Research Article

The Scars of Memory

A Prospective, Longitudinal Investigation of the Consistency of Traumatic and Positive Emotional Memories in Adulthood

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ABSTRACT—We conducted a prospective study with individuals who first described their memories of both a recent traumatic and a highly positive emotional experience in 2001–2002. Of the 49 subjects interviewed after 3 months, 29 were re-interviewed after 3.45 to 5.0 years. Subjects answered questions from a 12-item consistency questionnaire (maximum possible score of 36), rated the qualities of their memories, and completed questionnaires concerning the impact of the trauma. Results indicated that traumatic memories (including memories for violence) were highly consistent (M = 28.04) over time relative to positive memories (M = 17.75). Ratings of vividness, overall quality, and sensory components declined markedly for positive memories but remained virtually unchanged for traumatic memories. The severity of traumatic symptoms diminished over time and was unrelated to memory consistency. These findings contribute to understanding of the impact of trauma on memory over long periods.

The impact of trauma on memory has attracted an enormous amount of scientific and clinical attention for many years. However, the manner in which traumatic events are processed and recalled remains highly controversial (e.g., McNally, 2003, 2005; Read, 2001). A central issue in the debate is whether traumatic experiences affect memory differently than other events do, or as Shobe and Kihlstrom (1997) inquired, “Is traumatic memory special?”

Two distinct lines of thought predict that traumatic memories will be unreliable over time. The first, rooted in the clinical tradition, emphasizes that trauma actively impairs memories, leading to “fractured” recollections that lack a coherent verbal narrative and are resistant to retrieval (e.g., Herman, 1992; Nadel & Jacobs, 1998; van der Kolk & Fisler, 1995). According to this traumatic-memory argument, trauma leads to defenses, such as repression and dissociation, that cause memory impairment (Kihlstrom, 1996). Despite its long-standing popularity, empirical support for this perspective is scant. Studies cited as providing supporting evidence have found that some victims of child abuse report no recollection of the abuse in adulthood (e.g., Briere & Conte, 1993). Williams (1994) interviewed women who were sexually abused decades earlier, finding that 38% of them failed to mention the abuse. However, methodological limitations with such studies cloud interpretations about the nature of traumatic memory (e.g., Laney & Loftus, 2005). Alternative explanations for the “amnesia” range from ordinary forgetting to a disinclination to discuss the experience (e.g., Loftus, Garry, & Feldman, 1994).

A second line of thought suggests that traumatic memories are not unique, but, rather, are like other memories, showing a progressive deterioration over time. In other words, the decay of traumatic memories is due not to trauma but to ordinary forgetting and various distorting influences (see Laney & Loftus, 2005). Thus, the widely accepted conclusion that autobiographical memory is malleable and fallible (e.g., Loftus, 2003) extends to traumatic memories. For example, studies have brought into question the reliability of memory for public tragedies and for major news stories with an emotional component (e.g., Neisser & Harsch, 1992; Schmolck, Buffalo, & Squire, 2000). Additionally, some studies indicate that stronger negative emotion may lead to a greater vulnerability to misinformation in memory (e.g., Nourkova, Bernstein, & Loftus, 2004; Porter, Spencer, & Birt, 2003). Further, people can be led to mistakenly recall entire experiences through misleading interviews (e.g., Wade, Garry, Read, & Lindsay, 2002), with rates of false memories being higher for more negative events (Porter, Yuille, & Lehman, 1999).

Thus, the idea that memories for stressful events are fallible is supported. However, most relevant studies have not addressed the general issue of the reliability of traumatic memories relative...
to memories for other emotional experiences. In addition, little research has compared the consistency of memories for personally experienced, clinically traumatic events with the consistency of memories for other events over extended periods. An alternative to the perspectives just summarized is that—under some circumstances—personally traumatic memories (such as for violent victimization) may be “superior” to other memories. Was James (1890) correct when he argued that an event could be sufficiently stressful to “leave a scar upon the cerebral tissues” (p. 670), as alluded to in our title? Studies of children’s memories for traumatic medical procedures support the idea that stress may lead to enduring memories (e.g., Peterson & Parsons, 2005). Similarly, field studies suggest that traumatic experiences may be quite well remembered, or at least that memories of such experiences may be unimpaired by the effects of trauma (e.g., Wagenaar & Groeneweg, 1990). However, field studies lack the level of experimental control needed to make sound conclusions about trauma and memory. Another line of research comparing the features of traumatic memories with those of other emotional memories has indicated that traumatic memory narratives are more detailed and vivid (Bohanek, Fivush, & Walker, 2005; Porter & Birt, 2001).

