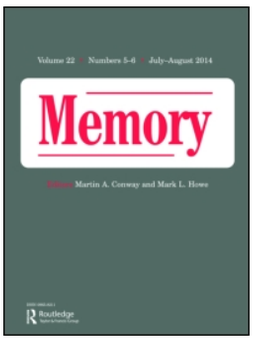

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"It was never that bad": Biased recall of grief and long-term adjustment to the death of a spouse

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"It was never that bad": Biased recall of grief and long-term adjustment to the death of a spouse

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At 6 months following the death of their spouse, 37 participants reported their grief-related symptoms and thoughts, and then, approximately 4.5 years later, they attempted to recall how they felt at the time of the 6-month report. Although participants were far less distressed at recall than initially, they recalled their 6-month grief rather accurately. Participants did however overestimate prior grief-related intrusive ideation. Participant's current level of grief predicted what they recalled slightly better than the actual initial grief. Conversely, what they recalled predicted current levels of grief across various measures. Participants whose grief diminished relatively little over time tended to overestimate prior grief more. The retrospective reappraisal that one's past grief was not severe may indicate effective coping.

The memories of one's life, or autobiographical memories, are generated from an underlying knowledge base and represent transitory dynamic mental constructions (Bartlett, 1932; Conway & Pleydell-Pearce, 2000). The present study investigated long-term memories for grief reactions following the death of one's spouse, and the role that these memories play in long-term adjustment. That autobiographical memories may be transitory and dynamic, depending in part on one's current status or goals, is of importance both methodologically and theoretically for investigations of grief.

Bonanno and Kaltman (1999) reviewed studies of conjugal bereavement and noted that these studies often rely on retrospective self-reports of coping and emotions. It is thus important methodolologically to know how accurately individuals can report on previously experienced states of emotion and previous coping strategies. For example, there is at best only a modest correlation between immediate measures of coping and how they are later recalled (Smith, Leffingwell, & Ptacek, 1999; Stone et al., 1998).

Theoretically, how one recalls prior states of grief may impact on one's current assessment of coping. Bonanno and Kaltman (1999) argued that individuals who are coping with a loss tend to engage in periodic *retrospective reappraisals* of their progress since the loss, assessing how well or how poorly they have coped over time (Albert, 1977; Ross & Wilson, 2000). Successful coping with the loss of one's spouse appears to involve a retrospective reappraisal that one has coped well with grief-related distress and is a stronger or better person for having gone through the experience (Bonanno & Kaltman, 1999; Davis, Nolen-Hoeksema, & Larson, 1998). Retrospective

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reappraisals will thus depend on the bereaved individuals' comparison of their current grief status with their memory of past grief-related symptoms, thoughts, and behaviors.

RECALL OF AFFECTIVE STATES

We are unaware of any studies investigating recall of grief-related symptoms, but several studies have investigated how well individuals can explicitly recall the intensity of previously experienced affective states. Studies in which undergraduates were asked to recall moods/emotions that they had recorded in diaries have consistently found moderate correlations ($r > .50$) between "average" moods recorded over a period of several weeks and recall of those average moods (Cutler, Larsen, & Bunce, 1996; Feldman Barrett, 1997; Parkinson, Briner, Reynolds, & Totterdell, 1995; Thomas & Diener, 1990). Although the between-subjects correlation indicated relative accuracy, subjects as a group tended to overestimate in recalling the intensity of negative mood states.

Similar results occurred when participants recalled negative affective states experienced at one specific point several weeks or months earlier, usually as part of a therapeutic programme. Although there were moderate correlations between recall and prior experience, participants tended to overestimate the intensity of their prior negative state. Examples include the overestimation by depressed patients of the intensity of previously reported depression (Schrader, Davis, Stefanovic, & Christie, 1990) and symptoms of depression (Zimmerman & Coryell, 1986), overestimation by chronic pain patients of prior feelings of anxiety and depression (Bryant, 1993), overestimation by dental patients of their negative mood following surgery (Beese & Morley, 1993), overestimation of negative affect at the time of their first relapse by smokers who were trying to quit (Shiffman et al., 1997), and overestimation by clients of their pre-psychotherapy distress (Safer & Keuler, 2001).

