

Parental Reminiscing About Positive and Negative Events

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We examined how 67 parent-child dyads talked about 2 emotionally laden events: an injury resulting in emergency room treatment and an individually nominated, positively valenced experience. Group differences were found in parental reminiscing between positive and negative events such that parents asked a higher proportion of open-ended memory questions in conversations about negative experiences and a higher proportion of yes-no questions in conversations about positive experiences. Also, parents focused more on emotion when discussing positive experiences with their children and more on causal explanations during the negative conversations. However, individual parents were consistent across event types in both reminiscing style and content. Finally, parental reminiscing style was correlated with children's recall for both types of events such that parents with an elaborative style had children who reported more new information during the conversations. Implications for children coping with stressful experiences as well as future research are discussed.

Everyday we experience an array of emotional events both positive and negative, and we talk about these experiences with others. Reminiscing about emotional events helps us to understand and evaluate our past. As adults, the ability to talk about one's personal past seems effortless, but children need to learn how to convey their life stories to make them comprehensible to the listener. Often for very

young children their first conversations about the past are with their parents. Recent research has demonstrated that the ways in which parents talk with their children about emotionally positive past events plays a large role in children's developing ability to recall their past (Fivush, 1991; Hudson, 1990; McCabe & Peterson, 1991; Peterson & McCabe, 1992, 1994, 1996; Reese, Haden, & Fivush, 1993). Yet little is known about parental influence on children's memories of stressful life experiences. The ways in which parents discuss negative life events with their children may play an important role in how children come to understand and cope with stressful experiences. Thus, the major objective of this study was to explore the similarities and differences in how parents and children discuss both pleasant and stressful events.

Over the past 20 years, psychologists have learned a great deal about children's memory for real-life experiences. Specifically, children as young as 2 years of age are able to recount past events, whether they are repeated or one-time occurrences, in an accurate and detailed fashion (see Fivush, 1997, 1998 and Peterson, in press, for reviews). Moreover, preschool children are able to report memories of personally experienced events even when the events took place more than a year in the past (Hamond & Fivush, 1990; Peterson, 1999; Peterson & Rideout, 1998; Todd & Perlmutter, 1982). However, younger children need more prompting and cueing from adults to recall as much information about the past as older children. In accord with Vygotskian (1978) theory, adults scaffold young children's recall by providing them with cues and prompts that enable the child to report more information than they could on their own. Ultimately, these adult-guided interactions teach children how to independently cue and retrieve memories, thereby facilitating children's developing memory skills.

However, adult-child communication provides the child with more than a way of cueing memories. Young children are also learning a great deal about how to narratively structure past experiences from the comments and questions that adults pose during such conversations (Fivush, 1991; Haden, Haine, & Fivush, 1997; McCabe & Peterson, 1991; Nelson, 1993, 1996; Peterson & McCabe, 1992, 1994, 1996). This coconstructed organization may facilitate children's comprehension of events, thus allowing these memories to remain accessible for conscious recall over time. Through sharing their past with others, children are learning both the forms and functions of remembering (Fivush, Haden, & Reese, 1996; Nelson, 1996). However, not all parents reminisce with their children in the same manner.

A substantial body of research has established clear and enduring individual differences in parental reminiscing styles (Fivush & Fromhoff, 1988; Harley & Reese, 1999; Hudson, 1990; McCabe & Peterson, 1991; Reese et al., 1993). Some parents are highly elaborative, providing a great deal of rich embellished details about the past, whereas other parents are less elaborative, tending to repeat the same questions over and over. Of importance, children of highly elaborative parents come to tell more richly detailed stories of their own past than children of less

elaborative parents. To date, however, research examining parent-child reminiscing has focused on emotionally positive events. It remains unclear if differing parental conversational styles are similar when discussing negative, stressful experiences. This is an important question because the adult literature suggests that how an event is remembered and reported by an individual may in turn affect how they cope with the trauma (Pennebaker, 1997). More specifically, people who produce more descriptive, coherent stories about stressful events demonstrate better coping and ultimately have better long-term physical and psychological outcomes. This may be true for children as well as adults. Sales, Fivush, Parker, and Bahrck (2002) found that children who used more positive emotion words and who included more information overall in their narratives immediately following a devastating hurricane had lower posttraumatic stress scores 6 years later. If parental reminiscing style remains consistent across negative events, then it should be expected that children of elaborative parents would produce more detailed narratives about negative events as well. Similar to the adult literature, a more elaborated memory of negative events may facilitate children's coping with such events. Thus, some parental reminiscing styles may be more beneficial for helping children cope with the stress associated with negative events than others.

Before we begin to examine how parental reminiscing may influence children's memories of negative experiences, it is first necessary to understand how children recall stressful events independently. Research examining children's memories for stressful events has been controversial. A few studies indicate that stress impairs children's recall (Bahrck, Parker, Fivush, & Levitt, 1998; Bugental, Blue, Cortez, Fleck, & Rodriguez, 1992; Merritt, Orstein, & Spicker, 1994; Vandermass, Hess, & Baker-Ward, 1993), whereas others suggest that stress improves event memory (Terr, 1979, 1988) or that stress has no effect on memory at all (Peterson & Bell, 1996). There are several problems with drawing any conclusions from this research. First and foremost, there are no clear-cut measures of stress. Some studies assess stress by rating children's behavior during the event. Other studies ask the child or parent to rate the child's level of stress. Still others use physiological measures including heart rate and cortisol levels. One difficulty is that these different measures of stress are not related to each other (e.g., Parker, Bahrck, Lundy, Fivush, & Levitt, 1998). Moreover, different studies use different measures of memory including free recall, cued recall, and recognition. Further, different aspects of the event are targeted for memory such as central or peripheral information. Finally, different studies have examined events ranging from mildly stressful, such as getting an inoculation, to highly traumatic, such as experiencing a life-threatening natural disaster. Given all these differences in operational definitions, measures, and events studied, it is not surprising that there are inconsistent findings in regards to stress and memory. Moreover, it is possible that stress may influence memory differently at different developmental points, further complicating comparisons across studies.