A recent longitudinal study of memory for child sexual abuse (CSA) addressed some limitations of past work and demonstrated the reliability of memories for personally traumatic events. Alexander et al. (2005) examined memory accuracy in 94 CSA victims 12 to 21 years after criminal prosecutions in the 1980s. In general, the victims’ memories were reliable over time (mean accuracy of 72%). Subjects for whom CSA was their most traumatic experience were relatively accurate regardless of the severity of their trauma symptoms. Although yielding important findings, this study did not include a comparison with other emotional memories and focused on one type of childhood event. In addition, little or no research has examined the long-term consistency of memories for various personal traumatic experiences in adulthood.

Although the relation between trauma and memory has important theoretical implications, it also has applied relevance. Given the typically long delays between a crime, its disclosure, and testimony about it, an important issue is the reliability of the victim’s memory. In the present study, our objective was to examine the consistency of memories for personally significant traumas and for highly positive emotional experiences over several years. Using a prospective design, lengthy follow-up, and within-subjects comparison between traumatic and positive memories, we hoped that the findings would help to resolve the traumatic-memory debate.

**METHOD**

**Subjects**

In the original community sample from 2001–2002 (see Peace & Porter, 2004), 49 subjects from Nova Scotia took part in two interviews separated by a mean of 110.86 days ($SD = 38.61$). To be eligible for this study, subjects had to be at least 18 years old, to have experienced a recent traumatic event, to have experienced moderate to severe levels of traumatic stress, and to agree to be recontacted over the ensuing decade. Of the 49 subjects interviewed a second time, 29 (59.2%) were successfully recontacted for a third interview. On average, the third interview took place 1,417.36 days ($SD = 114.56$), or 3.88 years ($SD = 0.31$; range = 3.45–5.0), after the initial interview. The interval between the second and third interviews was, on average, 1,306.5 days ($SD = 91.86$).

At the first interview, the mean age of the subjects in the final sample was 39.3 years ($SD = 11.7$); 86.2% were women. Their education levels were as follows: 6.9% had not completed high school, 13.8% had a high school diploma, 24.1% had some college or university education, 51.7% had a college or university degree, and 3.4% had postgraduate training. Their ethnicity was 79.3% Caucasian, 13.8% Aboriginal, 3.4% African Canadian, and 3.4% other.

**Design**

The design was a 2 (traumatic vs. positive memory) $\times$ 3 (interaction time: 1 vs. 2 vs. 3) repeated measures factorial. The main dependent variables were the consistency and phenomenological features of the positive and traumatic memories over time.

**Materials**

**Consistency Questionnaire**

We used the Consistency Questionnaire (CQ; Peace & Porter, 2004) to obtain 12 factual details for each traumatic and positive memory: time of day, day of week, people present at the scene, weather, clothing worn at the time of the event, location, emotional state immediately preceding the event, calendar date, personal belongings, event duration, emotional state immediately following the event, and sensory experiences during the event. Responses to CQ items were recorded by the interviewer on the questionnaire and coded for consistency later. The coding scheme examined consistency in details reported between pairs of interviews: Interview 1 versus Interview 2, Interview 2 versus Interview 3, and Interview 1 versus Interview 3. Each response was rated as inconsistent (0), mainly inconsistent (1), mainly consistent (2), or consistent (3) across the three interviews (see Peace & Porter, 2004), to generate three consistency scores for each memory type. A total consistency score was calculated for each memory by summing the numerical ratings across the 12 details (maximum = 36). This scheme has a high level of interrater reliability; consistency scores for the two raters were highly correlated for both positive memories, $r = .97, p < .001$, and traumatic memories, $r = .96, p < .001$ (e.g., Peace & Porter, 2004).

**Emotional Memory Survey**

On the Emotional Memory Survey (EMS; Porter et al., 1999), subjects provided subjective ratings concerning features of each
memory. A 7-point scale was used to rate two characteristics: vividness/clarity and overall quality of memory relative to other memories. A third feature, sensory components, was assessed by a question asking whether a memory contained visual, auditory, tactile, olfactory, or taste components; each “yes” response was tallied to provide a total sensory-components score (maximum = 5). Subjects also rated the level of stress associated with the event (1 = no stress/anxiety, 7 = extreme stress/anxiety) and how often they thought about it compared with other events (1 = never, 7 = very frequently). Finally, subjects were asked whether (a) there ever was a time when they were unable to recall the experience (yes/no) and (b) whether they felt the memory had changed over time (yes/no).