The present study is unique in asking conjugally bereaved individuals 5 years after the death of their spouse to recall grief-specific symptoms, intrusive ideation, and avoidant thoughts which they had originally reported during their sixth month of bereavement. Ross (1989) proposed that when asked to recall autobiographical information about past feelings, individuals assess their current state and then attempt to determine whether and how they have changed. They may also recall the past in such a way as to feel good about themselves in the present (Albert, 1977; McFarland & Alvaro, 2000; Ross & Wilson, 2000). Different biases for remembering the past, whether to appear consistent or to perceive improvement, may occur at different stages of one's life (Karney & Coombs, 2000).

How would such recall strategies manifest during bereavement? Bereaved individuals typically show increased distress in the early months after a loss, which gradually abates over the next several years (Bonanno & Kaltman, 2001). Although a relatively smaller subset of bereaved individuals tend to show chronic elevations in grief-related distress, most bereaved individuals are much less distressed at 5 years post-loss than at 6 months post-loss. Thus, we would expect most bereaved individuals to attempt recall by first assessing their current, much lower state of distress. Those who were still relatively distressed might overestimate their prior grief or grief-related thoughts and behaviours, so as to still perceive improvement. By exaggerating past distress, their answer in essence is "You should have seen how bad I was then; I've come a long way." In contrast, those who were relatively low on current grief-related distress might perceive that they have always coped relatively well with their bereavement and thus their recall of earlier grieving may be, in essence, "It was never that bad." Good copers may not need to exaggerate their past distress in order to feel good, and indeed such exaggeration of poor prior coping might affect their current self-appraisal. For example, Safer and Keuler (2001) found that clients who improved the least in psychotherapy were particularly likely to overestimate in recalling their pre-therapy distress; those who improved the most tended to be accurate or to underestimate.

hard/easy question: what is retrospective reappraisal on earth??

RETROSPECTIVE REAPPRAISAL

We have argued so far that one's current level of grief predicts recall of prior grief, but it is also possible that memory distortion in recalling prior grief affects current levels of distress and coping. For example, Safer, Levine, and Drapalski (2001) found that recall distortion in remembering anxiety predicted future negative affect. Students who overestimated in recalling the test anxiety that they had experienced prior to their mid-term exam, 4 weeks later reported, feeling more

unpleasant as they were about to take their final exam. Similarly Karney and Coombs (2000) found that wives tended to recall their marital satisfaction and emotional relationship with their husbands 10 years earlier as being worse than what they had reported at the time, so that presumably they could now perceive the relationship as having improved. Moreover, the degree of memory bias about the relationship exhibited at 10 years into the study predicted reported marital satisfaction 10 years later.

The concept of retrospective reappraisal provides a similar view of the relationship between recall of prior grief and current functioning. Bonanno and Kaltman (1999) observed that recovery from loss occurs gradually over time and involves both immediate or proximal coping efforts as well as more long-term or distal coping efforts. Whereas proximal coping is informed by appraisals of relatively immediate concerns, such as regulating the intense emotions that often accompany grief (Bonanno, 2001), more long-term coping strategies tend to involve comparably long-term assessments or retrospective reappraisals. These include long-term assessments of the impact of the loss, as well as evaluations of how well a person thinks he or she has adapted to the stress of the loss over time. The perception that one managed well will tend to foster a sense of well-being and continued coping efforts, whereas the continuing perception that one was overwhelmed by the pain of the loss will tend to undermine further coping efforts. Thus bereaved individuals who recall experiencing relatively little grief initially, at 6 months post-loss, should also report less current distress. Those who recalled initial grief as relatively high should have relatively high current distress levels, even though they may perceive themselves as having improved.

