

This article was downloaded by: [Lehigh University]

On: 01 October 2013, At: 11:08

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Journal of Cognition and Development

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/hjcd20>

Predicting the Quality of Mother-Child Reminiscing Surrounding Negative Emotional Events at 42 and 48 Months Old

Deborah Laible^a, Tia Panfile Murphy^b & Mairin Augustine^c

^a Lehigh University

^b Washington College

^c Pennsylvania State University

Accepted author version posted online: 07 Mar 2012. Published online: 31 Jan 2013.

To cite this article: Deborah Laible, Tia Panfile Murphy & Mairin Augustine (2013) Predicting the Quality of Mother-Child Reminiscing Surrounding Negative Emotional Events at 42 and 48 Months Old, *Journal of Cognition and Development*, 14:2, 270-291, DOI: [10.1080/15248372.2011.645972](https://doi.org/10.1080/15248372.2011.645972)

To link to this article: <http://dx.doi.org/10.1080/15248372.2011.645972>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

ARTICLE

Predicting the Quality of Mother–Child Reminiscing Surrounding Negative Emotional Events at 42 and 48 Months Old

Deborah Laible

Lehigh University

Tia Panfile Murphy

Washington College

Mairin Augustine

Pennsylvania State University

Researchers have speculated that a number of factors likely predict the quality of reminiscing between preschool children and their mothers. This study was designed to investigate three such factors, including child temperament, maternal personality, and maternal caregiving representations. Seventy mothers and their preschool children were recruited for the study. When the child was 42 months of age, mothers completed measures of her personality and the child's temperament. Mothers also took part in the shortened Parent Development Inventory, which was coded for coherence, pleasure, comfort, and perspective taking. At both 42 and 48 months, the mother–child dyad reminisced about a past event in which the child experienced a negative emotion. These conversations were coded for the amount of maternal elaboration, the discussion of emotion, and dyadic qualities (such as collaboration and intersubjectivity). At 42 months, aspects of maternal personality and child temperament were most associated with reminiscing quality. However, at 48 months, it was primarily maternal representations of relationships that predicted high-quality reminiscing in the dyad.

There is growing empirical evidence that children's emotional and relational understanding is socialized in the context of parent–child discourse (Brown & Dunn, 1996; Denham, Cook, & Zoller, 1992; Denham, Zoller, & Couchoud, 1994; Laible, 2004a). In the context of everyday

This research was supported by a National Institute of Child Health and Human Development grant to the first author (5R03HD046448-03).

Correspondence should be sent to Deborah Laible, Department of Psychology, Lehigh University, 17 Memorial Dr. East, Bethlehem, PA 18015, USA. E-mail: del205@lehigh.edu

discourse with children, parents help clarify the aspects of social experiences that are not always apparent and are often confusing for young children, including intentions, beliefs, and emotions (Thompson, Laible, & Ontai, 2003). Conversations about emotion begin remarkably early in development, often before the age of 2, and continue throughout the preschool years (Beeghly, Bretherton, & Mervis, 1986; Capatides & Bloom, 1993; Dunn, Brown, & Beardsall, 1991). By discussing emotion with young children, parents can elucidate the causes of emotion, discuss the consequences of emotion, and suggest ways to cope with emotion, all of which are important aspects of emotional competence (Denham, 1998). Thus, it is not surprising that frequent rich discussion about emotion in the toddler and preschool years has been linked with both children's subsequent use of emotional language and their subsequent emotional understanding (Brown & Dunn, 1996; Denham et al., 1994; Dunn et al., 1991).

Research suggests that young children struggle with understanding and coping with negative emotion in particular (Laible & Panfile, 2009). Parent–child discussions about negative emotion might be especially helpful for children in learning how to understand and cope with these more problematic emotions. Research has supported the idea that discourse surrounding negative emotion between parents and children is especially rich. For example, researchers have found that talk about negative emotion more frequently involves in-depth discussion of emotion and its causes, talk about other people and mental states, and sophisticated linguistic skills (Hudson, Gebelt, Haviland, & Bentivegna, 1992; Hughes & Dunn, 1999; Lagattuta & Wellman, 2002). Given that young children (and their parents) often struggle with the child managing negative emotion, it is probably not surprising that discussions about negative emotions between caregivers and children are particularly frequent and complex (Laible & Panfile, 2009).

Moreover, there are reasons to believe that parental discussion of emotion, particularly negative emotion, after the fact (in the context of reminiscing) might be more influential for promoting understanding than discussions about emotion that occur online as children are actually experiencing the emotion (Fivush, Berlin, Sales, Mennuti-Washburn, & Cassidy, 2003; Laible & Panfile, 2009). First, in the context of strong emotion, children's cognitive resources are often preoccupied with managing the emotion, and thus, they have few resources left to attend to and process parental messages about emotion. By discussing children's emotional experiences after the fact, parents can help clarify for children the reasons behind the emotions experienced in a given situation and can help coach children on how to cope with similar emotional experiences in the future (Gottmann, Katz, & Hooven, 1996; Ramsden & Hubbard, 2002). Second, when faced with children's emotions, particularly negative ones, the caregiver's immediate goal may be to manage these emotions and not to socialize emotional understanding. As a result, the type of discourse that occurs when the child experiences strong emotion may not be as rich as the type of emotion talk that happens after the emotional event has occurred. Third, and finally, reminiscing might be especially influential in shaping children's emotional scripts, because of the links that reminiscing is assumed to share with children's developing autobiographical memory and self-concept (Fivush, 1998). Researchers have argued and found evidence for the idea that these early reminiscing conversations between parents and children influence children's early memories of personal experiences (Bauer & Burch, 2004; Farrant & Reese, 2000; Fivush & Vasudeva, 2002; Hudson, 1990; Nelson, 1996). Therefore, by discussing children's experiences with emotion in the past, parents are helping to mold the role that emotion plays in children's developing self-concept and autobiographical memories (Fivush et al., 2003). Thus, by raising emotion during reminiscing, parents help to shape a child's developing emotional self-concept, including how he or she defines himself/herself in

terms of emotion (e.g., “I am mostly a cheerful child”) and the role that the child’s emotions play in influencing others (e.g., “When I am sad, mom is also upset”) (Fivush et al., 2003).

Research supports the idea that high-quality mother–child reminiscing about children’s past emotional experiences, particularly negative ones, relates to children’s emotional and relational understanding. Research has suggested that there are differences in both the style and content of past-event conversations and that these differences have consequences for children’s memory and understanding of those experiences. For example, research suggests that children of elaborative mothers (who discuss rich background detail with the child) have more detailed memories of their past experiences than those children of repetitive mothers (Hudson, 1990; Reese & Fivush, 1993; Reese, Haden, & Fivush, 1993), and when these conversations surround emotion, children of elaborative mothers also display more advanced emotional and social understanding (see Laible, 2004a, 2004b; Laible & Song, 2006). However, these effects have often been strongest when mothers are reminiscing about the child’s past negative emotional experiences (see Laible, 2011). Thus, although a number of studies support the importance of high-quality mother–child reminiscing, particularly surrounding negative events, for promoting children’s emotional and relational understanding, relatively little is known about the factors that promote high-quality reminiscing in mother–child dyads, including the mother’s amount of elaboration and her ability to discuss emotion. As a result, the goal of the current study was to look at a number of factors that should theoretically relate to the quality of mother–child reminiscing: maternal caregiving representations, maternal personality, and child temperament.

Maternal Caregiving Representations

Maternal representations of relationships have most often been studied from an attachment perspective. Bowlby (1984) argued that just as children are predisposed to seek and maintain proximity with a caregiver, parents are predisposed to care for and respond to their child’s bids for proximity and comfort, and thus, parents possess a caregiving system that is complementary to children’s attachment system. Moreover, Bowlby (1982) argued that all behavioral systems are ultimately guided at the cognitive level by internal representations (see also Slade, Belsky, Aber, & Phelps, 1999), and the caregiving system is no exception. Numerous researchers have begun to elaborate on this concept of caregiving representations and have argued that these representations function similarly to internal working models of attachment in children (Bretherton, Biringen, Ridgeway, Maslin, & Sherman, 1989; George & Solomon, 1996; Slade & Cohen, 1996; Solomon & George, 1996). That is, these representations likely influence the parent’s interpretation of the child’s behavior, his/her expectations and feelings about the relationship, and the parent’s actual behavior toward the child (see Slade et al., 1999). Because research on parental caregiving representations is in its infancy, researchers have not yet examined how these representations relate to parents’ expectations for and interpretations of children’s behavior. More work, however, has focused on how parental caregiving representations relate to actual parenting behavior. These studies have found that parents with more balanced, positive, and coherent representations of the child and their relationships (i.e., caregiving representations) are more sensitive, positive, and responsive to their young children and are more likely to have securely attached children than those parents who do not have these representations (Benoit, Parker, & Zeanah, 1997; George & Solomon, 1996; Slade et al., 1999; Sokolowski, Hans, Bernstein, & Cox, 2007).

