

NIX, KAREN LEIGH. Ph.D. WE REMEMBER: CONVERSATIONAL AND NARRATIVE DISCOURSE DURING MOTHER AND CHILD REMINISCING (2024)

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A specialized form of child narrative arises when parents discuss shared memories with their children. Reminiscing studies examine adult conversation style when caregivers and children recount shared memories together, such as family trips or unique experiences. Children of highly elaborative (HE) mothers use more autobiographical details and more propositions in their personal narratives and conversation with their caregivers than those of less elaborative (LE) mothers (Fivush et al., 2006; Reese et al., 1993). Few studies have examined mother and child reminiscence as both narrative and conversational discourse. Between the ages of 4 and 6, children are still developing narrative and conversation skills. During reminiscing, mothers scaffold children by creating a cohesive and coherent narrative and sustaining a conversation.

The present study investigated how maternal elaborative style was associated with narrative co-construction and conversational interaction during mother and child reminiscence. Results indicated the HE mother and child dyads use more complex narrative elements and structures than LE dyads. Children in HE dyads use more complex and complete narrative contributions than LE children. HE dyads sustained longer reminiscing conversations and HE mothers used twice as many affirmations and questions as LE mothers, although HE and LE mothers used measured speech acts in proportion with one another. Children in HE dyads engaged in narrative construction and conversational interactions that stretched developmental expectations.

WE REMEMBER: CONVERSATIONAL AND NARRATIVE DISCOURSE
DURING MOTHER AND CHILD REMINISCING.

by

Karen Leigh Nix

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Approved by

Dr. Alan Kamhi
Committee Chair

DEDICATION

This dissertation was inspired by my late grandfather, Grady Staton, who wrote his memoir, "I Remember," by hand in his kitchen when I was a little girl, stopping to tell me stories of running from the neighbor's bull as a child or getting stuck picking cotton in Dallas when he tried to make it to California to sing with a band. He was educated in a one-room schoolhouse and never made it past the eighth grade. I was honored to carry on his tradition of writing and storytelling with this work, and I am honored to pass on his stories to my husband Brad and son Enzo, who supported me on this journey.

APPROVAL PAGE

This dissertation written by Karen Nix has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair

Dr. Alan Kamhi

Committee Members

Dr. Jennifer Coffman

Dr. Jessica Obermeyer

Dr. Denise Tucker

June 21, 2024

Date of Acceptance by Committee

April 30, 2024

Date of Final Oral Examination

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CHAPTER I: INTRODUCTION

Statement of the Problem

Children's developing language has been examined in many ways. Many studies focused on developing syntactic, morphologic, and semantic aspects of language (Brown, 1973; Hadley, 2020; Nagy & Townsend, 2012; Rice & Warren, 2004). However, in the last 30 years, children's developing narrative abilities have received considerable attention (Applebee, 1978; Bliss & McCabe, 2012; Justice et al., 2010; McCabe & Rollins, 1994). These studies have shown that child narrative language skills are a unique window into child development, incorporating not just linguistic complexity but also a developing sense of temporal and causal relationships for events and firsthand experiences (Bliss & McCabe, 2012; Reese et al., 2011; Westby, 1984; Westby & Culatta, 2016).

One specialized form of child narrative arises when parents are discussing shared memories with their children. Reminiscing studies examine adult conversation style when caregivers and children recount shared memories together, such as family trips or unique experiences. Children of highly elaborative mothers use more autobiographical details and more propositions in their personal narratives and conversation with their caregivers (Fivush et al., 2006; Reese et al., 1993). Few studies have examined mother and child reminiscing as both narrative and conversational discourse. Kelly (2018) and Kelly and Bailey (2013) found it is challenging for young children to sustain a reminiscing conversation. Between the ages of 4 and 6, children are still developing narrative and conversation skills. Therefore, during reminiscing, mothers scaffold children in both creating a cohesive and coherent narrative and sustaining a conversation. However, the characteristics of maternal talk vary. Some maternal prompts elicit

the child to recount events and details, and some elicit the child to give evaluative information (Kelly & Bailey, 2013). Other maternal prompts seem less effective and are not followed at all by child contingent remarks (Kelly, 2018). Kelly (2018) linked an increased child use of narrative elements and child contingent remarks with maternal utterances that extend and expand child utterances. While their work sheds light on the language utilized by mothers during reminiscing, they did not examine the role of maternal elaborative style in maternal prompts or child utterances. The present study examined how maternal elaborative style is associated with differences in narrative co-construction and conversational interaction during mother and child reminiscing.