In summary, our hypotheses were: (1) participants would overestimate past grief; (2) current levels of grief would predict recalled grief; (3) recalled grief would predict current coping; and (4) participants who improved the least would be particularly likely to overestimate past grief.

METHOD

Participants

Conjugally bereaved participants were recruited for a longitudinal study (Bonanno, Keltner, Holen, & Horowitz, 1995) by newspaper advertisements, posted notices, and referrals from a variety of institutions within the San Francisco Bay area which requested paid volunteers who had sustained the death of a spouse between 3 and 6 months earlier. Respondents were interviewed over the phone and also completed questionnaires. Inclusion criteria stated that participants must be between the ages of 21 and 55, and must either have been married to or living with their deceased partner for at least 3 years. Based on the available data, 56 bereaved participants from the original study were considered for the 5-year follow-up. Of these, 39 participants (70%) were located and agreed to participate. Two participants were dropped from the analysis because of missing or ambiguous data, reducing the final sample for the present study to 37.

These participants ranged in age from 28 to 56 years ($M = 48.36$, $SD = 7.10$), were 70% female ($N = 26$), 91% Caucasian ($N = 34$), 51% with full-time employment ($N = 19$), and 23% with part-time employment ($N = 9$), had been married to or living with the deceased an average of 18.2 years ($SD = 11.6$), and had an average annual income of \$64,000 ($SD = 42,000$). Two Multivariate Analyses of Variance (MANOVA) were conducted to examine differences between bereaved individuals who provided 5-year data and those who could not be located or who refused to provide 5-year data. These analyses pertained to continuous demographic variables, and initial (6-month) symptom measures, respectively. In addition, a series of chi-square analyses were conducted to examine sample differences on categorical demographic variables. None of these analyses approached significance ($ps > .05$). indicating that the 5-year sample was representative of the original, larger group of participants.[1]

Overview of procedure

Respondents meeting inclusion criteria were mailed self-report symptom questionnaires at 6 months post-loss, and again at 5 years post-loss.

[1] None of the univariate comparisons of those who did versus did not participate in the 5-year follow-up was significant (all $ps > .05$). The test statistics for the continuous demographic variables were: age, $t(53) = 0.48$; income, $t(50) = 1.41$; years married, $t(50) = 1.61$. The test statistics for the categorical demographic variables were: gender, $\chi^2(1) = 0.79$; ethnicity, $\chi^2(4) = 5.21$; employment status, $\chi(2) = 2.00$; education level, $\chi^2(6) = 2.60$. The comparisons for initial symptoms were: intrusive ideation, $t(50) = 0.54$; avoidant thoughts, $t(50) = 0.24$; grief, $t(51) = 0.10$.

The 5-year participants also completed a questionnaire pertaining to their memory for symptoms at 6 months. We report the data for three measures that were reported initially (at 6 months) and currently (at 5 years), and for which participants attempted to recall their initial state.

Measures of grief-related symptoms and thoughts

Grief symptoms were measured using the Texas Revised Inventory of Grief (TRIG; Faschingbauer, 1981). The TRIG consists of 13 items addressing extent of current grief. These items capture ruminative facets of grief that reflect extent of continuing preoccupation with the deceased (e.g., I still cry when I think about the person who died; I am unable to accept the death of the person who died), and have shown adequate internal consistency (alpha coefficient = .81) (Faschingbauer, 1981). Support for TRIG's discriminant validity was shown with respect to sex differences, time since the death, and degree of relatedness to the bereaved (Faschingbauer, 1981).

Grief-related intrusive ideation and avoidant thoughts were measured using the intrusion and avoidance subscales of the Impact of Events Scale (IES; Horowitz, Wilner, & Alvarez, 1979). The IES is a widely used self-report measure of intrusive ideation and avoidant thoughts and behaviours generated in response to a specified stressful event, in this case the death of the spouse. The IES appears to measure an intermediary link between the degree of exposure to a stressor and psychological dysfunction (Creamer, Burgess, & Pattison, 1990). The intrusion subscale consists of seven items pertaining to unbidden and unwanted thoughts referencing the stressor event (e.g., "I thought about it when I didn't mean to", "I had trouble falling asleep or staying asleep because of pictures or thoughts about it that came into my mind"). The avoidance subscale consists of eight items pertaining to deliberate attempts to avoid thoughts of the stressful event ("I tried to remove it from memory") or reminders of the stressful event ("I stayed away from reminders of it").