There are good reasons to believe that mothers who have more coherent and positive caregiving representations might be able to more openly discuss with the child his/her past experiences with negative emotion. Just as with attachment representations, mothers with positive and coherent caregiving representations should be more able to draw upon these representations to openly discuss issues that might be considered threatening to children (e.g., negative affect) compared with mothers with negative or incoherent representations. Moreover, researchers have found substantial links between measures of caregiving representations and mother's Adult Attachment Interview classifications (see Slade et al., 1999), and secure individuals have been found to have more open and coherent communication (especially that surrounding emotion) than insecure individuals (see Bretherton, 1990; Cassidy, 1990; see Laible & Panfile, 2009, for a review). Thus, mothers with secure attachment representations and more positive caregiving representations might also communicate more effectively with their children, especially in situations involving negative affect. Although research examining the links between caregiving representations and mother's discourse with children is lacking in the literature, a preliminary study found that mothers who were secure in the Adult Attachment Interview were more elaborative when discussing the child's past experiences (Reese, 2008).

Personality

To our knowledge, there have been no empirical investigations examining the influence of the maternal personality variables of neuroticism and openness on mother–child reminiscing. Surprisingly, however, research examining the links between maternal personality (especially the Big Five dimensions) and other aspects of mother–child interaction and parenting is also lacking. The limited work that has been done has found links between maternal negative emotionality (and neuroticism) and less competent parenting. In general, research has suggested that neurotic mothers, who are high in negative emotionality, tend to be less warm and responsive parents and tend to be more intrusive, negative, or power-assertive with their children (Clark, Kochanska, & Ready, 2000; Conger, Patterson, & Ge, 1995; Goldstein, Diener, & Mangelsdorf, 1996; NICHD Early Child Care Research Network, 1999). It is important to point out that most of this work, however, has been done with parents who are depressed or experiencing distress. It is less clear whether non-depressed parents high in neuroticism have similar problems, although a couple of studies suggest that they do (Clark et al., 2000; Kochanska, Clark, & Goldman, 1997). Openness has been even less examined as a personality characteristic related to parenting, but preliminary work has found it to be connected with more positive parenting including more nurturance, less restrictiveness, and less negative control (Karreman, van Tuijl, van Aken, & Deković, 2007; Losoya, Callor, Rowe, & Goldsmith, 1997; Metsäpelto & Pulkkinen, 2003). Researchers have speculated that openness may promote problem solving in parents, which might also lead to parents providing more stimulating environments for their children (see Prinzie, Stams, Deković, Reijntjes, & Belsky, 2009).

Therefore, the maternal personality characteristics of openness and neuroticism might also relate to mothers' reminiscing. Mothers who are open (and therefore more creative and sensitive) should be more willing to explore a wide range of emotions with their children during reminiscing. The links that neuroticism shares with maternal behavior during reminiscing about the child's past experiences with negative affect are less clear. On the one hand, these parents might be prone to becoming overaroused when discussing negative emotions, and thus, be less

competent leaders of these conversations. In addition, because neurotic mothers are prone to power assertion, they may dominate the conversation rather than scaffold the discussion for the child. On the other hand, neurotic mothers who are prone to experiencing negative affect may be more competent at scaffolding reminiscing conversations about negative affect, because they frequently have such experiences and have experience coping with them. Both possibilities need to be empirically explored.

Child Temperament

Finally, there are good reasons to believe that children's temperament influences the quality of reminiscing between mothers and children. Children's temperament has been shown to influence maternal behavior in a number of contexts (see e.g., Calkins, Hungerford, & Dedmon, 2004; Gauvin & Fagot, 1995; Kennedy, Rubin, Hastings, & Maisel, 2004; Rubin, Nelson, Hastings, & Asendorpf, 1999) as well as dyadic behavior (Kochanska, Friesenborg, Lange, & Martel, 2004). The research that has been done on child temperament and reminiscing provides preliminary evidence for the idea that child temperament affects both maternal and child behavior in reminiscing (see Bird, Reese, & Tripp, 2006; Laible, 2004a; Lewis, 1999; Smolak, 1986). For example, Lewis (1999) found that mothers who perceived their children to be highly active and less sociable were more likely to be repetitive in memory conversations with their 3-year-old children. Similarly, Laible (2004a) found that mothers were more elaborative with children in a reminiscing task when they perceived their children to be high in effortful control or negative reactivity. Thus, mothers may adapt their reminiscing style to adjust to the child's temperament (Laible, 2004a), either repeating information for children who are active and likely to miss details or elaborating with children who are able to sustain a longer attention or need more emotion coaching (such as children prone to negative emotionality).

In addition, temperamental characteristics of children might also influence children's ability to contribute to these conversations. Thus, children high in effortful control might be able to sustain attention more during these conversations and could therefore contribute more. Similarly, children high in negative reactivity may become too overwhelmed in the context of emotional reminiscing (especially surrounding negative events) to contribute to these conversations. At least one preliminary study supports the influence of child temperament on children's contributions to these conversations (Bird et al., 2006). Bird et al. (2006) found that 5- and 6-year-old children rated high in effortful control by parents were more involved in emotional reminiscing with parents. Although Bird et al. (2006) did not find that negative reactivity by itself was an important predictor of children's involvement in reminiscing, they did find that goodness-of-fit between maternal expected and actual ratings of negative reactivity predicted children's involvement in emotional reminiscing.

Gender

Gender is also an important variable to consider when examining the quality of reminiscing. A number of theorists have argued for the idea that gender roles are socialized within the context of reminiscing (see, e.g., Fivush, Haden, & Reese, 2006). Research examining gender differences in early reminiscing with preschool children, however, has been mixed, with some researchers

finding differences (Bird & Reese, 2006; Reese, Haden, & Fivush, 1996; Reese & Fivush, 1993) and others not (Laible, 2004a, 2004b). When gender differences have been found, however, they have been subtle and may not have been captured by more global coding schemes, and as a result, may have been missed by some researchers. For example, Fivush and colleagues found that mothers used more emotion terms when discussing sad events with sons rather than with daughters (Fivush, Brotman, Buckner, & Goodman, 2000) and that they were more likely to situate emotional reminiscing in an interpersonal context for daughters than sons. In addition, girls have been found to discuss emotion more frequently in reminiscing with mothers than boys, and parents of sons have been shown to discuss anger in more depth than parents of daughters (see Bird & Reese, 2006; Fivush, 1989).

Current Study and Predictions

The goal of this study was to examine factors that predict the quality of reminiscing between mothers and children. In particular, we were interested in examining how maternal caregiving representations, maternal personality, and child temperament related to the quality of mother–child reminiscing surrounding children’s past negative emotional experiences at both 42 and 48 months old, including the amount of maternal elaboration, maternal discussion of emotion, and dyadic quality (such as collaboration and intersubjectivity). We predicted that mothers with positive, coherent, and flexible representations of their children would be more elaborative and more likely to discuss emotion causes and coping in these conversations. We also predicted that mothers who were high in openness but low in negative emotionality would potentially have higher-quality reminiscing conversations with their children. Finally, based on past research (Laible, 2004a), we also expected that children who were high in effortful control and high in negative emotionality would have more in-depth and elaborative discussions of their past negative emotional experiences.

The study was longitudinal and designed to examine the predictors of reminiscing across two time points (at 42 and 48 months of age). These ages were selected because previous researchers have found the quality of reminiscing during the early preschool years to predict concurrent socioemotional development (see Laible, 2004a, 2004b; Laible & Song, 2006). Moreover, there is remarkable growth in children’s ability to contribute to reminiscing across this period (Haden, Haine, & Fivush, 1997; Reese et al., 1993), and as a result, the factors that predict reminiscing quality across this time period might change as children begin to shape these conversations more. For example, temperament might become more influential in shaping reminiscing quality as children begin to direct and control these conversations more.