**Impact of Event Scale**

The well-validated Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979) was used to measure the level of traumatic stress associated with reported events. This 15-item questionnaire involves rating the frequency of cognitive and affective experiences associated with a traumatic event (0 = not at all, 5 = often). Scores reflect the level of stress and were used to establish that an event was indeed traumatic. The IES has excellent psychometric qualities and is sensitive to changes in stress levels over time (Briere, 1997; Horowitz et al., 1979). A cutoff of 25 was used as a criterion for participation; scores at this level indicate moderate to severe stress (Carlson, 1997) as defined by the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2000).

**Trauma Symptom Inventory**

The Trauma Symptom Inventory (TSI; Briere, 1995) is a well-validated 100-item self-report measure of symptomology associated with trauma and posttraumatic stress disorder (e.g., Briere & Elliott, 1997) and includes 10 clinical scales. Subjects were asked to rate each item on its frequency of occurrence in the past 6 months (0 = hasn’t happened, 3 = happened often). The TSI provided a comprehensive measure of the influence of the experiences on subjects’ psychological functioning.

**Dissociative Experiences Scale**

To assess for dissociative symptoms, we administered the well-validated Dissociative Experiences Scale (DES; Bernstein & Putnam, 1986). This 28-item questionnaire addresses a range of dissociative experiences, from the common (e.g., being unaware of external events while driving) to the rare and severe (e.g., not recognizing family members). The DES has excellent validity and reliability, and good psychometric properties in general (Carlson, 1997).

**Procedure**

For a detailed description of the original interview procedures in 2001–2002, see Peace and Porter (2004). Briefly, potential subjects were asked to complete the IES for screening purposes. Next, each eligible subject met with an interviewer. In the interview, the subject was asked to first provide a narrative description (tape-recorded or recorded verbatim) of either the traumatic experience or his or her most positive emotional experience in the past year (counterbalanced; see Peace & Porter, 2004, for further information on the elicitation of the narratives).

Next, the DES was administered, and then the subject recalled his or her second experience. Recall of both events was followed by the EMS and CQ questions. Finally, the TSI was completed for the traumatic memory. In the second interview, the subject returned to the lab, recalled the same positive and traumatic experiences, and completed the EMS, CQ, and IES. The third interview, years later, involved the administration of the EMS, CQ, and IES.

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1Because many subjects no longer resided in the area at Time 3, in-person interviews were not possible. Thus, the final interviews were conducted over the telephone. Because of salient ethical and practical concerns, subjects were not asked to provide narrative accounts of their traumatic experiences over the telephone. We were mainly interested in the factual details elicited via the 12-item CQ.
(MANOVA) with consistency scores as the dependent measures. There were main effects of memory type, \( F(1, 27) = 78.65, p_{rep} > .99, \eta_p^2 = .74, \) and time interval, \( F(2, 26) = 55.02, p < .001, p_{rep} > .99, \eta_p^2 = .65, \) as well as a Memory Type \( \times \) Time Interval interaction, \( F(2, 26) = 9.3, p < .01, p_{rep} > .95, \eta_p^2 = .31. \) Overall, traumatic memories had higher scores (\( M = 28.36, SD = 3.13 \)) than positive memories (\( M = 19.1, SD = 5.42, \)) while difference in consistency scores decreasing with increasing intervals) resulted primarily from the reduction in consistency scores (combined scores for positive and traumatic memories) differed for all three time intervals: Times 1 and 2 (\( p < .001 \), \( M = 27.11 \)) Times 2 and 3 (\( p < .001, M = 22.89 \)), Times 1 and 3 (\( p < .001, M = 21.17 (p_{rep} > .95) \)). For traumatic memories, the consistency scores were as follows: Times 1 and 2, \( M = 29.83, SD = 2.88 \); Times 2 and 3, \( M = 28.0, SD = 3.3 \); Times 1 and 3, \( M = 26.86, SD = 3.49 \). For positive memories, the scores were as follows: Times 1 and 2, \( M = 24.11, SD = 5.57 \); Times 2 and 3, \( M = 17.75, SD = 5.38 \); Times 1 and 3, \( M = 15.43, SD = 5.3 \). The interaction indicated that the main effect of time interval (i.e., consistency scores decreasing with increasing intervals) resulted primarily from the reduction in consistency scores for positive memories over time; consistency scores for traumatic memories remained relatively unchanged (see Fig. 1).