Responses to the IES use a 4-point scale with the following labels: 0 = Not at all, 1 = Rarely, 3 = Sometimes, and 5 = Often. This scale was used for the 6-month questionnaire. Unfortunately, a clerical error in preparation of the 5-year questionnaire resulted in the alteration of the scale from a 4-point to a 6-point scale. Essentially, this involved filling in the scale to include each number between 0 and 5. As a result, the range of the scale was the same (i.e., 0 to 5) and the 0, 1, 3, and 5 responses used the same labels. The additional responses of 2 and 4 were unlabeled. It is impossible to determine whether adding these two extra scale points influenced participants' responses, or comparison of 6-month ratings to 5-year and recalled ratings. We suspect that there was, at most, only a minor effect. The coefficient alpha reliability of the 5-year ratings was .82 for both intrusive ideation and avoidant thoughts, with 16% of the responses being either 2 or 4 for intrusive ideation and 12% being either 2 or 4 for avoidant thoughts.

Recall of grief-related symptoms and thoughts

After completing the TRIG and IES at 5 years post-loss, participants completed a recall of symptoms questionnaire that began with the following instruction:

> For the next set of questions, we are going to do something different. When you first entered the study, you were asked to complete a number of questionnaires about your grief and your experiences dealing with the loss. Now, we would like to ask you about the same time period—around three to six months after the death of your spouse—and we would like you to try to remember how you might have responded then. We realise that, since several years have passed, it may not be easy to remember exactly how you responded when you first completed the questionnaires. However, we would like to ask that you do the best that you can. As you may have already guessed, we are asking these questions because we are trying to learn about the role that memory may play in bereavement. Thus, for this part of the questionnaire packet, we are *not* asking how you feel right now—we want to measure only what you remember about how you felt *then*, *when you first came into the study*, and how you responded then.

To help them remember their feelings at that time, participants were first encouraged to remember contextual information, such as how they became involved in the study and where they completed the initial bereavement questionnaire.

Following this instruction, participants were presented with the TRIG and IES scales. The

instructions were modified for this task to specify that the items should be completed in reference to ''when you first entered the study''.

RESULTS

Change in grief-related thoughts and symptoms over time

We compared self-ratings on the grief-related measures at 6 months and again at 5 years (see Table 1). Participants reported less intrusive ideation, t (36) = 9.27, $p < .001$, d = 1.55, fewer avoidant thoughts, t (36) = 3.70, $p = .001$, $d = 0.62$, and less grief, t (36) = 7.58, $p < .001$, $d = 1.26$. The mean of the three d values was 1.14, indicating that participants were currently, on average, more than one standard deviation below their initial reports. Compared to their 6-month ratings, 92% of participants reported less intrusive ideation, 68% recounted fewer avoidant thoughts, and 92% indicated fewer grief symptoms.