METHODS

Participants

Seventy mother–child dyads were recruited through archival birth announcements from a mid-sized mid-Atlantic town to participate in a larger study examining the predictors and consequences of mother–child communication about emotions. Letters were sent to mothers of children who would be 42 months old at the time of the first assessment period. To retain

participants for a second assessment 6 months later, mothers were offered small monetary payments at the first assessment and slightly larger payments following the second assessment. Children were given a stuffed animal at each assessment for their participation. Of the participating children, 37 were female and 87.5% were Caucasian. Among the mothers, 70.9% had at least a college degree or higher. Two mother–child dyads dropped out of the study prior to the second assessment.

Overview

Mothers completed self-reports of personality and maternal reports of the children's temperament at 42 months. At 42 months, mothers also took part in the Parent Development Interview (PDI) to assess their representations of relationships. At 42 months and 48 months, mothers and their children took part in a video-recorded laboratory session during which the dyad engaged in 10 minutes of free play as a warm-up task, followed by a reminiscing task. After the reminiscing task, mothers completed the PDI while children were engaged in completing a battery of assessments of their socioemotional development (which are not reported as part of this study).

Reminiscing Task (42 and 48 Months)

The conversations about the child's past negative emotional experiences were elicited following a procedure identical to the one used by Laible and Song (2006). Following the warm-up free play, the researcher notified the mother that she was interested in shared conversations about the child's past emotional experiences. Mothers were asked to think about a recent past emotional event that involved both herself and her child in which her child experienced negative emotion.¹ Mothers were instructed to select one-time events (e.g., an injury or misbehavior) rather than ongoing events (e.g., going to bed) and were asked to evoke the child's memory about the event as naturally as possible. Example events for each of the three primary negative emotions were given (e.g., fear of lightning, being mad at a sibling, or sad at being injured). Mothers generally complied with the request to discuss one-time events. Mothers who discussed ongoing conflicts without any reference to the past were excluded from the analyses, which included two different dyads at each time point. Mothers determined the length of these conversations, which lasted for an average of 48.75 ($SD = 21.32$) conversational turns at 42 months and 43.80 ($SD = 19.68$) conversational turns at 48 months. There were common themes that emerged in these conversations. At 42 months, the vast majority of the conversations (48%) centered on conflicts with peers, parents, or siblings and often involved the child's misbehavior (e.g., aggressive behavior). The remaining involved injuries to the self or other (24%), missing someone or leaving an event/person that the child was enjoying (13%), or being scared of something, such as thunder (10%). At 48 months, the conversational topics were a little more varied; 32% of the conversations centered on issues of conflicts with parents, peers, or siblings, 24% involved an injury to the child or another person,

¹We also asked mothers and children to reminisce about a positively valenced event, but these conversations were not consistently related to temperament, personality, or maternal representations of relationships. Thus, these conversations are not included in the article or analyses.

23% involved missing a person or missing out on an event, and 14% involved events that frightened children.

Coding of mother–child discourse during reminiscing tasks. Verbatim transcripts were made of each reminiscing conversation. From the transcripts, all references to emotions were identified and coded (see Laible, 2004a). References to emotions included words referring to “prototypical” emotional states (e.g., happy, angry, scared) as well as words indicative of emotional states (e.g., crying, laughing, screaming). In addition to identifying references to emotions, three other aspects of emotion references were coded. First, the *number of unique emotions* that mothers and children used in each conversation was coded. In addition, references to *causes of emotion* (i.e., identification of the sources of particular emotions [e.g., “Did mommy make you feel better?”]) were coded. Finally, *emotion-coping references* (e.g., “When you are scared, you can come to me”) were also noted. Two coders independently coded 15 common transcripts. Intraclass correlations between the two raters on the number of emotions, the number of unique emotions, the causes of emotions, and emotion coping per transcript were acceptable ($\alpha = .77-.99$).

To reduce the number of variables, the three codes (unique emotions, causes of emotion, and emotion coping) by speaker were submitted to a principal components analysis. At both 42 and 48 months, a single factor emerged for both speakers on which all types of emotion references loaded positively (all above .46). Thus, for both mothers and children, a single factor emerged, on which references to unique emotions, causes, and emotion coping loaded. However, because there were no significant predictors of children’s discussion of emotion, causes, and coping at either time point, these variables were dropped from the analyses. Mothers typically are the individuals who raise emotion in these reminiscing conversations (see Laible, 2004a). Therefore, it is not surprising that we are unable to predict child references to emotion.

In addition, the mother–child reminiscing tasks at 42 and 48 months were also coded for the quality of maternal elaboration. Elaborative ratings were assigned based on criteria used in previous empirical research (see Laible, 2004a; Laible & Song, 2006). Transcripts were rated on a 5-point scale based on the amount of background description that the mother provided and the quality of the open-ended questions that the mother asked of her child during the negative reminiscing conversations. Mothers low in elaboration (receiving scores of 1 or 2) provided little background detail and asked a series of repetitive yes/no questions. Mothers rated high in elaboration asked frequent open-ended questions of their children and introduced new information on the majority of conversational turns. The intraclass correlations between the two raters on 15 transcripts for elaborative ratings were acceptable ($\alpha = .88$ at 42 months and $\alpha = .93$ at 48 months).

Finally, the reminiscing conversations from both time periods were coded for the amount of collaboration and intersubjectivity using scales adapted from Gini, Oppenheim, and Sagi (2003). Collaboration was rated on a 5-point scale and included the degree to which the reminiscing conversation was truly co-constructed, with both partners contributing to the conversation. Dyads that were low in this quality (rated 1 or 2) had one partner (either the mother or child) who dominated the conversation while the other party provided limited information. Dyads rated high in collaboration (e.g., 4 or 5) had conversations where both partners were active participants. Intersubjectivity included the degree to which dyads had the sense of shared meaning and togetherness in the reminiscing task, which was also rated on a 5-point

scale. Dyads that rated low in this quality (1 or 2) produced narratives that were high in confusion and low in shared meaning and that were disconnected. Dyads that were high in intersubjectivity (rated 4 or 5) created a shared story about the experience and had few instances of incoherence, disconnection, and confusion. The interclass correlations between two raters on 15 transcripts was acceptable ($\alpha = .92$ for collaboration and $\alpha = .91$ for intersubjectivity at 42 months; $\alpha = .92$ for collaboration and $\alpha = .90$ intersubjectivity at 48 months). Because collaboration and intersubjectivity were highly correlated ($r > .65$, $p < .01$), these scores were averaged to create a single index of dyadic quality at each time point (labeled dyadic collaboration and intersubjectivity).

Predictors of Reminiscing (42 Months)

Child temperament. Mothers also completed scales that assess negative reactivity and effortful control from the Very Short Form of the Children's Behavior Questionnaire (CBQ; Very Short Form, Version I, Putnam & Rothbart, 2006). Work from Putnam and Rothbart (2006) suggests that the Very Short Form of the CBQ shows psychometric properties that are similar to the Long Form CBQ, which has been well validated in past research (see Rothbart, Ahadi, Hershey, & Fisher, 2001). The two scales, negative emotionality (12 items, $\alpha = .70$; sample item: "cries sadly when a favorite toy gets lost or broken") and effortful control (12 items, $\alpha = .72$; sample item: "sometimes becomes absorbed in a picture book and looks at it for a long time"), demonstrated adequate internal consistency.

Maternal personality. Mothers also completed two scales from the Big Five Inventory (Versions 4a and 54; John, Donahue, & Kentle, 1991). Although the original measure contains five scales, mothers completed just the scales relevant to openness and neuroticism. Internal consistency on both scales was adequate (neuroticism, $\alpha = .82$, sample item: "I see myself as someone who worries a lot"; and openness, $\alpha = .78$, sample item: "I see myself as someone who likes to reflect, play with ideas").