Effects of stress on coherence of children's accounts are also unclear, with some research showing stressful events reported more coherently (Fivush, Hazzard, Sales, Sarfati, & Brown, 2003) and some research showing stress impaired coherence (Peterson & Biggs, 1998). However, even with all of these considerations, two recent reviews (Fivush, 1998; Pezdek & Taylor, 2001) have concluded that at least the central aspects of stressful events are recalled as well as or better than emotionally neutral or positive events. Moreover, recent evidence indicates that children's memories about stressful events are accurate and enduring (Fivush, Sales, Goldberg, Bahrick, & Parker, 2001; Peterson, 1999; Peterson & Bell, 1996; Peterson & Whalen, 2001).

One additional limitation in drawing conclusions from this literature is that studies have not compared the same children recalling emotionally positive and negative events. In the first study to address this issue, Fivush et al. (2003) examined narratives for stressful and positive past experiences among 5- to 12-year-old children growing up in a violent community. Children were able to report a great deal of information about both types of events, but the content differed. When recounting positive experiences, children reported more objects and people and used more descriptive words, but when recounting negative experiences, they included more information about their thoughts and emotions. The negative narratives were also more coherent than the positive narratives. This pattern suggests that, even if children report the same amount of information quantitatively, children's reports of negative events may differ in content from their reports of positive events, and this content may reflect the ways in which children are trying to make sense out of more stressful or negative experiences.

If joint reminiscing helps children to organize and recall the events of their lives, then the ways in which parents discuss more negative experiences may be critical in how children come to understand and remember these experiences. However, we know very little about how parents and children discuss emotionally stressful events. Goodman, Quas, Batterman-Faunce, Riddlesberger, and Kuhn (1994) assessed how parental self-report about communication and emotional support affected the accuracy of 3- to 10-year-old children's memories for a painful medical procedure. Overall, children were very accurate in their recall, although older children recalled more information, were more accurate, and answered more questions about the procedure than the younger children. Interestingly, Goodman et al. discovered that maternal report of lack of communication and emotional support highly predicted the inaccuracy of the children's memory reports, suggesting that parent-child communication may play an important part in the development of traumatic memory.

Only one study (Ackil, Waters, Dropik, Dunisch, & Bauer, 1999) has directly compared parents and children discussing a traumatic event and an emotionally positive event. Ackil et al. compared mother-child conversations about a devastating tornado with their conversations about a nontraumatic event. Conversations

concerning the tornado included more mention of negative emotion and information about the causes and consequences of the event than did the conversations about the nontraumatic events. However, this study included a relatively small number of mothers and children across a wide developmental age span; therefore, it was difficult to examine developmental differences in any detail. Further, the analyses focused on the content of mothers and children's conversations and did not assess their reminiscing style.

Overall, then, previous research has established that children recall a great deal of information about both emotionally positive and emotionally negative experiences, although the content of what they report may differ. However, whereas research has amply demonstrated that parental reminiscing about positive experiences profoundly affects children's developing memory skills, we know very little about how parents may discuss more stressful events with their young children. The limited research suggests that both parent-child conversations and children's own reports of stressful experiences may differ in content from reports of more emotionally positive experiences. Thus, the major objective of this study was to more fully examine both the style and the content of parent-child conversations about emotionally positive and negative events. The negative event selected was a highly stressful medical event, an injury requiring emergency room treatment, and the positive event was selected by each family to be an event that was distinctive, highly positive, and experienced at about the same time as the stressful event.

Three major questions were addressed. First, do parents discuss positive and negative events similarly during conversations with their children? In particular, do style and content change depending on the emotionality of the event? One might expect the goals of a positive conversation to be rather different from those of a negative conversation. Parents use conversations centered on positive family events to relive happy experiences and strengthen a shared bond within the family. However, parents may focus on the causes and negative emotions surrounding an injury to help the child understand why the injury occurred and to cope with the negative feelings resulting from the incident. Thus, it was predicted that parental reminiscing about positive events may contain more elaborations about the event itself and the positive emotions associated with the event in an attempt to recreate a shared, happy moment. Parental reminiscing about the negative event was expected to be less elaborative and more focused toward teaching the child the cause of the injury that resulted in negative emotions.

We were also interested in individual differences in parental style across the two event types. Do parents who have an elaborative reminiscing style during the positive event conversation remain elaborative during a negative conversation? Parental reminiscing style is very consistent over time and across siblings for talk about positive experiences (Haden, 1998; Reese et al., 1993). Therefore, it is plausible to expect similarities in how individual parents structure their conversations about

negative and positive events, such that a parent who has an elaborative style of reminiscing with her children about positive events would also be elaborative during talk about negative events.

The third question addressed the relations between parental talk and children's recall. Previous research has shown that children of elaborative parents recall more detailed stories of their own past than children of less elaborative parents (Fivush, 1991; McCabe & Peterson, 1991; Peterson & McCabe, 1994, 1996; Reese et al., 1993). Thus, we expected children of highly elaborative parents to recall more information about their past experiences than children of repetitive parents. Similarly, we expected relations between parental and child content. Past research has demonstrated that parents who include emotion talk when reminiscing with their children have children who talk about past emotions more frequently (Kuebli, Butler, & Fivush, 1995). Thus, we expected that style and content of children's talk would be highly related to parental talk. Finally, we were interested in how these patterns may change across the preschool years, as children become more competent at participating in reminiscing.

METHOD

This study is part of a larger, ongoing project conducted at Memorial University of Newfoundland in Canada investigating the accuracy and endurance of children's memories for negative and positive events. Only those aspects of the larger project relevant to this study are described here.

Participants

Preschool children treated for minor medical traumas such as broken bones or lacerations were recruited from the emergency room of the only children's hospital in St. John's, Newfoundland, Canada. Parents and children were approached at the hospital during their emergency room visit, at which time the study was explained to them, consent forms signed, and permission was obtained for contacting them at home to set up home interviews. Approximately 80% of the parents approached agreed to participate. The majority of children were White and from mixed socioeconomic status backgrounds. Sixty-seven dyads were included in analysis. There were 36 boys and 31 girls. Children were divided by age into one of three groups; there were twenty-two 3-year-olds ($M = 36$ months, range = 29–42 months; 11 boys and 11 girls), twenty-one 4-year-olds ($M = 53$ months, range = 49–59 months; 12 boys and 9 girls), and twenty-four 5-year-olds ($M = 65$ months, range = 60–82 months; 13 boys and 11 girls).