CHAPTER II: LITERATURE REVIEW

This literature review examines the development of personal narrative language skills of typically developing young children ages 4-6 in the context of maternal reminiscing conversations. It begins with a review of traditional narrative development frameworks by Applebee (1989) and story grammar skills described by Stein and Glen (1979). Next, it addresses how those concepts align with personal narrative and autobiographical memory skills in contrast to traditional narrative retelling skills. Finally, it addresses the co-construction of a personal narrative within a maternal reminiscing conversation (Fivush et al., 2006; Kelly, 2018; Kelly & Bailey, 2013; Langley et al., 2017).

The Personal Narrative is a Unique Developmental Skill

The personal narrative is simply retelling one's own experiences. It requires the linguistic complexity of the traditional complete narrative (Applebee, 1978), for example, talking about causal and temporal connections (Applebee, 1978; Bliss & McCabe, 2012; Fivush, 2011; Reese et al., 2011). However, this more personal connection of self, time, and causation is impacted by autobiographical memory skills sensitive to self-reflection and placement of self in a larger narrative of self in the world (Fivush, 2011; Habermas & de Silveira, 2008; Langley et al., 2017; Plotka & Wang, 2019). Thus, it is vital in this review to outline traditional narrative development from fictional narrative retell literature and the personal narrative development of young children using examples from literature in child language and autobiographical memory development.

From Heaps to High Points – Evaluation Emerges

One of the earliest studies to describe child narrative development was Applebee (1989), who identified four levels: heaps, sequence stage, primitive narratives, unfocused and focused chains, and the complete narrative. The familiar beginning, middle and end of a story may not emerge until age five, and the complete narrative with a problem and resolution appears next at about age six (Bliss & McCabe, 2012; McCabe & Rollins, 1994; Peterson & McCabe, 1983). Stories begin in “heaps” or piles of details and unconnected events. These can emerge early, at about ages two to three, depending on communication skills (McCabe & Rollins, 1994). Over time, children become more adept in centering a narrative around a central or core concept (Applebee, 1978) and these “heaps” of information move from unfocused to focused chains.

One of the first personal connections to emerge in a young child’s narrative is the “high point.” This is more than leaping ahead to the most exciting part of the story; it is a glimpse of the child making reflective connections in a personal narrative. The evaluative comments in a high point are centered around the problem and the feelings and actions taken in resolution of the problem. From ages seven to nine, children make multiple evaluative comments in their recounts (Peterson & McCabe, 1983). However, the high point evaluative comments collect around the problem or big event in a story. Here the child is placing an event within a context that includes causation, interdependence, and reflection (Bliss & McCabe, 2012; McCabe & Rollins, 1994). This judgment and connection are necessary for the emergence of complex interrelated episodes in later school years for both story retelling and personal narrative skills.

Leap Frog and Chain Narratives – Early Sequences and Insights

Between ages two and four, children may not recount enough events or connections for a completed narrative. They may instead tell a “Leap Frog narrative” of two to four events out of sequence. Next emerges an unfocused chain, which contains a series of loosely connected events. The sequence of events is forward; events unroll in sequence from beginning to end (Bliss & McCabe, 2012; McCabe & Rollins, 1994; Peterson & McCabe, 1983). So, while children may not yet make causal connections in a story, they relay events and actions in an accurate order (Stein & Glenn, 1979). This unfocused chain shows the emergence of story grammar elements but still lacks major elements, notably a resolution (Westby, 1984).

Many children ages four to five can tell a story in order. This is a chain narrative, with many recognizable story elements and a forward, accurate retelling of temporally linked events (Stein & Glenn, 1979). It resembles a complete narrative but lacks the depth of a complete narrative, specifically descriptions of intent and causation (Borovsky & Elman, 2006; Trabasso & van den Broek, 1985; Westby, 1984).

The Complete Narrative – How, Why, And When

Typically, children enter kindergarten in the U.S. at about age five with the ability to tell a chain narrative. Narratives are arranged around a central event or problem and the associated actions of characters, followed by the outcome (Fivush, 2011; McCabe & Rollins, 1994; Peterson & McCabe, 1983). Younger elementary children use abbreviated episodes and begin to flesh out the details with more sophisticated semantic and morphosyntactic skills, such as adding feeling and thinking words (think, know) and adding dependent clauses. For example, when describing a trip to an amusement park it is less complex to say, “the big ride” versus “the big ride that goes up in the air and spins around (see p. 25).” Over time, younger elementary students

can expand those details. They shift from abbreviated episodes to more robust complete episodes. There is an initiating event and more complexity in the ensuing actions and consequences (Stadler & Ward, 2005; Westby & Culatta, 2016).