Maternal representations of relationships. Mothers took part in the PDI short form at the 42-month assessment (Slade et al., 1999). The shortened PDI consists of 25 questions assessing the parent's view of the child, the self as a parent, the relationship, affective experiences of parenting, parent's family history, and the child's experiences with separation/loss. Ultimately, the PDI asks about the mother's experience in "moments of interaction and relatedness" with her child (Slade et al. 1999, p. 613) and is believed to tap the mother's representation of her specific relationship with the study child (Slade et al., 1999). The PDI has been shown to have links with theoretically relevant constructs such as parenting and the Adult Attachment Interview (e.g., Suchman, DeCoste, Castiglioni, Legow, & Mayes, 2008; Trapolini, Ungerer, & McMahon, 2008).

Coding of the PDI was done from audiotapes and detailed notes that were made from those tapes. A number of coding schemes have been used on the PDI, and we chose to code for constructs most theoretically relevant to the quality of mother-child discourse surrounding negative affect. Thus, we coded the interview for the amount of secure base/comfort the mother discussed in the interview, her ability to take the perspective of the child, the amount of joy and pleasure the mother experienced in her relationship with her child, and coherence. Codes regarding the

mother's provision of comfort, her perspective taking, and her joy/pleasure in the relationship with her child were taken from Pianta et al. (1995) and were coded on a 4-point scale. Scores of 0 indicated that the construct was absent from the mother's interview, scores of 1 indicated that the construct was vaguely present, scores of 2 indicated that the construct was clearly present in the interview but not elaborated on or strongly present, and scores of 3 indicated detailed and elaborated evidence of the construct. *Comfort/secure base* behavior was based on the degree to which mothers clearly indicated that they soothed and comforted their child when he/she was distressed or scared. *Perspective taking* was coded as the degree to which the mother was capable of putting herself in the mindset of the child and truly understanding the child's feelings and thoughts. Finally, *pleasure/positive affect* was the degree to which the mother indicated that the relationship she shared with her child involved high amounts of positive affect, affection, happiness, joy, and/or pride. Twenty percent of the interviews ($N = 14$) were independently coded by a second rater, and adequate interrater reliability was obtained. Intraclass correlation coefficients for comfort, perspective taking, and positive affect were .88, .92, and .91, respectively.

In addition, because others have hypothesized that the coherence (i.e., the ability to integrate flexibly a wide range of thoughts and feelings about the relationship with her child) is a key element in predicting the mother's responsiveness and other caregiving behaviors (e.g., Goldberg, Benoit, Blokland, & Madigan, 2003), the PDI was coded for coherence using scales adapted from the Family Narrative Consortium (Fiese et al., 1999). Interviews were coded for three main elements of coherence using 5-point scales: personalization, syntheses, and contradictions. Higher scores on personalization (4 or 5) indicated that mothers provided detailed specific examples when asked to recall memories or examples to back up an assertion (e.g., when a mother provided an adjective of "empathic" to describe her child, she was able to describe a specific instance in which her child provided comfort). Low scores reflected a mother's inability to recollect specific examples to back up her contentions (e.g., when asked to give a memory to support her claim that her child was "loving," a mother suggested that it was nothing specific, he is "just that way"). Higher scores on contradictions represented an absence of contradictions (or that all contradictions are recognized and explained) in the interview, which meant that a mother was consistent throughout the interview in describing her child and her relationship with her child. Thus, for example, a mother would be given a low score if early in the interview, she described her child as easygoing, but then when asked about what she did not like about her child indicated that she did not like the fact that her child angered easily. High scores on synthesizing (4 or 5) were given when mothers used reoccurring themes throughout the interview. For example, a mother who repeatedly emphasized common themes (such as the tolerance of her child's independence) would be scored high as opposed to a mother who did not raise ideas more than once. The three scores were averaged to give a mean coherence rating. Twenty percent of the interviews ($N = 14$) were independently coded by a second rater, and adequate interrater reliability was obtained. Intraclass correlation coefficients for contradictions, personalization, and synthesis were .80, .70, and .80, respectively.

To reduce the number of PDI codes, the four constructs (comfort/secure base, perspective taking, joy/pleasure, and coherence) were submitted to a principal components factor analysis. One factor emerged that was labeled "mother's positive and coherent representations of her relationship with her child" on which all four codes loaded strongly positively (all above .59).

RESULTS

Descriptive statistics of the measures appear in Table 1, and bivariate relations between the constructs appear in Table 2. Bivariate relations suggested that aspects of child temperament related to the quality of discourse. Higher levels of effortful control at 42 months were related to the dyadic quality of reminiscing at both 42 and 48 months (i.e., higher levels of collaboration and intersubjectivity). In addition, higher levels of effortful control were linked with more concurrent elaboration by mothers. A child's negative reactivity was inversely related to concurrent maternal elaboration and her discussion of emotion, causes, and coping. Maternal neuroticism had few links with the quality of reminiscing at both time periods. The one exception was that it was related to less concurrent discussion of emotion, causes, and coping. Maternal openness at 42 months, in contrast, was related to more concurrent elaboration in reminiscing and more concurrent discussion of emotion, causes, and coping by mothers. Openness at 42 months was also weakly significantly related to the dyadic quality (i.e., intersubjectivity and collaboration) longitudinally. Positive maternal caregiving representations were linked with higher levels of maternal elaboration both concurrently and longitudinally. In addition, positive maternal caregiving representations at 42 months were associated with more intersubjectivity and collaboration at 48 months.

Hierarchical regression models were built to predict the dyadic and maternal reminiscing qualities at both 42 and 48 months. Because others have found gender differences in the nature of reminiscing (see, e.g., Fivush & Wang, 2005; Reese et al., 1996), gender was entered on the first step. Gender was only significantly correlated with maternal elaboration at 42 months ($r = -.32$, $p < .01$) and was marginally significantly correlated with dyadic intersubjectivity/collaboration at 42 months ($r = -.29$, $p < .10$). It had no other relations with reminiscing. Maternal education was significantly correlated with maternal elaboration at 42 months ($r = .27$, $p < .05$) and with the amount of collaboration and intersubjectivity at 48 months ($r = .29$, $p < .05$). It was not significantly correlated with the other measures of reminiscing ($r < .21$, $p > .05$). Including mother education in the regression models as a control does not change the pattern of findings and in none of the models did it make a significant independent contribution to predict reminiscing. To preserve the subjects-to-variables ratio, it was omitted from the models. For the models predicting the quality of reminiscing at 48 months, previous reminiscing quality at 42 months was also entered on the first step as a control. Maternal representations, maternal personality, and child temperament variables were entered simultaneously on the second step of the models.² The full models predicting the quality of reminiscing at 42 months appear in Table 3, and the models predicting the quality of reminiscing at 48 months appear in Table 4.

All three full models predicting the quality of reminiscing at 42 months were significant. In the model predicting dyadic intersubjectivity and collaboration, $F(6, 60) = 3.15$, $p < .01$, gender, maternal neuroticism, and effortful control all made significant independent contributions to the model. Maternal neuroticism shared no significant bivariate relationship with this variable; this independent effect was the result of a suppressor effect. Inspection of the variance inflation factors (VIFs) did not reveal a problem with collinearity in the model (all VIFs < 1.27). Further

²Interactions between temperament variables and personality factors were also explored. However, there was no consistent pattern of interactions that emerged. Given the small sample size, we likely do not have the power to test goodness-of-fit concepts in these models. See Bird et al. (2006) for a study that tested goodness-of-fit concepts.

TABLE 1
Means and Standard Deviations (in Parentheses) on Study Variables

	42 months	48 months
Maternal Positive Representations		
PDI coherence ^a	3.91 (0.60)	
PDI security/comfort ^b	1.50 (1.01)	
PDI perspective taking ^b	1.71 (0.99)	
PDI pleasure/positive affect ^b	2.11 (0.78)	
Child effortful control ^c	5.34 (0.73)	
Child negative reactivity ^c	3.95 (0.83)	
Maternal neuroticism ^a	3.00 (0.60)	
Maternal openness ^a	3.60 (0.67)	
Maternal elaboration ^a	2.77 (0.89)	3.30 (1.10)
Dyadic Collaboration and Intersubjectivity		
Dyadic collaboration ^a	2.65 (1.00)	3.02 (1.10)
Dyadic intersubjectivity ^a	2.77 (1.05)	2.93 (1.17)
Maternal discussion of emotion, causes, and coping		
Maternal references to unique emotions	4.12 (2.28)	4.29 (2.22)
Maternal references to emotion causes	2.56 (1.60)	3.18 (2.19)
Maternal references to emotion coping	0.26 (0.47)	0.53 (0.78)
Child discussion of emotion, causes, and coping		
Child references to unique emotions	1.92 (1.32)	2.34 (1.60)
Child references to emotion causes	0.98 (1.14)	1.16 (1.24)
Child references to emotion coping	0.043 (0.20)	0.074 (0.26)

^aScored on a 1- to 5-point scale.