Procedure

Two home visits were conducted within 2 weeks of the child's injury. The first home visit consisted of an experimenter interviewing the mother and the child independently about the child's injury and treatment (negative event) and a parent-nominated positive event, as well as completing several questionnaires related to the events. For this study, we focused on the second home visit during which the parent and child discussed the same injury and treatment together, which is the negative event, and the same positive event discussed at the first home visit. In 7 families (two 3-year-olds, four 4-year-olds, and one 5-year-old), the father conversed about these events with their child; in the remaining 60 families, the conversations were between mother and child.

Parent-child interview. The research assistant first helped the parent choose the positive event to be talked about. Parents were instructed to pick a distinctive one-time event that had occurred within the past few weeks, such as a trip to the beach or a recent family vacation. Parents were asked to sit in a quiet place with their child and discuss these two events in as natural a manner as possible. They were also instructed to talk about the negative event first because the primary focus of the larger longitudinal study was children's long-term recall of the negative event. There were no time restrictions for the interview. After the dyad indicated they were finished talking, the parent was asked to rate both the child's and her own emotional reaction at the time of the event on a scale ranging from 0 (*not at all emotional*) to 4 (*extremely emotional*).

Coding

All parent-child interviews were audiotaped and transcribed verbatim. All conversations were broken down into propositional units for coding. A *propositional unit* was defined as an independent clause containing a subject and verb. Only those conversational turns pertaining to the events were coded into mutually exclusive and exhaustive categories adapted from Fivush and Fromhoff (1988).

Parental utterances. Parental utterances were coded on two dimensions: reminiscing style and content. Style captured what types of questions parents asked during the event conversations as well as the amount of new and repetitive information. Content coding examined what type of information parents were providing.

Style coding.

1. Memory question elaboration (MQE): Any question the parent asked that was meant to elicit a new piece of information from the child and also

- contained new information regarding the event in the question (e.g., "Where did you hurt your finger?" when finger has never been mentioned before, and "What sound does a lion make" when the sound of the animal is new information).
2. **Memory question repetition (MQR):** Any question the parent asked that was meant to elicit new information from the child but does not contain any new information in the question (e.g., "What happened to your arm?" when this same question has already been asked).
 3. **Yes-No question elaboration (YNE):** Any question in which the child was required to confirm or negate the new information provided by the parent (e.g., "Did you get stitches on your head?" when stitches are being mentioned for the first time).
 4. **Yes-No question repetition (YNR):** Any question that provided the child with previously discussed information about the event in which the child was required to confirm or negate the information provided by the parent (e.g., "Did you get stitches on your head?" when this information has already been provided).
 5. **Evaluation (EVAL):** A statement that either confirmed or negated the child's previous utterance (e.g., "Right," "Yeah," or "No"). The parent's repetition of a child's previous response was considered an EVAL as well.

Content coding. All questions and statements were coded further into the following content categories:

1. **Event:** Any information that mentioned or referred to the event in general (e.g., "When did you cut your head?").
2. **Emotion:** Any information that referred to emotion (e.g., "You were very scared," Or "Did the beach make you happy?"). All emotion utterances were further coded into positive or negative emotion.
3. **Cause:** Any information that referred to a causal relation (e.g., "Why did you get hurt?" or "What did you do to get hurt?").

Children utterances. All children's utterances were coded into the following categories:

1. **Memory elaborations:** The child provided at least one new piece of information about the event.
2. **Memory placeholder:** The child took a legitimate conversational turn but provided no memory information. These responses could be "yes," "no," or "I don't know," or repetitions of already provided information.
3. **Off topic:** The child switches to a completely different topic.

In addition, children's utterances were also coded into the content categories of event, emotion, and cause.

Following is an example of the full coding of a conversation:

- Mother: What happened to your foot? [coded as an MQE about the event]
 Child: I broke it. [coded as a memory elaboration about the event]
 Mother: What did Kathy do for your foot? [coded as an MQE about the event]
 Child: Well, first she analyzed it. [coded as memory elaboration about the event]
 Mother: Oh, she analyzed it. [coded as an EVAL about the event]
 Child: To see if it was good or not. [coded as a memory elaboration about the event]
 Mother: Did she wrap it up? [coded as a YNE about the event]
 Child: Yes. [coded as a memory placeholder about the event]
 Mother: Were you scared? [coded as a YNE about a negative emotion]
 Child: I cried. [coded as a memory elaboration about a negative emotion]

Several other categories were also coded for, such as clarification questions, metamemory response, and associated talk. Because these types of utterances were infrequent in parent-child conversations and are not theoretically pertinent to this study, they were not included in analyses.

Reliability

Two judges independently coded 25 transcripts (35% of the transcripts). All parent and child utterances were combined across the positive and negative event to compute a reliability score for each dyad. Coders achieved .80 reliability across utterance types according to Cohen's kappa. All discrepancies were discussed between the coders before proceeding. After reliability was obtained, the remaining transcripts were divided between those two people to be coded.

RESULTS

The goals of this study were threefold: to compare the overall style and content of parent-child conversations for positive and negative events, to examine individual differences and consistency between positive and negative conversations, and to investigate the relations between parental style and children's recall for both types of events. To address the first issue pertaining to group differences in reminiscing style and content, a series of multivariate analyses of variance (MANOVAs) were conducted. All significant results were followed up with appropriate univariate tests at the $p < .05$ level. To address the second and third issues, a series of correla-

tions were computed to examine consistency in parent and child utterance types between positive and negative event conversations and also the relations between parental reminiscing style and children's recall.