Recall of initial grief-related thoughts and symptoms

Because recall ratings were obtained shortly after participants completed their current 5-year ratings, it is important to show that participants were discriminating in what they were rating. Current ratings were significantly less than recalled ratings for intrusive ideation, t (36) = 11.90, $p < .001$, d = 1.98, avoidant thoughts, t (36) = 2.90, $p < .01$, $d = 0.48$, and grief symptoms, t (36) = 7.51, $p < .001$, d = 1.25. The mean of the three d values was 1.24, indicating that participants recalled, on average, grief-related affect that was more than 1 standard deviation above their current level. Clearly when asked to recall their grief, participants were not simply restating their current levels of grief (see Table 1). We predicted that participants would overestimate in recall, and indeed they recalled having more grief-related intrusive ideation than what they had actually reported at 6 months, t (36) = 3.45, $p = .001$, $d = 0.58$. The means for 6-month and recalled ratings of intrusive ideation were 18.81 (SD = 7.68) and 23.27 (SD = 6.93) respectively, with 68% of the participants overestimating. However, there was no significant distortion in recalling avoidant thoughts, t (36) = −0.77, or grief symptoms, t (36) = −0.69. Thus, as a group, participants overestimated in recalling one measure but were accurate for the other two measures (see Table 1). Moreover, despite the slight difference in scale formats, the variances did not differ significantly for initial versus recalled ratings of either intrusive ideation or avoidant thoughts (ps > .05).

Prediction of recalled grief

We proposed, following Ross (1989), that when asked to recall the intensity of prior grief, individuals cannot recall directly what they had experienced, but instead use their current status on these measures plus an adjustment based on how much they think they have changed. For each of the three measures, we examined the relative contributions of both initial grief and current grief status as predictors of the level of grief recalled. The zero-order correlations for these measures are in Table 2.

Both the current level of intrusive ideation, r = .46, $p < .01$, and the initial level of intrusive ideation, $r = .42$, $p < .01$, were significantly correlated with the recalled ratings of intrusive ideation. A multiple regression analysis in which both measures were forced into the equation found neither measure by itself to be significant (both ps

these values: larger the worse. (so similar to my emotion rating case)

TABLE 1
Means and standard deviations for 6-month, 5-year, and recalled ratings of intrusive ideation, avoidant thoughts, and grief symptoms

	6-month		*5-year*		*Recalled*	
Measures	*M*	*SD*	*M*	*SD*	*M*	*SD*
Intrusive ideation	18.81[a]	7.68	10.03[b]	5.97	23.27[c]	6.93
Avoidant thoughts	11.95[a]	8.86	7.57[b]	7.41	10.86[a]	7.73
Grief symptoms	46.92[a]	8.77	35.78[b]	9.97	45.92[a]	9.48

Within each row, means with different superscripts are significantly different in pairwise comparisons.

TABLE 2
Correlations between measures of 6-month, 5-year, and recalled ratings of intrusive ideation, avoidant thought, and grief symptoms

	6-month			*5-year*			*Recalled*		
Measures	*Intru*	*Avoid*	*Grief*	*Intru*	*Avoid*	*Grief*	*Intru*	*Avoid*	*Grief*
6-month									
Intrusive ideation	—								
Avoidant thoughts	.70***	—							
Grief symptoms	.67***	.56***	—						
5-year									
Intrusive ideation	.67***	.45**	.41**	—					
Avoidant thoughts	.51***	.62***	.40**	.62***	—				
Grief symptoms	.50**	.27	.55***	.57***	.53***	—			
Recalled									
Intrusive ideation	.42**	.40**	.32*	.46**	.46**	.43**	—		
Avoidant thoughts	.26	.48**	.27	.19	.58***	.28	.37*	—	
Grief symptoms	.33*	.25	.54***	.38*	.36*	.64***	.69***	.18	—

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

should def do some analysis similar to this for the proj with Johnny!

> .05), although together they predicted significantly what subjects recalled about intrusive ideation, F (2, 34) = 5.20, p = .01.

Both the current level of avoidant thoughts, r = .58, p < .001, and the initial level of avoidant thoughts, r = .48, p < .01, were significantly correlated with the recalled ratings of avoidant thoughts. However a multiple regression analysis that included both measures found that initial avoidant thoughts did not contribute significantly (p > .05) when current level of avoidant thoughts was in the equation.