At this early stage (about ages five to six), children lack the developmental schema for insight into the how and why of a narrative and may be constrained in the representation of self, purpose and others (Berman et al., 1994; Reese et al., 2011). In fictional retelling, they demonstrate a plot still developing in temporal links, causality, and depth of insight into the character's actions and motivations. Characters have more dimensional feelings, and time is more accurately sequenced. The resolution associated with a true narrative, tidying up and telling how everyone lived happily ever after emerges around age six (Bliss & McCabe, 2012; McCabe & Rollins, 1994; Peterson & McCabe, 1983). This is the complete narrative, with accurate and insightful retelling of events, including what might happen next (Gillam et al., 2017, 2018; Westby, 1984). During the early stages of the complete narrative children use elements of coherence and cohesion that allow them to be accurate in depicting temporal and causal relationships (Channell et al., 2018; Pinto et al., 2016). However, at the early stage, around ages five to six, children may struggle with understanding the how and why of a story, as well as with representing themselves, goals, and other characters (Berman et al., 1994; Reese et al., 2011). When retelling fictional stories, they may still be developing their understanding of the plot in terms of time sequences, cause-and-effect relationships, and the depth of insight into the characters' actions and motivations. Around the age of six, children start to use a more complete narrative structure, including the classic resolution where everything ends happily ever after (Bliss & McCabe, 2012; McCabe & Rollins, 1994; Peterson & McCabe, 1983). This entails

accurately and insightfully recounting events and explaining why and how they occurred, as well as predicting what might happen next (Gillam et al., 2017, 2018; Westby, 1984).

Narrative language development does not end with the rise of the complete narrative. Children master all story grammar elements by age 10 with coherence and cohesion (Nippold, 2016). By late elementary/early adolescence, children can tell a complex narrative with multiple sequential episodes. Narrative language skills are a lifelong journey, and there is a complex interaction of life and literary experiences that interact with narrative skill development (Bliss & McCabe, 2006; Habermas & de Silveira, 2008; Westby & Culatta, 2016).

Personal Narrative and Narrative Retell

Much of the literature describing the development of the complete narrative is associated with story retelling, not a personal recount. It places narrative development in a linguistic framework (Applebee, 1978) and a literary context (Stein & Glenn, 1979). It lacks the attention to both autobiographical memory and the sociocultural context necessary to describe the development of the personal narrative (Fivush, 2011; Reese et al., 2011; Westby & Culatta, 2016).

The personal narrative develops like the traditional narrative yet requires the integration of autobiographical memory skills not taxed in retelling a fictional narrative. Children can retell a story in order by age five or six but may not be able to tell a personal story in order until age 8 or later (Habermas & de Silveira, 2008). Whereas children typically acquire and master the language skills necessary for a complete narrative between ages four and six, their personal narrative skills may lack the depth and accuracy reflected in their narrative retelling skills. Overall, in the elementary years, children are still developing the ability to tell longer and more reflective personal narratives. The multi-episodic personal narrative may need significant support

or revision for accuracy, particularly below ages eight to ten (Ackil et al., 2003; Bauer, 2015; Bauer et al., 2007; Fivush, 2011).

Sociocultural Influences on Personal Narrative

Personal narratives reflect complex sociocultural influences. Gender is associated with narrative style. Girls have been found to use more descriptions, more emotional words, and longer utterances in their personal stories (Reese et al., 2011; Westby & Culatta, 2016). Race and ethnicity have long been studied in linguistics and in language development and variations in personal narrative style (Heath, 1983). Heath (1983) gives the most famous examples of child personal narrative style influenced by African and Southern gospel oral traditions. She describes a child's narrative as a performance using associative connections rather than a linear causal structure.

Children may use a more individualistic or collectivist approach to personal narrative based on their cultural expectation. Traditionally, Western and European children use a narrative style more focused on themselves as an individual. Yet other cultures may use a collectivist or participatory style. Plotka and Wang (2019) reviewed multiple studies of children of Latino, Yiddish, Turkish and Chinese heritage and found these children created narratives with an emphasis on their family or community and less emphasis on linear, descriptive retells of events (Plotka & Wang, 2019).