^bScored on a 0- to 4-point scale.

^cScored on a 1- to 7-point scale.

TABLE 2
Bivariate Correlations Between Reminiscing and Potential Predictors

	1	2	3	4	5	6	7	8	9	10	11
1. Maternal neuroticism	—	-.28*	-.26*	.28*	.17	.09	.01	.08	.03	-.33**	-.12
2. Maternal openness		—	.24 ⁺	-.10	.23 ⁺	.24*	-.01	.10	.24*	.45**	.16
3. Maternal positive representations			—	-.27*	.35**	.24*	.42**	.18	.39**	.14	.18
4. Negative reactivity				—	-.05	-.25*	-.21 ⁺	-.17	-.01	-.26*	-.19
5. Effortful control					—	.27*	.11	.32**	.28*	.18	.19
6. Elaboration 42 months						—	.33**	.70**	.27*	.29*	.28*
7. Elaboration 48 months							—	.26*	.39**	-.01	.27*
8. Dyadic quality 42 months								—	.31*	.05	.12
9. Dyadic quality 48 months									—	-.02	.24*
10. Maternal discussion of emotion, causes, and coping at 42 months										—	.33**
11. Maternal discussion of emotion, causes, and coping at 48 months											—

* $p < .05$. ** $p < .01$. ⁺ $p < .10$.

TABLE 3
Regression Models Predicting Reminiscing Quality at 42 Months

<i>Dyadic Intersubjectivity & Collaboration:</i>						
<i>Predictor</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	<i>B</i>
Gender	-.36	.24	-.18	-.49	.23	-.24*
Maternal openness				-.02	.18	.01
Maternal neuroticism				.33	.16	.26*
Effortful control				-.52	.17	.39**
Negative reactivity				-.21	.14	-.18
Maternal positive representations				.05	.13	.05

Note. Model 1 $R^2 = .03$ and Model 2 $R^2 = .24^{**}$.
 $\Delta R^2 = .21^{**}$.
 $*p < .05$. $**p < .01$.

<i>Maternal elaboration:</i>						
<i>Predictor</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.30	.24	-.15	-.18	.22	-.09
Maternal openness				.54	.17	.37**
Maternal neuroticism				-.20	.15	-.15
Effortful control				.14	.16	.10
Negative reactivity				-.23	.14	-.19
Maternal positive representations				-.08	.12	-.08

Note. Model 1 $R^2 = .02$ and Model 2 $R^2 = .29^{**}$.
 $\Delta R^2 = .27^{**}$.
 $**p < .01$.

<i>Maternal discussion of emotion, causes, and coping:</i>						
<i>Predictor</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.30	.24	-.15	-.18	.22	-.09
Maternal openness				.54	.17	.37**
Maternal neuroticism				-.20	.15	-.15
Effortful control				.14	.16	.10
Negative reactivity				-.23	.14	-.19
Maternal positive representations				-.08	.12	-.08

Note. Model 1 $R^2 = .02$ and Model 2 $R^2 = .29^{**}$.
 $\Delta R^2 = .27^{**}$.
 $**p < .01$.

TABLE 4
Regression Models Predicting Reminiscing Quality at 48 Months

<i>Dyadic Intersubjectivity & Collaboration:</i>						
<i>Predictor</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	.10	.24	.05	.01	.24	.01
42-month intersubjectivity/collaboration	.30	.12	.30**	.19	.13	.19
Maternal openness				.25	.18	.17
Maternal neuroticism				.20	.16	.16
Effortful control				.12	.18	.09
Negative reactivity				.11	.15	.09
Maternal positive representations				.38	.14	.35**

Note. Model 1 $R^2 = .08^+$ and Model 2 $R^2 = .26^{**}$.
 $\Delta R^2 = .17^*$.
 $**p < .01$ $^+p < .10$.

<i>Maternal elaboration:</i>						
<i>Predictor</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Gender	-.03	.27	-.01	-.01	.27	-.01
42-month elaboration	.34	.16	.27*	.29	.17	.24 ⁺
Maternal openness				-.20	.20	-.13
Maternal neuroticism				.03	.18	.02
Effortful control				-.12	.19	-.08
Negative reactivity				-.11	.16	-.08
Maternal positive representations				.49	.15	.44**

Note. Model 1 $R^2 = .08^+$ and Model 2 $R^2 = .27^{**}$.
 $\Delta R^2 = .18^{**}$.
 $*p < .05$. $**p < .01$. $^+p < .10$.

<i>Maternal discussion of emotion, causes, and coping:</i>						
<i>Predictor</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	<i>B</i>
Gender	.04	.24	.02	-.02	.25	-.01
42-month discussion of emotion	.33	.12	.33**	.31	.14	.31*
Maternal openness				-.04	.21	-.03
Maternal neuroticism				.12	.18	.09
Effortful control				.19	.18	.14
Negative reactivity				-.11	.16	-.09
Maternal positive representations				.11	.15	.11

Note. Model 1 $R^2 = .10^*$ and Model 2 $R^2 = .15$.
 $\Delta R^2 = .05$.
 $*p < .05$. $**p < .01$.

Downloaded by [Lehigh University] at 11:08 01 October 2013

exploration of the effect suggested that this finding is hard to interpret because it is the result of three variables (openness, positive maternal representations, and children's negative reactivity). Once maternal openness, positive representations, and children's negative reactivity were taken into account, neuroticism predicted more maternal elaboration. The other independent effects were straightforward. Dyads who had boys and those children who were high in effortful control were the most likely to demonstrate high levels of intersubjectivity and collaboration when discussing the child's past negative emotional experiences. In the model predicting maternal elaboration, $F(6, 60) = 4.67, p < .01$, gender, maternal neuroticism, and both child temperamental dimensions made independent contributions to the model. Again, the effect of maternal neuroticism was the result of a similar suppressor effect, and examination of the VIFs indicated no significant problems with collinearity (again, all VIFs < 1.27). The effect this time, however, involved primarily two variables: maternal openness and negative reactivity. Once maternal openness and children's negative reactivity was taken into account, dyadic intersubjectivity and collaboration was predicted by higher maternal neuroticism. Also, boys, children high in effortful control, and those low in negative reactivity had mothers who elaborated the most when discussing the child's past negative emotional experiences. Finally, in the model predicting maternal discussion of emotion, $F(6, 61) = 4.05, p < .01$, it was primarily maternal openness that made a significant contribution to the model. Mothers who were high in openness were more likely to discuss emotion, causes, and coping in the conversations surrounding a child's past negative emotional experiences.

Two of the three full regression models predicting the quality of reminiscing at 48 months were significant, and the pattern of prediction was the same across the two significant models (i.e., dyadic intersubjectivity and collaboration, $F[7, 57] = 3.04, p < .01$, and maternal elaboration, $F[7, 58] = 2.91, p < .05$). The model predicting maternal discussion of emotion was not significant, $F(7, 58) = 1.47, p > .05$. Mothers who had more positive caregiving representations at 42 months elaborated more at 48 months when discussing the child's past negatively valenced emotional experiences. In addition, mothers with more positive caregiving representations at 42 months had reminiscing conversations with their children at 48 months that were higher in collaboration and intersubjectivity. The model predicting the mother's discussion of emotion, causes, and coping was not significant. Despite this, however, the mother's previous discussion of emotion, causes, and coping at 42 months predicted her subsequent use of this type of emotion language at 48 months.

DISCUSSION

The goal of the study was to examine factors that predicted the quality of reminiscing across the early preschool years. Although there is growing evidence that the quality of reminiscing between mothers and children has consequences not just for children's memory of past events, but also their understanding of those events, relatively little research has focused on the types of factors that might predict the quality of reminiscing in the mother-child dyad. Overall, our study suggests that differences in maternal perceptions of children's temperament, maternal personality, and mother's caregiving representations predict the quality of reminiscing between mothers and children at both 42 months and 48 months but that the pattern of results is complex and varies across time.