Preliminary analyses on number of propositions produced by the parents in each event conversation (positive vs. negative) indicated more overall talk in the negative event conversation ($M = 46.51$, $SD = 33.74$) than in the positive conversations ($M = 26.66$, $SD = 17.77$), $t(66) = -6.91$, $p < .001$. Also, analyses on the number of propositions produced by the children in each event conversation indicated more overall talk in the negative event conversation ($M = 30.40$, $SD = 19.66$) than in the positive conversations ($M = 19.79$, $SD = 12.84$), $t(66) = -5.70$, $p < .001$. To adjust for this, all analyses were based on proportions of each specific utterance type over the total number of propositions. In addition, all analyses were conducted both including and excluding the dyads with fathers, and the patterns were the same. Only analyses including the father-child dyads are reported.

Description of Events

The majority of children's injuries were lacerations requiring stitches (35%). However, some of the children had broken bones requiring X rays and casting (21%), cuts that did not require stitches (13%), and various other injuries requiring emergency treatment such as burns or deep bruising (31%). The majority of positive events discussed were family vacations (46%). However, several dyads discussed parties they attended (16%), visits to fairs or amusement parks (11%), visits to petting farms or animal parks (8%), participating in a sporting event (6%), family visiting their home (5%), or other positive experiences (8%). A concern is the comparability of the positive and negative events. Both the positive and negative events discussed were complex, temporally extended events composed of several distinct episodes. For instance, the negative event was comprised of the injury episode, the trip to the emergency room, the treatment, and the return home. The most common positive event was a family vacation, which usually consisted of traveling to the destination, what they saw and did over the duration of the vacation, and returning home.

A more important concern is the level of emotional intensity of the negative versus positive event. Means for emotional intensity were computed from the parent's rating of the emotionality of the events for the children and themselves. The mean parental rating of the children's emotional intensity of the negative event was 2.06 ($SD = 0.85$) and for the positive event was 3.18 ($SD = 0.95$). The mean parental rating of their own emotional intensity for the negative event was 1.59 ($SD = 0.90$) and for the positive event was 3.02 ($SD = 0.90$). Separate t tests conducted on the parent and child scores indicated the positive event was rated as being more emotionally intense than the negative event for both parents, $t(51) = 9.09$, $p < .001$, and children, $t(50) = 5.65$, $p < .001$.

Style Analyses

Parental reminiscing style. To examine parental style, MQEs, MQRs, YNEs, YNRs, and EVALs were analyzed. Table 1 presents all means and standard deviations by utterance type, age, and child gender. A 3 × 2 × 2 × 5 (Age of Child: 3, 4, or 5 years old × Gender of Child × Type of Event: Positive and Negative × Type of Utterance: MQEs, MQRs, YNEs, YNRs, and EVALs) MANOVA was conducted. Type of event and type of utterance were within-subjects factors and gender and age were between-subject factors. Overall, a significant main effect was found for type of utterance, $F(4, 244) = 97.86, p < .001$. However, this main effect must be interpreted within the context of several interactions, between age of child and type of utterance, $F(8, 244) = 2.40, p < .05$; gender of child and type of utterance, $F(4, 244) = 3.78, p < .05$; and a significant interaction between type of event and type of utterance, $F(4, 244) = 2.42, p = .05$.

Separate *t* tests on each utterance type comparing positive and negative events indicated that parents asked a higher proportion of MQEs in the negative event conversations than in the positive conversations and a higher proportion of YNEs in the positive event conversations than the negative conversations (see Figure 1). To examine age effects, one-way ANOVAs were conducted on each utterance type by age. Only MQRs achieved significance, $F(2, 66) = 12.55, p < .001$. Follow-up Tukey post hoc tests indicated parents asked a higher proportion of MQRs with

TABLE 1
Means and Standard Deviations of Parental Style
Utterances by Child Gender and Age

Event	Parental Style Codes	Child Gender											
		Male						Female					
		3- year-old		4- year-old		5- year-old		3- year-old		4- year-old		5- year-old	
		M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Positive	MQE	.20	.09	.27	.12	.24	.10	.20	.08	.25	.16	.28	.15
	MQR	.19	.19	.08	.10	.02	.04	.14	.11	.11	.09	.05	.05
	YNE	.20	.13	.21	.09	.26	.10	.18	.13	.13	.11	.13	.10
	YNR	.04	.06	.08	.10	.04	.06	.04	.04	.04	.05	.03	.03
	EVALS	.29	.18	.29	.15	.30	.15	.32	.14	.34	.14	.41	.11
Negative	MQE	.26	.08	.33	.12	.25	.09	.26	.08	.25	.12	.32	.14
	MQR	.25	.15	.09	.08	.09	.04	.10	.05	.06	.05	.06	.04
	YNE	.17	.12	.16	.07	.20	.10	.13	.06	.15	.08	.15	.07
	YNR	.06	.04	.04	.05	.06	.06	.04	.04	.03	.03	.04	.04
	EVALS	.26	.08	.29	.09	.28	.09	.34	.14	.36	.12	.34	.10

Note. MQE = memory question elaboration; MQR = memory question repetition; YNE = yes-no question elaboration; YNR = yes-no question repetition; and EVALS = evaluation.

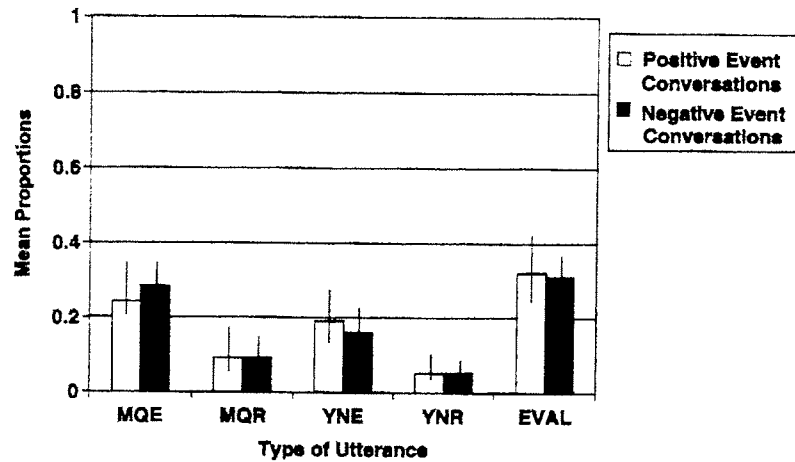


FIGURE 1 Means and standard deviations for each parental style utterance by event type. MQE = memory question elaboration; MQR = memory question repetition; YNE = yes-no question elaboration; YNR = yes-no question repetition; and EVAL = evaluation.