A similar pattern occurred for predicting recall of initial grief symptoms. Both the current level of grief, r = .64, p < .001, and the initial level of grief, r = .54, p = .001, were significantly correlated with the recalled ratings of grief. However a multiple regression analysis using both measures found that initial grief did not contribute significantly (p > .05) with current level of grief in the equation.[2]

What is striking about these results is that current levels predicted recalled levels even though subjects were currently experiencing intrusive ideation, avoidant thoughts, and grief symptoms at much lower levels than either their initial ratings or their recalled ratings. Current levels predicted slightly better than initial levels, even though initial levels were much closer to recalled levels. What subjects recalled required average adjustments of more than one standard deviation to their current levels.

and see whether we could reach similar answer

Prediction of current grief states

The concept of retrospective reappraisal (Bonanno & Kaltman, 1999) suggests that recalled grief should be positively correlated with current functioning. As described in the previous section and in Table 2, recall for each of the three measures was significantly correlated with current levels of that measure (rs = .46, .58, and .64 for intrusive ideation, avoidant thoughts, and grief symptoms, respectively, explaining from 21% to 41% of the variability). These correlations may be inflated because they were based on self-reports on the same items. A more stringent test of the positive relationship between recalled grief and current functioning is whether recall based on one of the measures predicted current functioning on the other two measures. Of the six possible correlations, four were significant (see Table 2, rows 7–9, columns 4–6). Thus, recalled intrusive ideation significantly predicted ratings of both current avoidant thoughts (r = .46, p < .01) and grief symptoms (r = .43, p < .01), and recall of grief

[2] We also calculated the regression for each measure after first forcing the initial rating into the equation. This is equivalent to calculating the partial correlation of recalled and current ratings after controlling for effects of the initial ratings. These partial correlations were .26 (p = .13) for intrusive ideation, .42 (p < .01) for avoidant thoughts and .50 (p < .01) for grief. Conversely, the partial correlation of recalled and initial ratings after controlling for the effects of the current rating was not significant for any of the three measures (all three ps > .05).

symptoms predicted current levels of both intrusive ideation (r = .38, p < .05) and avoidant thoughts (r = .36, p < .05). Recall of avoidant thoughts was positively, but not significantly, correlated with current levels of intrusive ideation (r = .19) and grief (r = .28). These six correlations (mean r = .35) were not the result of answering identical questions, and thus they provide further support for the positive association between recalled grief and current functioning.

Objective change and memory distortion

We predicted an inverse relationship between objective change and memory distortion, such that those who showed the least objective improvement would tend to overestimate more in recalling their initial levels (Conway & Ross, 1984; Safer & Keuler, 2001). For each of the three grief measures, we calculated difference scores for objective change (initial – current rating) and memory distortion (recalled – initial rating).[3] The predicted correlations between objective change and memory distortion were −.54 for intrusive ideation, −.63 for avoidant thoughts, and −.57 for grief symptoms (all ps < .001) (see Table 3). These significant correlations were expected in part because current and recalled ratings for each measure were based on self-reports on the same items. A more stringent test was whether objective change, based on one measure, correlated negatively with memory distortion, based on the other measures. Of the six relevant correlations, three were significant and the other three approached significance (see Table 3). Thus, objective change in intrusive ideation correlated significantly with memory distortion for avoidant thoughts (r = −.35, p < .05) and for grief symptoms (r = −.43, p < .01), and objective change in avoidant thoughts correlated significantly with memory distortion for grief symptoms (r = −.33, p < .05). These correlations provide further evidence that those who improved relatively little tended to overestimate more in recalling prior grief.

TABLE 3
Correlation between measures of objective change and memory distortion for intrusive ideation, avoidant thoughts, and grief symptoms

	Memory distortion		
Objective change	*Intrusive ideation*	*Avoidant thoughts*	*Grief symptoms*
Intrusive ideation	−.54***	−.35*	−.43**
Avoidant thoughts	−.31	−.63***	−.33*
Grief symptoms	−.24	−.29	−.57***

* $p \leq .05$. ** $p \leq .01$. *** $p \leq .001$.