One of the most consistent predictors of concurrent reminiscing quality was the mother's perception of the child's temperament. Consistent with past research, children's effortful control was related to concurrent reminiscing quality (Laible, 2004a). Mothers who perceived that their children were higher in effortful control elaborated more with their children when discussing their child's past emotional event. In addition, children who were high in effortful control collaborated (and contributed) more to these conversations and were able to achieve more intersubjectivity with their mothers. This finding supports the idea that children whose temperaments are inclined toward having high levels of attention and self-regulation may facilitate the ability of the dyad to discuss the child's past negative emotional experiences (see Laible, 2004a; Lewis, 1999). Moreover, this finding is consistent with past work that found that slightly older children who were rated as high in effortful control by parents also contributed more to reminiscing about their past emotional experiences (see Bird et al., 2006). Children with more active temperaments may be less likely to have such elaborative and meaningful conversations with their mothers, and this may put them at a disadvantage with regards to learning about negative emotion and its regulation.

In addition to effortful control, negative reactivity was related to less maternal elaboration in the 42-month reminiscing conversation. Mothers who perceived that their children were high in negative emotionality may have been less willing to discuss in depth their child's past negative emotional experience for fear of upsetting the child. This finding does suggest that mothers are sensitive to their children's temperamental profile and adapt their parenting as a result (e.g., Gauvin & Fagot, 1995). This finding is also in the opposite direction of Laible (2004a) who found that mothers who perceived their children as high in negative reactivity were more elaborative. This may have to do with the differences in the context of the conversation between the studies. Laible (2004a) asked parents of young children to discuss with children their previous good behavior and misbehavior and did not separate the conversations by the valence of the event. Thus, it is not clear in the previous study if mothers elaborated more with children they perceived to be high in negative reactivity across both the positively or negatively valenced event (i.e., the good behavior and misbehavior) or if they elaborated more just in the negatively valenced event. Thus, more work is needed to sort out how negative emotionality relates the quality of mother–child reminiscing, and researchers need to consider that the valence of the event discussed may impact this link.

Interestingly, with just a few exceptions, maternal personality was not consistently related to the quality of mother–child reminiscing conversations at either time period. Contrary to expectations, maternal neuroticism did not make mothers less competent discussion leaders when discussing their child's past negative emotional experiences. Although bivariate relations revealed a weak negative correlation between maternal neuroticism and concurrent maternal discussion of emotion, emotion causes, and emotion coping, this link was washed out by the much stronger link that maternal openness had with maternal discussion of emotion. Mothers who reported being high in openness were more likely to discuss the causes of negative emotions and ways to cope with negative emotion and were more likely to use unique emotion terms with children at 42 months. Researchers have speculated that parents who are high in openness might be more willing to provide novel experiences and stimulation for their children (see Prinzie, Stams, Deković, Reijntjes, & Belsky, 2009). Our findings support this idea and also suggest that parents who are high in this quality might be more willing to explore difficult topics with their children, such as the causes and regulation of negative emotion. It is less clear why maternal neuroticism had fewer links with reminiscing quality. It is possible that some mothers high in neuroticism

might be too anxious to discuss negative emotion with their children, and thus, be less competent leaders of these conversations, while others who are well-regulated might be quite competent leaders of these conversations. More work is needed to explore these possibilities.

Although temperament and maternal personality had concurrent relationships with the quality of mother-child reminiscing, these predictors did not hold longitudinally. Instead, it was maternal caregiving representations (at 42 months) that predicted the quality of mother-child reminiscing 6 months later. Mothers who had coherent, positive, and secure caregiving representations at 42 months elaborated more with their children when discussing their past negative emotional experiences at 48 months. In addition, having a mother with a positive representation also led to higher levels of intersubjectivity and collaboration in these conversations 6 months later. These findings support attachment theory and suggest that maternal caregiving representations might relate to the ability of the mother to communicate with her child, especially in the context of difficult conversations, such as when discussing the child's past negative emotional experiences. Moreover, these findings are consistent with much of the past research indicating that positive maternal representations are linked with maternal sensitivity (see, e.g., Slade et al., 1999; Sokolowski et al., 2007), and these findings suggest that the benefits of positive and coherent caregiving representations may also relate to more sensitivity in the context of reminiscing. Interestingly, although bivariate relations supported the idea that the link between maternal caregiving representations and quality of reminiscing existed at 42 months, the link was weak enough that it was washed out in regression models by temperamental and personality variables. Across time, however, the link between caregiving representations and the quality of reminiscing became stronger, suggesting that these representations potentially provide a foundation for the subsequent high-quality discussion of negative emotional events.

Gender also related to the quality of mother-child reminiscing, albeit in an unexpected direction. Mothers of sons elaborated more when discussing their child's past negative emotional experiences at 42 months than did mothers of girls, and dyads that were composed of mothers and sons had higher levels of intersubjectivity and collaboration compared with mother-daughter dyads. Research regarding gender differences in reminiscing has been mixed, with some researchers finding no gender differences (see, e.g., Laible, 2004a; Laible & Thompson, 2000) and others reporting differences (see Reese et al., 1996; Reese & Fivush, 1993). However, gender differences also seem to depend on what aspect of reminiscing has been examined. For example, research has found differences in the types of emotions that are emphasized with boys versus girls (e.g., mothers tend to discuss anger more with boys than with girls) (see Fivush, 1989) and has found that parents emphasize interpersonal experiences more with girls than with boys when discussing past emotion (see Fivush et al., 2000). With regards to elaboration, when past researchers have found gender differences, they have typically favored girls (with mothers and fathers of girls being more elaborative than mothers and fathers with boys). Most of the research that has found gender differences in elaboration, however, has been with reminiscing conversations surrounding positive events (see, e.g., Reese et al., 1996). Because boys are typically less competent emotion regulators (see Davis, 1995), it may be that mothers of boys in our sample felt the need to discuss these negatively valenced events more than did mothers of girls to help boys learn to manage negative emotion.

Although these findings are intriguing, there are a number of limitations of the current work that must be acknowledged. First, because the study is correlational, causal attributions must be made with caution. However, it is important to point out that there is growing evidence from

intervention studies that training mothers to use more elaborative reminiscing does have consequences for children's outcomes, especially for children's memory for events and their emotional understanding (see Boland, Haden, & Ornstein, 2003; Reese & Newcombe, 2007; Van Bergen, Salmon, Dadds, & Allen, 2009). Understanding how maternal personality and child temperament influence different qualities of reminiscing may inform and strengthen these intervention efforts. Second, the sample was relatively homogenous and involved mostly middle-class Caucasian families. Thus, the results have limited generalizability. Research has found substantial cultural differences in features of reminiscing between mothers and children, including in the amount of elaboration and in the discussion of emotion (Fivush & Wang, 2005; Wang & Fivush, 2005). Work examining how socioeconomic status relates to reminiscing quality has been less examined, but researchers have speculated that it does likely influence the nature and quality of reminiscing in the dyad (see Fivush et al., 2006, for a discussion of this issue). Finally, future research needs to examine factors that predict the quality of reminiscing between fathers and their children. Although researchers have found few differences in the quality of reminiscing between mothers and fathers (see Reese et al., 1996), it is unclear whether the same factors that predict the quality of reminiscing between mothers and children would affect the quality of reminiscing between fathers and children.

Despite the limitations, our study is one of the first to examine a wide variety of factors that predict the quality of reminiscing between mothers and children. Given the recent speculation that mother–child emotional reminiscing has important consequences for children's development of emotional and relational understanding, it seems important to understand the factors that predict the quality of this reminiscing in dyads. More work on the types of factors that influence the quality of reminiscing in the laboratory and the home setting is needed. It seems likely that many of the factors explored in this study (e.g., child temperament and maternal personality) interact to predict the quality of reminiscing, and future studies will need larger sample sizes to have the power necessary to examine interactions. Other potential factors, however, also likely impact the quality of reminiscing. For example, it might be important to examine how parent socialization goals relate to parental strategies in reminiscing. For example, parents with long-term child-centered socialization goals (see Hastings & Grusec, 1998) might be especially prone to using reminiscing to help children learn how to manage negative affect. In addition, researchers have also speculated that reminiscing might help children to cope with stressful events after the fact (see, e.g., Laible & Panfile, 2009; Sales, 2009). Research examining this issue is scarce (for an exception, see Ackil, Van Abbema, & Bauer, 2003; see also Sales & Fivush, 2005), and more work is needed to understand how the discussion of negative emotional events can help children cope with similar future events. Finally, given the recent work indicating that maternal elaborative reminiscing can be trained in mothers (see, e.g., Boland, Haden, & Ornstein, 2003; Reese & Newcombe, 2007; Van Bergen et al., 2009), it would be interesting to examine whether certain characteristics of mothers (e.g., personality traits) make mothers more likely to endorse and follow through with training. For example, it may be that mothers who are high in openness might be more likely to incorporate reminiscing training into their daily past events conversations with children.