3-year-olds ($M = .15$, $SD = .10$) than with 4-year-olds ($M = .09$, $SD = .07$), and a higher proportion of MQRs with 3-year-olds ($M = .15$, $SD = .10$) than with 5-year-olds ($M = .05$, $SD = .03$). Finally, to examine gender effects, t tests were conducted on each utterance type by child gender. Significant differences were found for yes-no elaborations, $t(66) = 6.90$, $p < .05$, and for evaluations, $t(66) = 6.20$, $p < .05$. Examining the means revealed that parents asked a higher proportion of YNEs with boys ($M = .20$, $SD = .09$) than girls ($M = .15$, $SD = .08$), and parents were proportionally more evaluative with girls ($M = .36$, $SD = .12$) than boys ($M = .29$, $SD = .12$). No other significant main effects or interactions were found.

In summary, parents asked a higher proportion of open-ended memory questions that contained new information during conversations about the negative events and a higher proportion of yes-no questions with new information during the positive event conversations. Not surprising, parents had a more repetitive questioning style with the younger children than the older children. Also, parents seemed to use proportionally more evaluations in their conversation with girls and asked a higher proportion of YNEs with boys.

Children's recall. Figure 2 displays the means and standard deviations for the children's utterances as a function of age of child. Children went off topic infrequently ($M = .06$, $SD = .12$ for positive events, and $M = .07$, $SD = .10$ for the nega-

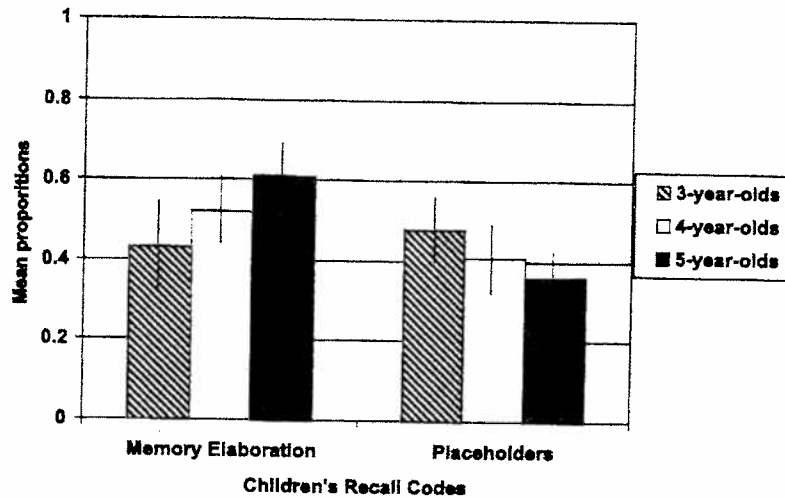


FIGURE 2 Means and standard deviations for children's recall codes by event type.

tive events). A t test comparing these means indicated that children were equally engaged in both conversations, $t(66) = -.30, p = .76$. Because of the low proportion of off-topic talk, it was excluded from further analyses.

To examine children's recall of positive and negative events, a $3 \times 2 \times 2 \times 2$ (Age of Child \times Gender of Child \times Type of Event: Positive or Negative \times Type of Utterance: Memory Elaboration or Placeholders) MANOVA was conducted, with age and gender as between-subject factors and type of event and type of utterance as within-subjects factors. A main effect of type of utterance resulted, $F(1, 61) = 8.01, p < .05$. However, this main effect must be interpreted within the context of an interaction between type of utterance and age, $F(2, 61) = 5.57, p < .05$. One-way ANOVAs examining age effects for each utterance type revealed a significant age effect for both memory elaborations, $F(2, 66) = 6.65, p < .05$ and placeholders, $F(2, 66) = 3.47, p < .05$. Tukey's post hoc tests indicated that 5-year-olds ($M = .61, SD = .19$) reported a higher proportion of memory elaborations than the 3-year-olds ($M = .43, SD = .19$), but the 4-year-old children did not differ significantly from either 5- or 3-year-old children. Also, the 5-year-olds used proportionally fewer placeholders ($M = .36, SD = .15$) during their conversations than 3-year-olds ($M = .49, SD = .17$), but 4-year-old children did not differ significantly from either the 5- or 3-year-old children. In addition, a significant interaction was revealed between type of utterance and gender, $F(1, 61) = 3.88, p = .05$. To examine gender effects, t tests were conducted on each

utterance type by gender. Only memory elaborations approached significance, $t(66) = 3.41, p = .07$. Examining the means suggested that girls ($M = .57, SD = .17$) reported a higher proportion of memory elaborations than boys ($M = .49, SD = .18$). Thus, the older children's conversation contained a higher proportion of unique memory information than the youngest children's conversations, although the younger children were still actively participating in the conversations by repeating information proportionally more than the older children and remaining on topic.