DISCUSSION

The present study found that almost all participants reported much less grief at 5 years after the death of a spouse than at 6 months. The bereaved individuals as a group showed considerable accuracy in recalling 6-month levels of grief-related symptoms and avoidant thoughts, but overestimated their 6-month levels of intrusive ideation. Importantly, however, recall was less than perfect for all three grief-related variables. Consistent with predictions, recalled grief was positively correlated with current (5-year) levels for each of the measures, even though recalled levels of grief were much higher than current levels. Specifically, bereaved individuals who reported relatively high levels of grief-related symptoms and thoughts at 5 years also recalled high initial levels. There was evidence for retrospective reappraisal, as across different measures, current levels of grief were predicted by recalled levels of grief. There was also an inverse relationship between symptom changes over time and measures of recall distortion. Participants who improved relatively less over time tended to overestimate their initial grief symptoms and thoughts, and those who improved relatively more over time tended to underestimate their initial grief symptoms and thoughts.

[3] A potential problem with using simple difference scores for measuring objective change and memory distortion is that difference scores are affected by their correlation with the initial ratings. A common suggestion is to calculate residualised difference scores, whereby initial ratings are partialled out of the outcome measures. Here, the correlations of the residualised difference score for objective change and the residualised difference score for memory distortion for each of our three measures would be equivalent to the partial correlations between recall and current ratings after removing initial ratings (see Footnote 2). Colvin, Block, and Funder (1996) argue strongly in favour of reporting simple, rather than residualised, difference scores because they are more interpretable and meaningful psychologically. Discarding the initial ratings may produce a statistical, but not a psychological, equivalence across participants, and may obscure meaningful relationships.

Recall of grief-related thoughts and symptoms

Participants recalled avoidant thoughts and grief symptoms accurately, but overestimated in recalling intrusive ideation. This overestimation may have occurred because of the slight difference in scale formats that were used initially (4 points: 0, 1, 3, 5) and at recall (6 points: 0–5). However, the format differences also occurred for initial and recalled avoidant thoughts, and there was no overestimation. The scale formats did not appear to affect the reliability or variability of the measures. Intrusive ideation produces destabilising failures of memory control processes (Conway & Pleydell-Pearce, 2000), and thereby interrupts and disrupts ongoing mental activity. Intrusive ideation may be overestimated in recall because such interruptions and disruptions were particularly memorable.

Based on studies reviewed in the introduction, we had predicted that participants would overestimate in recalling their prior grief-related thoughts, symptoms, and behaviours. Those studies primarily tested recall of clients undergoing some form of therapy, and it is possible that they overestimated in recalling prior emotional distress in order to exaggerate the benefits of therapy. In contrast, our participants were volunteers for a study that emphasised the investigator's interest in learning more about the bereavement experiences of each participant (Bonanno, Mihalecz, & LeJeune, 1999). Perhaps the lack of an explicit therapy, combined with participants' marked reduction in grief over 5 years, accounted for their accurate recall on two of the three measures.

Ross (1989) argued that in recalling prior states of emotion, an individual uses his or her current state and a model of how one may have changed. For all three measures of grief, current levels predicted significantly both initial and recalled levels even though participants were currently about a standard deviation below both their initial and recalled ratings. Current levels correlated somewhat higher with initial levels than did recalled levels. These correlations indicated consistent individual differences in self-reported grief across time and rating instructions, whereas the recalled ratings provided more accurate information about group mean levels of initial grief. Thus a practical suggestion for studies that rely on retrospective self-reports of emotions is that the researcher should obtain measures of both current levels and recalled levels.

Although most participants reported much less grief at 5 years than at 6 months, those who improved relatively little tended to overestimate their initial grief, perhaps so as to feel good about however much they had improved. Conversely, those who reported the greatest reduction on the grief measures tended to underestimate what their grief had been at 6 months. Given their current low level, they perhaps could not recall having ever been so grieved. The inverse relationship between objective change and memory distortion is consistent with other studies which have found that individuals with relatively poor outcomes tended to overestimate in recalling prior negative thoughts and emotional states (Bryant, 1993; Conway & Ross, 1984; McFarland & Alvaro, 2000; Safer & Keuler, 2001; Safer, Levine, & Drapalski, 2001).