REFERENCES

- Ackil, J. K., Van Abbema, D. L., & Bauer, P. J. (2003). After the storm: Enduring differences in mother–child recollections of traumatic and nontraumatic events. *Journal of Experimental Child Psychology*, 84, 286–309.

- Bauer, P. J., & Burch, M. M. (2004). Developments in early memory: Multiple mediators of foundational processes. In J. M. Lucariello, J. A. Hudson, R. Fivush & P. J. Bauer (Eds.), *The development of the mediated mind* (pp. 101–125). Mahwah, NJ: Lawrence Erlbaum.
- Beeghly, M., Bretherton, I., & Mervis, C. (1986). Mothers' internal state language to toddlers. *British Journal of Developmental Psychology, 4*, 247–260.
- Benoit, D., Parker, K. C. H., & Zeanah, C. H. (1997). Mothers' representations of their infants assessed prenatally: Stability and association with infants' attachment classifications. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 38*, 307–313.
- Bird, A., & Reese, E. (2006). Emotional reminiscing and the development of an autobiographical self. *Developmental Psychology, 42*, 613–626.
- Bird, A., Reese, E., & Tripp, G. (2006). Parent–child talk about past emotional events: Associations with child temperament and goodness-of-fit. *Journal of Cognition and Development, 7*, 189–210.
- Boland, A., Haden, C., & Ornstein, P. (2003). Boosting children's memory by training mothers in the use of an elaborative conversational style as an event unfolds. *Journal of Cognition and Development, 4*, 39–65.
- Bowlby, J. (1982). *Attachment* (2nd ed.). New York, NY: Basic Books.
- Bowlby, J. (1984). *Attachment and loss: Vol. 1. Attachment* (2nd ed.). London, UK: Penguin.
- Bretherton, I. (1990). Open communication and internal working models: Their role in the development of attachment relationships. In R. A. Thompson (Ed.), *Socioemotional development. Nebraska Symposium on Motivation* (Vol. 36; pp. 57–113). Lincoln, NE: University of Nebraska Press.
- Bretherton, I., Biringen, Z., Ridgeway, D., Maslin, C., & Sherman, M. (1989). Attachment: The parental perspective. *Infant Mental Health Journal, 10*, 203–221.
- Brown, J., & Dunn, J. (1996). Continuities in emotional understanding from 3 to 6 years. *Child Development, 67*, 789–802.
- Calkins, S. D., Hungerford, A., & Dedmon, S. E. (2004). Mothers' interactions with temperamentally frustrated infants. *Infant Mental Health Journal, 25*, 219–239.
- Capatides, J., & Bloom, J. (1993). Underlying process in the socialization of emotion. *Advances in Infancy Research, 43*, 112–128.
- Cassidy, J. (1990). Emotion regulation: Influences of attachment relationships. *Monographs of the Society for Research in Child Development, 59*, 228–283.
- Clark, L., Kochanska, G., & Ready, R. (2000). Mothers' personality and its interaction with child temperament as predictors of parenting behavior. *Journal of Personality and Social Psychology, 79*, 274–285.
- Conger, R. D., Patterson, G. R., & Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development, 66*, 80–97.
- Davis, T. (1995). Gender differences in masking negative emotions: Ability or motivation? *Developmental Psychology, 31*, 660–667.
- Denham, S. A. (1998). *Emotional development in young children*. New York, NY: Guilford Press.
- Denham, S. A., Cook, M., & Zoller, D. (1992). 'Baby looks very sad': Implications of conversations about feelings between mother and preschooler. *British Journal of Developmental Psychology, 10*, 301–315.
- Denham, S., Zoller, D., & Couchoud, E. (1994). Socialization of preschoolers' emotion understanding. *Developmental Psychology, 30*, 928–936.
- Dunn, J., Brown, J., & Beardsall, L. (1991). Family talk about feeling states and children's later understanding of others' emotions. *Developmental Psychology, 27*, 448–455.
- Farrant, K., & Reese, E. (2000). Maternal style and children's participation in reminiscing: Stepping stones in children's autobiographical memory development. *Journal of Cognition and Development, 1*, 193–225.
- Fiese, B. H., Sameroff, A. J., Grotevant, H. D., Wamboldt, F. S., Dickstein, S., & Fravel, D. L. (1999). The stories that families tell: Narrative coherence, narrative interaction, and relationship beliefs. *Monographs of the Society for Research in Child Development, 64*(2, Serial No. 257). Malden, MA: Blackwell Publishers.
- Fivush, R. (1989). Exploring sex differences in the emotional content of mother–child conversations about the past. *Sex Roles, 20*, 675–691.
- Fivush, R. (1998). The stories we tell: How language shapes autobiography. *Applied Cognitive Psychology, 12*, 483–487.
- Fivush, R., Berlin, L., Sales, J. M., Mennuti-Washburn, J., & Cassidy, J. (2003). Functions of parent–child reminiscing across negative events. *Memory, 11*, 125–150.
- Fivush, R., Brotman, M., Buckner, J. P., & Goodman, S. H. (2000). Gender differences in parent–child emotion narratives. *Sex Roles, 42*, 233–253.

- Fivush, R., Haden, C. A., & Reese, E. (2006). Elaborating on elaborations: The role of maternal reminiscing style in cognitive and socioemotional development. *Child Development, 77*, 1568–1588.
- Fivush, R., & Vasudeva, A. (2002). Remembering to relate: Socioemotional correlates of mother–child reminiscing. *Journal of Cognition and Development, 3*, 73–90.
- Fivush, R., & Wang, Q. (2005). Emotion talk in mother–child conversations of the shared past: The effects of culture, gender, and event valence. *Journal of Cognition and Development, 6*, 489–506.
- Gauvin, M., & Fagot, B. (1995). Child temperament as mediator of mother–toddler problem solving. *Social Development, 4*, 257–276.
- George, C., & Solomon, J. (1996). Representational models of relationships: Links between caregiving and attachment. *Infant Mental Health Journal, 17*, 198–217.
- Gini, M., Oppenheim, D., & Sagi, A. (2003, April). *Negotiation styles in mother–child narrative co-construction at age 7.5 years: Associations with early patterns of attachment*. Paper presented at Society for Research in Child Development's Biennial Conference, Tampa, FL.
- Goldberg, S., Benoit, D., Blokland, K., & Madigan, S. (2003). Atypical maternal behavior, maternal representations and infant disorganized attachment. *Development and Psychopathology, 15*, 239–257.
- Goldstein, L., Diener, M., & Mangelsdorf, S. (1996). Maternal characteristics and social support across the transition to motherhood: Associations with maternal behavior. *Journal of Family Psychology, 10*, 60–71.
- Gottman, J., Katz, L., & Hooven, C. (1996). Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. *Journal of Family Psychology, 10*, 243–268.
- Haden, C. A., Haine, R. A., & Fivush, R. (1997). Developing narrative structure in parent–child reminiscing across the preschool years. *Developmental Psychology, 33*, 295–307.
- Hastings, P., & Grusec, J. (1998). Parenting goals as organizers of responses to parent–child disagreement. *Developmental Psychology, 34*, 465–479.
- Hudson, J. (1990). The emergence of autobiographical memory in mother–child conversation. In R. Fivush & J. Hudson (Eds.), *Knowing and remembering in young children* (pp. 166–196). New York, NY: Cambridge University Press.
- Hudson, J., Gebelt, J., Haviland, J., & Bentivegna, C. (1992). Emotion and narrative structure in young children's personal accounts. *Journal of Narrative and Life History, 2*, 129–150.
- Hughes, C., & Dunn, J. (1999). 'When I say a naughty word': A longitudinal study of young children's accounts of anger and sadness in themselves and close others. *British Journal of Developmental Psychology, 20*, 515–535.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big Five Inventory: Versions 4a and 54*. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- Karreman, A., van Tuijl, C., van Aken, M. A. G., & Deković, M. (2007). The relation between parental personality and observed parenting: The moderating role of preschoolers' effortful control. *Personality and Individual Differences, 44*, 723–734.
- Kennedy, A. E., Rubin, K. H., Hastings, P., & Maisel, B. (2004). The longitudinal relations between child vagal tone and parenting behavior: 2 to 4 years. *Developmental Psychobiology, 45*, 10–21.
- Kochanska, G., Friesenborg, A. E., Lange, L. A., & Martel, M. M. (2004). Parents' personality and infants' temperament as contributors to their emerging relationship. *Journal of Personality and Social Psychology, 86*, 744–759.
- Kochanska, G., Clark, A. L., & Goldman, M. S. (1997). Implications of mothers' personality for their parenting and their young children's developmental outcomes. *Journal of Personality, 65*, 387–420.
- Lagattuta, K., & Wellman, H. (2002). Differences in early parent–child conversations about negative versus positive emotions: Implications for the development of psychological understanding. *Developmental Psychology, 38*, 564–580.
- Laible, D. (2004a). Mother–child discourse in two contexts: Factors that predict differences in the quality and emotional content of the discourse and the consequences of those differences for socioemotional development. *Developmental Psychology, 40*, 979–992.
- Laible, D. (2004b). Mother–child discourse surrounding a child's past behavior at 30 months: Links to emotional understanding and early conscience development at 36 months. *Merrill Palmer Quarterly, 50*, 159–180.
- Laible, D. (2011). Does it matter if preschool children and mothers discuss positive vs. negative events during reminiscing? Links with attachment, family emotional climate, and socioemotional development. *Social Development, 20*, 394–411.