Content Analyses

Parental content. All parental utterances were coded into one of the following content categories: event, emotion, or cause. Because of low frequencies of emotion talk, positive and negative emotion were combined for initial analyses. Proportions were created by dividing the variable of interest by total amount of content talk. Total content talk was obtained by adding the amount of event, emotion, cause, and off-topic talk. Means and standard deviations for these categories for both positive and negative events are displayed in Figure 3. These proportions were entered into a $3 \times 2 \times 2 \times 3$ (Age of Child: 3-, 4-, or 5-Years-Old \times Gender of Child \times Type of Event: Positive and Negative \times Type of Content: Event, Emotion,

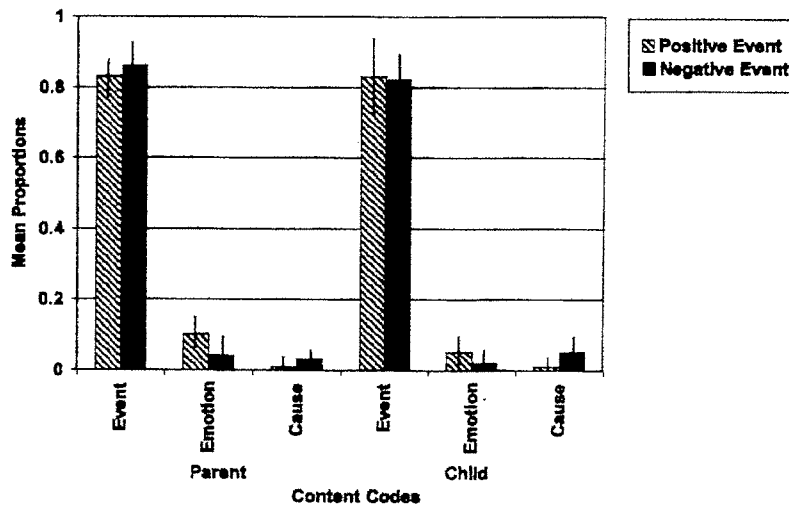


FIGURE 3 Means and standard deviations for parental and child content codes by event type.

or Cause) MANOVA. Age of child and gender were between-subject factors and type of event and type of content were within-subjects factors. A significant main effect of age was found, $F(2, 61) = 3.69, p < .05$, with a higher proportion of parental talk falling into the three content categories of event, emotion, or cause in the conversations with 5-year-old children (total across positive and negative events; $M = 1.93, SD = 0.08$) than the 4-year-old children (total across positive and negative events; $M = 1.84, SD = 0.19$) and the 3-year-old children (total across positive and negative events; $M = 1.84, SD = 0.13$). There was not a significant difference between the 3- and 4-year-olds. Also, a significant main effect of type of content was obtained, $F(2, 122) = 2312.77, p < .001$, which must be interpreted within the significant interaction between type of event and type of content, $F(2, 122) = 14.40, p < .001$. Although, as seen in Figure 3, parents talked proportionally more about the event itself in both event conversations, they also included a higher proportion of emotions in the positive conversations and higher proportion of the cause of injury in the negative conversations.

To explore the type of emotion (positive emotion vs. negative emotion) mentioned in the event conversations, a 2×2 (Event Type: Positive and Negative \times Emotion Valence: Positive and Negative) ANOVA was conducted. Because there were effects of age or gender on emotion talk in the MANOVA, and amount of emotion talk was relatively low overall, we collapsed across age and gender to allow for analyses. An interaction was found between event and emotion valence, $F(1, 66) = 107.06, p < .001$; parents include a higher proportion of positively valenced emotion in the positive event conversations ($M = .72, SD = .42$) than negatively valenced emotion ($M = .05, SD = .19$) and a higher proportion of negatively valenced emotion in the negative event conversations ($M = .43, SD = .45$) than positively valenced emotion ($M = .14, SD = .29$). There were no other significant main effects or interactions.

Child content. Figure 3 shows the means of the three content categories for children by type of event. A $3 \times 2 \times 2 \times 3$ (Age of Child \times Gender of Child \times Type of Event \times Type of Content: Event, Emotion, and Cause) MANOVA yielded a main effect of type of content, $F(2, 122) = 1280.68, p < .001$. However, this main effect must be interpreted within a significant interaction of type of event and type of content, $F(2, 122) = 3.09, p < .05$. Similar to parents, the content of the positive event conversations contained a higher proportion of emotion talk than the negative event conversation, and children provided a higher proportion of causal talk in the negative event conversations. Although children's conversations did contain emotion talk, it was too infrequent to conduct an analysis to examine the valence (positive and negative) of the emotion talk by event type. However, the means obtained from the children who included emotion talk follow in line with the parents such that children included a higher proportion of positive emotion ($M = .75, SD = .40$) than negative emotion ($M = .18, SD = .34$) in the positive event. Also, children

included a higher proportion of negative emotion ($M = .77$, $SD = .42$) than positive emotion ($M = .09$, $SD = .21$) in negative event conversation.

The number of parents and children who actually included emotion and causal talk in their conversations varied by the type of conversation (i.e., positive or negative event conversation). Table 2 contains the number and proportion of parents and children who included positive emotion, negative emotion, and causal talk in their positive and negative event conversations. As can be seen, the number of dyads including emotion and causal information in their conversations follows the same pattern as the group means.

Consistency of Parental Style and Relations to Children's Recall

Parental consistency. The second question addressed was the consistency of parental reminiscing style between positive and negative event conversations. To assess whether individual parents were similar in their discussions of positive and negative events, Pearson's correlations were conducted among parental style and content utterances for both types of events. (Note that a correlation could not be computed for the content category of cause due to the truncated range of causal talk in the positive conversations for both parents and children.) All correlations appear in Table 3. Overall, parental reminiscing style was consistent across events. The only utterance type that was not significantly correlated was yes-no repetitions. Thus, individual parents were reminiscing about these different events in similar ways; parents who provided a great deal of elaborative information during the positive conversations also did so in the negative conversations. Similarly, parents who were more repetitive in the positive conversations were also more repetitive in the negative conversations. Moreover, parents were consistent in the content they focused on. Parents who frequently included emotion in the content of the positive conversation also included emotion in the negative event conversation.

TABLE 2
Number (and Proportion) of Parents and Children
Who Used Emotion and Causal Talk

Variable	Positive Event		Negative Event	
	Parent	Child	Parent	Child
Causal talk	8 (.12)	4 (.06)	36 (.54)	29 (.43)
Positive emotion	51 (.76)	18 (.27)	16 (.24)	3 (.05)
Negative emotion	8 (.12)	6 (.09)	35 (.52)	15 (.22)

Consistency in children's recall. To assess whether individual children were similar in their discussions of positive and negative events, Pearson's correlations were conducted among children's memory and content utterances for both types of events. All correlations appear in Table 3. Overall, children's recall was consistent between events. The only utterance type that was not significantly correlated was emotion. Thus, children who provided large amounts of unique information in the positive event conversations also did so in the negative conversations.