To examine these differences further, we examined mean scores for positive and traumatic memories for each of the 12 details rated for consistency (see Table 1). A MANOVA was significant, \( F(12, 16) = 6.82, p < .001, p_{rep} > .99. \) Scores for positive and traumatic memories differed for all but one detail (emotional state preceding the event); for 11 of the 12 details, traumatic memories were more consistent than positive memories. For traumatic memories, consistency scores for Times 1 and 2 were correlated with consistency scores for Times 2 and 3, \( r(28) = .38, p_{rep} > .88, \) indicating that consistency was a stable characteristic of individual subjects over time.

To get a clearer picture of possible major inconsistencies within traumatic and positive memories, we examined the relative frequencies of CQ scores of 0 for the two memory types. Following are the percentages of 0 scores for traumatic and positive memories, respectively: time of day, 10.3% versus 35.7%; number of people present, 6.9% versus 39.3%; weather, 0% versus 17.9%; clothing, 0% versus 35.7%; day of week, 0% versus 42.9%; location, 13.8% versus 32.1%; emotional state before, 10.3% versus 28.6%; calendar date of event, 3.4% versus 28.6%; personal belongings, 10.3% versus 28.6%; duration of event, 17.2% versus 57.1%; emotional state after, 3.4% versus 14.3%; sensory experiences, 10.3% versus 57.1%. Thus, an average of 7.16% of details in reports of traumatic memories had changed dramatically, compared with an average of 34.8% of details for positive memories, approximately a fivefold difference.

### Table 1: Mean Consistency Scores

<table>
<thead>
<tr>
<th>Detail</th>
<th>Positive memories</th>
<th>Traumatic memories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time of day***</td>
<td>1.04 (0.96)</td>
<td>2.29 (0.94)</td>
</tr>
<tr>
<td>Number of people present**</td>
<td>1.43 (1.32)</td>
<td>2.43 (0.88)</td>
</tr>
<tr>
<td>Weather***</td>
<td>1.36 (0.95)</td>
<td>2.21 (0.63)</td>
</tr>
<tr>
<td>Clothing***</td>
<td>1.07 (1.05)</td>
<td>2.36 (0.73)</td>
</tr>
<tr>
<td>Day of the week***</td>
<td>1.25 (1.29)</td>
<td>2.89 (0.42)</td>
</tr>
<tr>
<td>Location**</td>
<td>1.64 (1.34)</td>
<td>2.29 (1.00)</td>
</tr>
<tr>
<td>Emotional state before</td>
<td>1.32 (0.96)</td>
<td>1.61 (0.92)</td>
</tr>
<tr>
<td>Calendar date*</td>
<td>1.50 (1.14)</td>
<td>2.57 (0.69)</td>
</tr>
<tr>
<td>Personal belongings*</td>
<td>1.43 (1.14)</td>
<td>2.11 (0.99)</td>
</tr>
<tr>
<td>Duration of event***</td>
<td>0.86 (1.11)</td>
<td>2.18 (1.02)</td>
</tr>
<tr>
<td>Emotional state after**</td>
<td>1.50 (0.79)</td>
<td>2.11 (0.79)</td>
</tr>
<tr>
<td>Sensory experiences**</td>
<td>1.04 (1.26)</td>
<td>1.89 (0.92)</td>
</tr>
</tbody>
</table>

Note. Standard deviations are given in parentheses. Asterisks indicate a significant difference between positive and traumatic memories, *\( p_{rep} > .38, \) **\( p_{rep} > .95, \) ***\( p_{rep} > .99. \)

### Consistency of Violent Versus Nonviolent Traumatic Memories

Ten of the 29 traumatic experiences involved criminal violence. To examine whether the consistency of memories differed between violent traumas and other traumas, we conducted a 2 (violent vs. nonviolent trauma) \( \times \) 3 (time interval) MANOVA. There was no main effect of violence condition on consistency, and no interaction. Although caution is warranted given the small sample, the mean scores of nonviolent and violent memories were highly similar, and the standard deviations were small (e.g., \( M = 27.94, SD = 2.76 \) vs. \( M = 28.1, SD = 4.31 \)).