- Laible, D., & Panfile, T. (2009). Mother-child reminiscing in the context of secure attachment relationships: Lessons in understanding and coping with negative emotion. In J. Quas & R. Fivush (Eds.), *Emotion and memory in development: Biological, cognitive, and social considerations*. Oxford series in affective science (pp. 166–195). Oxford, UK: Oxford University Press.
- Laible, D., & Song, J. (2006). Affect and discourse in mother-child co-constructions: Constructing emotional and relational understanding. *Merrill Palmer Quarterly*, 52, 44–69.
- Laible, D., & Thompson, R. (2000). Mother-child discourse, attachment security, shared positive affect, and early conscience development. *Child Development*, 71, 1424–1440.
- Lewis, K. (1999). Maternal style in reminiscing: Relations to child individual differences. *Cognitive Development*, 14, 381–399.
- Losoya, S. H., Callor, S., Rowe, D. C., & Goldsmith, H. H. (1997). Origins of familial similarity in parenting: A study of twins and adoptive siblings. *Developmental Psychology*, 33, 1012–1023.
- Metsäpelto, R., & Pulkkinen, L. (2003). Personality traits and parenting: Neuroticism, extraversion, and openness to experience as discriminative factors. *European Journal of Personality*, 17, 59–78.
- Nelson, K. (1996). *Language in cognitive development: Emergence of the mediated mind*. New York, NY: Cambridge University Press.
- NICHD Early Child Care Research Network. (1999). Child care and mother-child interaction in the first three years of life. *Developmental Psychology*, 35, 1399–1413.
- Pianta, R., O'Connor, T., Morog, M., Button, S., Dimmock, J., & Marvin, R. S. (1995). *Parent Development Interview: Coding manual*. Charlottesville, VA: University of Virginia.
- Prinz, P., Stams, G. J. J. M., Deković, M., Reijntjes, A. H. A., & Belsky, J. (2009). The relations between parents' Big Five personality factors and parenting: A meta-analytic review. *Journal of Personality and Social Psychology*, 97, 351–362.
- Putnam, S., & Rothbart, M. (2006). Development of Short and Very Short Forms of the Children's Behavior Questionnaire. *Journal of Personality Assessment*, 87, 102–112.
- Ramsden, S., & Hubbard, J. (2002). Family expressiveness and parental emotion coaching: Their role in children's emotion regulation and aggression. *Journal of Abnormal Psychology*, 30, 657–667.
- Reese, E. (2008). Maternal coherence in the Adult Attachment Interview is linked to maternal reminiscing and to children's self-concept. *Attachment & Human Development*, 10, 451–464.
- Reese, E., & Fivush, R. (1993). Parental styles of talking about the past. *Developmental Psychology*, 29, 596–606.
- Reese, E., Haden, C. A., & Fivush, R. (1993). Mother-child conversations about the past: Relationships of style and memory over time. *Cognitive Development*, 8, 403–430.
- Reese, E., Haden, C., & Fivush, R. (1996). Mothers, fathers, daughters, sons: Gender differences in autobiographical reminiscing. *Research on Language and Social Interaction*, 29, 27–56.
- Reese, E., & Newcombe, R. (2007). Training mothers in elaborative reminiscing enhances children's autobiographical memory and narrative. *Child Development*, 78, 1153–1170.
- Rothbart, M. K., Ahadi, S. A., Hershey, K. L., & Fisher, P. (2001). Investigations of temperament at 3–7 years: The Children's Behavior Questionnaire. *Child Development*, 72, 1394–1408.
- Rubin, K. H., Nelson, L. J., Hastings, P., & Asendorpf, J. (1999). Transaction between parents' perceptions of their children's shyness and their parenting styles. *International Journal of Behavioral Development*, 23, 937–957.
- Sales, J. (2009). Creating a context for children's memory: The importance of parental attachment status, coping, and narrative skill for co-constructing meaning following stressful experiences. In J. Quas & R. Fivush (Eds.), *Emotion and memory in development: Biological, cognitive, and social considerations*. Oxford series in affective science (pp. 196–220). Oxford, UK: Oxford University Press.
- Sales, J., & Fivush, R. (2005). Social and emotional functions of mother-child reminiscing about stressful events. *Social Cognition*, 23, 70–90.
- Slade, A., Belsky, J., Aber, J. L., & Phelps, J. L. (1999). Mothers' representations of their relationships with their toddlers: Links to adult attachment and observed mothering. *Developmental Psychology*, 35, 611–619.
- Slade, A., & Cohen, L. J. (1996). Processes of parenting and the remembrance of things past. *Infant Mental Health Journal*, 17, 217–238.
- Smolak, L. (1986). Child characteristics and maternal speech. *Journal of Child Language*, 14, 481–492.
- Sokolowski, M. S., Hans, S. L., Bernstein, V. J., & Cox, S. M. (2007). Mothers' representations of their infants and parenting behavior: Associations with personal and social-contextual variables in a high-risk sample. *Infant Mental Health Journal*, 28, 344–365.

- Solomon, J., & George, C. (1996). Defining the caregiving system: Toward a theory of caregiving. *Infant Mental Health Journal, 17*, 183–197.
- Suchman, N., DeCoste, C., Castiglioni, N., Legow, N., & Mayes, L. (2008). The Mothers and Toddlers Program: Preliminary findings from an attachment-based parenting intervention for substance-abusing mothers. *Psychoanalytic Psychology, 25*, 499–517.
- Thompson, R., Laible, D., & Ontai, L. (2003). Early understandings of emotion, morality, and self: Developing a working model. In R. V. Kail (Ed.), *Advances in child development and behavior* (Vol. 31; pp. 137–171). San Diego, CA: Academic.
- Trapolini, T., Ungerer, J., & McMahon, C. (2008). Maternal depression: Relations with maternal caregiving representations and emotional availability during the preschool years. *Attachment and Human Development, 10*, 73–90.
- Van Bergen, P., Salmon, K., Dadds, M. R., & Allen, J. (2009). The effect of mother training in emotion-rich, elaborative reminiscing on children's shared recall and emotion knowledge. *Journal of Cognition and Development, 10*, 162–187.
- Wang, Q., & Fivush, R. (2005). Mother–child conversations of emotionally salient events: Exploring the functions of emotional reminiscing in European American and Chinese families. *Social Development, 14*, 473–495.