Relations between parental and children's utterances. As shown in Table 4, Pearson's correlations relating parental style utterances (MQEs, MQRs, YNEs, YNRs, and EVALs) to children's recall (memory elaborations and placeholders) were conducted to investigate the relations between parental style of reminiscing and children's recall for both the positive and negative event conversations. Overall, it appears that parental style of reminiscing was related to the information their children recalled. Specifically, parents who had a more elaborative reminiscing style (i.e., more MQEs and evaluations) had children who recalled

TABLE 3
Correlations Between Positive
and Negative Parental and Child Codes

<i>Code</i>	<i>Correlation</i>
Parental	
MQE	.45**
MQR	.33**
YNE	.47**
YNR	.09
EVALS	.64**
Event	.43**
Emotion	.25*
Cause	N/A
Child	
ME	.46**
PL	.48**
Off topic	.39**
Event	.30*
Emotion	.09
Cause	N/A

Note. MQE = memory question elaboration; MQR = memory question repetition; YNE = yes-no question elaboration; YNR = yes-no question repetition; and EVALS = evaluations for the parental code. N/A = correlation cannot be computed. ME = memory elaboration. PL = placeholders for the children's code.

* $p < .05$. ** $p < .001$.

TABLE 4
Relations Between Parental Style Codes and Children's Recall Codes

Parental Style Code	Positive Event Child Recall Code		Negative Event Child Recall Code	
	ME	PL	ME	PL
MQE	.28*	-.27*	.50**	-.37**
MQR	-.26*	.01	-.49**	.28*
YNE	-.29*	.34**	-.05	.21
YNR	-.33**	.25*	-.38**	.30*
EVAL	.41**	-.23	.34**	-.30*

Note. ME = memory elaboration; PL = placeholder; MQE = memory question elaboration; MQR = memory question repetition; YNE = yes-no question elaboration; YNR = yes-no question repetition; EVAL = evaluation.

* $p < .05$. ** $p < .001$.

more unique memory information in both conversations. Furthermore, parents with a repetitive style (i.e., more YNRs and MQRs) tended to have children who provided fewer memory elaborations and more placeholders in their conversations, and these relations were similar for positive and negative events with the exception of the lack of a significant correlation between MQRs and children's placeholders during the positive conversation. Notice, however, that the pattern of correlations for the positive event resulted in more moderately sized correlations than the correlations for the negative event.

Pearson's correlations between the content of parental and children's utterances (see Table 5) revealed that the content of children's recall closely mirrored that of the parents. For positive and negative event conversations alike, when parents' conversations contained more information pertaining to emotion, their children's recall did as well. Moreover, during the negative event conversation when parents talked about the event itself, so did their children. For the negative event conversations, parents

TABLE 5
Relations Between Parent Consent Codes and Child Consent Codes

Parental Content	Positive Event Child Content			Negative Event Child Content		
	Event	Emotion	Cause	Event	Emotion	Cause
Event	.22*	-.31***	.08	.69***	-.26**	-.33***
Emotion	-.01	.43***	-.11	-.17	.53***	.29**
Cause	.05	.05	N/A	-.25**	.03	.72***

Note. N/A = cannot compute correlation.

* $p < .10$. ** $p < .05$. *** $p < .001$.

who focused on the causal aspects of the negative event had children whose recall reflected causal information too.

DISCUSSION

Previous research has established that parental reminiscing style has a profound influence on children's developing autobiographical memory skills. As yet, however, little research has examined parent-child conversations about more emotionally negative or stressful experiences. This is an important research question because the ways in which parents help their young children understand and remember these kinds of experiences may have an effect on children's coping. The results of this research indicate individual consistency of parental style across events but intriguing differences in the overall structure and content of parental reminiscing across these differing emotional contexts.

Similar to previous research on consistency of parental reminiscing style over time (McCabe & Peterson, 1991; Reese et al., 1993) and across siblings (Haden, 1998), we found that parents in this study who were highly elaborative when reminiscing about an emotionally positive experience were highly elaborative when reminiscing about an emotionally negative experience. In addition to style, we also examined the content of these conversations. Parents who focused more on the emotional aspects of positive experiences also focused more on the emotional aspects of negative experiences, suggesting that parents are consistent in the kind of information they select to reminisce about. These findings confirm and extend the idea that parental reminiscing style is a stable aspect of parental conversational style. Moreover, more highly elaborative parents have children who are recalling more during conversations than children of less elaborative parents, and parents who focus on emotions have children who focus on emotions. Although we only assessed concurrent effects of parental style, these results are consistent with findings of parental style and content influencing children's recall both concurrently and over time (McCabe & Peterson, 1991; Peterson & McCabe, 1992, 1994, 1996; Reese et al., 1993; Harley & Reese, 1999).

Of course, consistency is a relative measure; previous research has established that all parents become more elaborative over time as children become increasingly able to participate in reminiscing but that parents maintain their relative level of elaborativeness compared to their peers (McCabe & Peterson, 1991; Reese et al., 1993). This pattern is mirrored in our cross-sectional findings. Parents were more repetitive with younger children than older children, and this pattern held across event types. Related to this, older children contributed more unique memory information than younger children. However, the younger children were still actively involved in these conversations by confirming and repeating already provided information (see

Haden, 1998, for similar data on younger and older siblings). Thus, we see the development of more coconstructed memory conversations across the preschool years.

Also similar to previous research, we found gender differences in the way in which parents reminisced with daughters versus sons (Reese & Fivush, 1993; Reese, Haden, & Fivush, 1993). Specifically, parents were more evaluative with girls than with boys, and girls in turn provided more information in these conversations than boys did. Previous research demonstrated that girls are reporting more detailed information about their past experiences very early in development, even with a nonevaluative unfamiliar interviewer (Fivush, Haden, & Adams, 1995). In line with this argument, parents asked more yes–no questions, which only required a confirmation or negation, with boys than with girls. If boys are less willing and/or able to participate in reminiscing, parents may have needed to provide these more structured questions to keep boys engaged. These findings reinforce the notion that gender is a critical filter through which autobiographical memory must be viewed (see Fivush & Buckner, *in press*, for a full discussion).