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**Fig. 1.** Consistency scores for positive and traumatic memories over the entire follow-up period. Standard errors of the means are indicated by the dashes above and below the plotted symbols.
Traumatic Stress and Memory Consistency
The potential impact of the initial IES scores on the consistency of traumatic memories over time was examined with scores classified as both continuous data and categorical data (bottom-, middle-, and top-third percentile scores). There was no correlation between IES scores and any of the three consistency scores. Further, an ANOVA indicated that categorical scores were not associated with consistency between Times 1 and 3, \( F(2, 26) = 1.1, \) n.s. There also was no correlation between self-reported stress ratings and consistency. The association between trauma symptoms and consistency was addressed using linear regression analysis with scores from the 10 TSI scales entered as predictors of consistency scores. The regression was not significant for any consistency scores.

The impact of original DES scores on memory consistency was examined as well. There was a negative correlation between DES score and consistency between Times 1 and 2, \( r(28) = -0.39, \) \( p < 0.05. \) Although this trend continued for consistency between Times 1 and 3 (\( r = -0.24 \)) and between Times 2 and 3 (\( r = -0.24 \)), the latter correlations were not significant. DES scores were not correlated with vividness, overall memory quality, or sensory components at Time 3.

Comparison of Subjective Memory Characteristics of Traumatic and Positive Memories
To compare the subjective features of positive and traumatic memories, we conducted a MANOVA with memory type and time of recollection as independent variables and self-ratings of vividness, overall quality, and sensory components as dependent measures. There were multivariate main effects of memory type, \( F(3, 21) = 8.01, \) \( p < 0.001, \) \( p_{rep} > 0.99, \) \( \eta_p^2 = 0.53, \) and time, \( F(6, 18) = 5.19, \) \( p < 0.01, \) \( p_{rep} > 0.95, \) \( \eta_p^2 = 0.63. \) There also was a Memory Type \( \times \) Time interaction, \( F(6, 18) = 14.9, \) \( p_{rep} > 0.99, \) \( \eta_p^2 = 0.83. \) Overall, traumatic memories were recalled more vividly, were of higher quality, and contained more sensory components than positive memories. Pair-wise comparisons indicated that vividness ratings differed (\( p_{rep} > 0.95 \)) at Times 1 and 3 only. Overall quality ratings differed at both Times 1 and 3 (\( p_{rep} > 0.99 \)) and Times 2 and 3 (\( p_{rep} > 0.88 \)). Self-reported sensory components differed at both Times 1 and 2 (\( p_{rep} > 0.88 \)) and Times 1 and 3 (\( p_{rep} > 0.88 \)). However, there was a Memory Type \( \times \) Time interaction for each rating (\( \eta_p^2 = 0.36, 0.47, \) and \( 0.25 \) for vividness, overall quality, and sensory components, respectively); the decrease in ratings over time reflected a deterioration of the positive memories, but not of the traumatic memories (see Fig. 2). None of the self-ratings at Time 1 correlated significantly with consistency scores over the follow-up period for either memory type. At Time 3, only ratings of overall quality for positive memories were associated with CQ scores, \( r(28) = 0.38, \) \( p_{rep} > 0.88. \)

In response to the question of whether there was a time when subjects were unable to recall their traumatic experiences, 6.9% (2/29), 0%, and 0% responded “yes” at Times 1, 2, and 3, respectively. In response to the question of whether each memory had changed, subjects were more likely to respond “yes” (82.14%) than “no” for positive memories, \( \chi^2(1, N = 29) = 11.57, p_{rep} > 0.99, \) but more likely to respond “no” (82.76%) than “yes” for traumatic memories, \( \chi^2(1, N = 29) = 12.45, p_{rep} > 0.99. \) Finally, subjects reported that they had thought about the trauma more frequently (\( M = 6.32, SD = 0.95 \)) than the positive event (\( M = 3.39, SD = 0.99, \) \( F(1, 27) = 171.27, p_{rep} > 0.99. \))

DISCUSSION
Does trauma exert a unique impact on memory? The traditional clinical argument asserts that trauma actively impairs memory. A second prominent view holds that trauma has no unique effect on memory and that traumatic memories show the same deterioration as other autobiographical memories. Finally, the trauma-superiority view holds that traumatic memories—although vulnerable to misinformation—can be highly reliable over time relative to other memories.