Taylor's (1991) mobilisation-minimisation theory of coping may help to explain this inverse relationship. She proposed that initial responding to threats, presumably including the death of one's spouse, requires short-term mobilisation of physical, psychological, and social resources, whereas longer-term adaptation is generally favoured by processes that dampen, minimise, or even erase the intensity of the negative event. Recalling past grief as high should accompany continued mobilisation of coping resources, whereas recalling past grief as low may signal further minimisation of the intense short-term emotions that are no longer adaptive.

Two field studies of responses to trauma, which may include grief, support this proposed relationship between recall and coping. In both studies, subjects recalled a traumatic experience, either a school shooting (Schwarz, Kowalski, & McNally, 1993) or events during the Gulf War (Southwick, Morgan, Nicolaou, & Charney, 1997), relatively soon after the experience and then again, 1 or 2 years later. Both studies found that those individuals whose memory of the experience had become more threatening over time appeared to be coping much less effectively than those whose memory had grown less threatening. Both Schwarz et al. and Southwick et al. concluded that one's current emotional state affected what was recalled, but we would also argue that what was recalled, including the retrospective reappraisal of how one coped, contributed to and justified the current emotional state.

Retrospective reappraisal

Retrospective reappraisal refers to an individual's evaluation of how well he or she has coped over the long run with a problem or loss. No matter whether recall is accurate or distorted, what is recalled about prior grief may affect current and future coping. Indeed we found that recalled grief correlated positively with self-reports of current grief levels.

There are several methodological limitations to this finding. First, we cannot determine a causal sequence as to whether recalled grief led to current (5-year) grief or vice versa. Second, because current and recalled grief were measured on the same occasion and on the same scales, there was likely to be some overlap due to shared method variance and idiosyncratic response styles. Third, all participants reported their current grief prior to recalling their initial grief, and order of reporting may be important. We did not counterbalance the order of reporting current and prior grief so as to be consistent with previous follow-ups of these participants, in which they only had to report their current grief. Also, the power to detect even moderate correlations (r = .3) was only .46 with 37 participants and would have been just .25 with 19 participants had there been order effects. Indeed, some of the non-significant correlations in Tables 2 and 3 may simply reflect the relatively low statistical power of the present study.

Nonetheless, our conclusion that recalled grief affected the current levels of grief remains plausible in spite of these various methodological concerns. There was cross-measure generalisation, as recalled levels on one of our three grief measures generally predicted current levels of grief on the other two measures. Also, participants clearly discriminated in recalling their 6-month grief to be, on average, more than one standard deviation greater than their current 5-year grief. Reporting the current grief first did not seem to "anchor" the recalled grief.

Memory and grief therapy

The associations observed between recalled grief and current grief may have some important therapeutic implications. Traditionally bereavement therapists encouraged clients to recall past grief and "work" through it, although it has yet to be determined whether grief-focused therapies are effective for severely grieved individuals (Schut, Stroebe, Van Den Bout & Terheggen, in press). This catharsis or "grief work" perspective was developed primarily from retrospective reports of individuals who had sought therapy (Bonanno, 2001). Our data call into question the usefulness of focusing on past grief. Participants who overestimated past grief, presumably the more likely candidates for therapy, tended to show the least objective improvement over time. Focusing on past grief may be particularly counterproductive for individuals with relatively low levels of grief-related symptoms and distress, who tended to recall relatively less grief. Encouraging such individuals to focus on past grief may undermine their otherwise successful coping efforts. Empirical studies similarly favour "repressive coping" in that those who show few signs of earlier grieving tend to have better long-term outcomes, with there being no evidence for delayed grief (Bonanno et al., 1995). Perhaps contrary to the grief work perspective, intervention for grief should specifically aim to keep the individual from exaggerating in memory the intensity of prior grief.

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