Perhaps our most intriguing findings concern the overall differences in parent–child conversations about emotionally positive versus negative experiences. Whereas there was consistency in individual style, as a group parents focused more on open-ended memory questions in conversations about negative experiences and yes–no questions in conversations about positive experiences. Parents also focused more on emotion when discussing positive experiences with their children and more causal explanations when discussing negative events.

Because the negative event was always discussed first, and these conversations were longer than the positive event, these differences may be artifactual. It should be noted that by nature positive and negative events differ in a variety of ways, and although we were able to assess or account for several of these possible sources of variance, there may have been other differences that we did not control that could lead to alternate interpretations of our results. Also, the negative event focused on in this study was a medical emergency; there may be differences between different types of negative events making it hard to generalize from these data to other types of negative events (see Fivush & Sales, *in press*, for a full discussion of this issue). Furthermore, the injury–treatment events were talked about extensively within the family immediately following the event. This is a highly public event and one worthy of a great deal of family story telling; thus, we assume that by the time we collected the mother–child interview, the event had been told and retold numerous times. Indeed, maternal report of family discussion of this event supported this assumption, although of importance, amount of family talk did not vary between the positive and negative events. However, some experiences, and particularly some negative experiences, are more private and are discussed very little if at all. Thus, it is important for future research to replicate these findings with multiple instances of positive and negative experiences and with order of positive and negative events counterbalanced.

However, even given these concerns, we believe that our results reflect real differences for three reasons. First, analyses focused on proportions rather than frequencies, thereby correcting for overall talkativeness and thus making the events comparable. Proportions allowed us to compare the percentage of talk that fell into the categories of interest between the two conversations in spite of the fact that the negative conversations were longer. Second, we examined emotional intensity to see whether the differences could be due to the negative event being more emotionally engaging. We found that the positive events selected were rated as more emotionally intense than the negative events; therefore, differences in amount of talk may not be attributed to the negative event being more emotionally compelling. Finally, the positive conversations could be shorter because of a lack of interest in the topic at hand or disinterest in the task at the time of the second conversation. However, low levels of off-topic talk and no differences in amount of off-topic talk between the two event types suggest that children were just as engaged in the conversations about the positive events and negative events.

Thus, we believe these differences suggest that parents may have different underlying goals in these two emotional contexts. Reminiscing about shared positive experiences serves to create and maintain emotional bonds and helps create a shared history that is a basis for family identity (e.g., Fivush et al., 1996). Thus, in these conversations, parents engage in coconstructing the experience with their children, with each conversational partner contributing information about what occurred. Moreover, a greater focus on emotion, and especially positive emotion, may serve to highlight how this event is meaningful in the context of the parent-child relationship. Emotions regulate relationships (e.g., Fogel, 1993), and discussing one's own and other's emotional reactions to a past experience may help to bond the participants together.

In contrast, discussing negative experiences may serve more of a didactic function. Parents are interested in teaching their children how to cope with stressful experiences and to avoid injury in the future. To facilitate their children's thinking about what happened and why, parents may try harder to get their children to recall the details of the event rather than providing this information themselves and asking for confirmation. Focusing on causal information would help the child understand how and why this stressful event occurred, which would both help to make this event more comprehensible and perhaps provide a lesson on how to prevent similar mishaps in the future, and indeed Ackil et al. (1999) found a similar pattern in their analyses of mother-child conversations about a stressful natural disaster. Finally, by downplaying emotion, parents may be trying to deflect attention from the stressful aspects of the experiences.

Note, however, that Fivush et al. (2003) found that children included more emotion and internal state language when narrating stressful experiences to an unfamiliar adult than emotionally positive experiences. On the other hand, when the experiences are highly stressful, there may be an inverse relation between

stress and emotion language. Peterson and Biggs (1998) assessed children's mention of internal emotional responses as well as other types of evaluation in their narratives about a stressful injury and subsequent hospital treatment to an unfamiliar adult, and they found that when the experience was highly distressing (i.e., children's responses to their injury or treatment were described by their parents as hysterical distress and intense crying), children between 2 and 13 years of age provided little emotional information in their accounts. In contrast, children who had been less distressed (according to parent report) included more evaluative and emotional information in their accounts. Thus, inclusion of emotional information in children's narratives may depend on level of stress experienced as well as conversational partner.

Overall, then, there are both similarities and differences in how parents discuss positive and negative experiences with their preschool children. Parents seem to focus on helping children to recall negative experiences for themselves, with particular emphasis on what caused this event to occur, whereas positive experiences seem to be more coconstructed and focused on positive emotional aspects of the event. Yet individually, parents show consistency of style across these two emotional contexts both in the structure and the content of the conversation, and children's recall closely parallels their parent's style.

These results have important implications for dealing with children who have experienced trauma. If parental style influences children's recall, then when parents discuss traumatic experiences with their children they are shaping their children's memories of the experience. As the adult literature suggests, how an event is remembered and reported by an individual affects how they cope with the trauma and ultimately affects their physical and psychological well-being (Pennebaker, 1997); more so, some parental reminiscing styles may be more beneficial for helping children understand and cope with trauma. Future research should examine how parental reminiscing styles affect children's long-term memory and coping strategies for both one-time traumas such as emergency room visits as well as recurring traumatic experiences such as chronic illness and abuse.

ACKNOWLEDGMENTS

This research was primarily supported by Grant OGP000513 from the Natural Sciences and Engineering Research Council of Canada to Carole Peterson. Additional funding came from the Memorial University Undergraduate Career Experience Program and the Summer Career Placement Program.

We thank Lesley Boland, Maria Fagan, and Sarah Foley for conducting the home visits and Ashli Owen-Smith, Amy Goldberg, Derek Turesky, Justin Rowe, Rachelle Sohern, Debbie Yunker, Jodi Sebso, and many other research assistants

for their help in data transcription and coding as well as in recruitment. We extend our thanks as well to the Janeway Hospital and their Emergency Room staff. Most of all, we are grateful to all of the families who participated in this research.

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