Overall, our results provide strong evidence that traumatic memories are indeed special, but in a manner contradicting the traditional traumatic-memory argument. Subjects’ traumatic memories were not fractured or pushed from consciousness over time. Nor did they fade from memory naturally to the same extent as other events. Rather, traumatic experiences persisted in subjects’ memories, remaining highly consistent years after their occurrence. Violent experiences (including sexual and physical assaults), which one might assume to be optimal contenders for repression or other impairing mechanisms, were no exception. Unlike recent findings with victims of child abuse
(Alexander et al., 2005), our findings indicate that trauma severity is unrelated to memory consistency over time. Although these findings may suggest that trauma in childhood affects memory differently than trauma in adulthood, they more likely reflect a ceiling effect; a criterion for participation in our study was a clinical level of trauma. Unlike traumatic experiences, positive emotional memories exhibited a progressive deterioration, changing dramatically during the follow-up.

Not only were traumatic memories more factually consistent over time than positive memories, but their vividness, quality, and sensory components remained essentially unchanged during the follow-up period. In contrast, these subjective features of positive memories declined substantially with time. It is interesting to note that previous research suggests that memory is positively biased in general (e.g., Walker, Skowronski, Gibbons, Vogl, & Thompson, 2003). It has been argued that this positive bias results from a fading affective bias in which the emotional intensity of positive experiences does not diminish to the extent that the emotional intensity of negative events does (Walker, Skowronski, & Thompson, 2003). Although we did not test this hypothesis directly, we found that the qualities of traumatic memories remained highly consistent even though affective intensity (i.e., IES scores) declined over time.

The sole clinical predictor of traumatic memory consistency was dissociation; higher DES scores predicted lower consistency initially, but this association weakened over the years. Although previous studies have established a relation between dissociation and susceptibility to memory distortion (e.g., Porter, Birt, Yuille, & Lehman, 2000), there is little support for the model suggesting that trauma leads to dissociation, which then leads to memory impairment (e.g., Candel & Merckelbach, 2004). In fact, we found that DES scores did not predict ratings of vividness, overall quality, or sensory components.

Why did traumatic events persist so remarkably well in memory? First, one factor may be that they are highly distinctive experiences that profoundly affect multiple aspects of a person’s functioning. Second, from an evolutionary perspective, memory for a dangerous, perhaps life-threatening experience should be reliable over time in order to facilitate avoidance of a similar situation in the future. Third, positive information and negative information appear to be processed differently on a neurological level. For example, Paradiso et al. (1999) found that observing highly negative stimuli produced activations in subcortical limbic regions, whereas pleasant stimuli activated the prefrontal cortex. Another contributing factor could be the higher frequency of rehearsal for traumatic memories, sometimes manifested as flashbacks. Over time, our subjects continued to think about the trauma more often than the positive experience. Some subjects commented that they wished they could forget the trauma but were haunted by it in memory. One subject even stated, “I thought he was going to kill me. The whole event is just ingrained in my brain, I can remember it all so clearly” (Peace & Porter, 2004, p. 1153), a comment reminiscent of James’s (1890) observation.

Some limitations of this study should be noted. First, given that we used a community sample of trauma victims and given the length of time involved, we were able to locate only 29 of the 49 original subjects. We cannot rule out the possibility that an examination of the entire sample could have yielded different results. Second, as is the case with most studies of traumatic memory, in the absence of video recordings of the original events, we could not establish the ground truth and were limited to examining memory consistency, not necessarily reliability. Third, because we were interested in the general relation between trauma and memory, we examined a variety of traumas and cannot make conclusions about the effects of specific types of trauma (e.g., sexual trauma) on memory (see Alexander et al., 2005). We did not address the possibility that subjects had experienced multiple traumas in their lives (or other potential influences on memory), focusing only on the consistency of memory for a single event and considering the potential influence of the traumatic impact of that experience. Finally, although the traumatic memories were consistent over time, there were a small number of noteworthy inconsistencies in these reports. For example, one subject who witnessed the death of a family member initially recalled that it occurred on a sunny day. Four years later, she recalled that it occurred in the middle of the night. She initially reported that there was only one other witness present, but she later recalled there being three or four. Thus, traumatic memories are certainly not immune from distorting influences (e.g., Nourkova et al., 2004).

In conclusion, trauma does seem to create scars on memory, resulting in remarkably vivid and consistent recollections over long periods. As much as people may wish to forget painful experiences, the details remain fully intact in their consciousness. In contrast, despite people’s rose-colored glasses (e.g., Walker, Skowronski, Gibbons, et al., 2003), the details of the joys of life are vastly changeable.

Acknowledgments—This study was funded by grants to the first author from the Social Sciences and Humanities Research Council of Canada (SSHRC) and the Natural Sciences and Engineering Research Council (NSERC). We thank the subjects for sharing their experiences. We also thank Naomi Doucette and Ainslie McDougall for their invaluable assistance.

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