Reminiscence – Linking Autobiographical Memory and Personal Narrative

One area of research that examines the diverse developmental skills required in both personal narrative and autobiographical memory is maternal reminiscing. Maternal reminiscing (MRM) studies have accumulated a body of research supporting the role of mothers' conversational style in improved child outcomes in memory, language, literacy, and

socioemotional skills (Fivush et al., 2006). Substantial literature links elaborative maternal reminiscing to improved skills in later autobiographical memory skills (Bauer, 2015; Fivush, 2011; Nelson & Fivush, 2004; Reese, 2014).

Autobiographical skills such as recall of details, placing events on a timeline, and connecting an event to oneself (Nelson & Fivush, 2004; Reese et al., 2011) are also personal narrative skills (Applebee, 1978; Bliss & McCabe, 2012; McCabe & Rollins, 1994). Maternal elaboration scaffolds an emerging complete narrative. Specifically, attention to time, causality, and personal connections, which are vital in the early high point narrative and the later complete narrative, are featured in elaborative maternal reminiscing conversations. (Bauer, 2015; Habermas et al., 2010; McCabe & Rollins, 1994; Peterson et al., 2014). This connection between autobiographical memory and personal narrative leads to the closing section of this literature review discussing maternal elaboration as a facilitator of not just child autobiographical memory skills but also child personal narrative and conversation skills.

Reminiscence and maternal elaboration

Maternal reminiscing (MRM) studies examine maternal conversation styles during reminiscing conversations between mothers and their children. Mothers are prompted to engage their children in conversations about a shared experience yet avoid talking about a scripted routine like a birthday party (Fivush et al., 2006). Conversation styles are characterized as highly and less elaborative based upon the number and types of utterances produced by the mother. “A highly elaborative reminiscing style is composed of several features: open-ended elaborative questioning, confirmations, provision of new information, and a willingness to follow in on children’s memory provisions” (Cleveland & Reese, 2005, p. 377). Elaborative mothers keep the conversation going. They reinforce the turns and contribution of the child. They

scaffold, affirm, or embellish a story of a shared experience (Reese et al., 1993; Fivush et al., 2006; Langley et al., 2017; van der Kaap-Deeder et al., 2020). Longitudinal studies confirm that elaborative mothers stay elaborative as their children develop and maternal elaborative style stabilizes during preschool years (Fivush et al., 2006; Kulkofsky, 2011).

There is no single model or definition of maternal elaboration. Measures of elaboration vary by theoretical influences and research aims. Reese et al. (1993) coded maternal utterances as elaborations, repetitions, evaluations, associative talk, metamemory comments and off-topic talk in their study. Langley et al. (2017) expanded the work of Reese et al. (1993) to include meta-memory talk and maternal confirmations of child contributions during conversation. Their findings confirm a positive association between high maternal elaboration and memory, specifically autobiographical and declarative memory. With the additional emphasis on metamemory modeling and cueing, their work suggests a highly elaborative mother is teaching their child how to remember. Talking about remembering encourages skills in children that lead to better abilities to use memory strategies. It is likely that the same scaffolding of memory skills is also evident in narrative skills.

Maternal Elaborative Style and Language

Spoken language has frequently been included as a variable in reminiscing studies, but studying child or adult language has not been the purpose of research in reminiscing. In reminiscing studies, child language skills have been measured using single word receptive or expressive vocabulary skills (Hedrick et al., 2009) or more comprehensive standardized measures of child expressive and receptive language skills (Langley et al., 2017). These were stand-alone measures and not taken from the conversation transcripts utilized in measures of maternal language or elaboration.

Within reminiscing conversation, child and adult utterances have traditionally been coded as elaborations or as propositions (Cleveland & Reese, 2005). Propositions, while powerful indications of language or memory content, do not offer insight into the structures typically studied in child language or child narrative development. Visual inspection of reminiscing conversation transcripts, such as those in Cleveland and Reese (2005), show that both parent and child utterances vary in length but are frequently quite short. This means that each utterance must be very efficiently understood by both parties, yet the utterance is too short for some methods of language analysis. Note mean length of utterance, syntactic complexity and diversity may not be as high in conversation as in other forms of discourse (Hadley, 2020; Nippold, 2009; Nippold et al., 2005). Additionally, studies in child language development do not yield conversational benchmarks for the number of turns or other quantitative measures (Nippold et al., 2005). However, much of a child's interaction with adults and other children in academic, social, and family settings is centered around conversation. Traditional methods of monologic language sample analysis may not capture the richness or complexities of child contributions to conversations with their parents during reminiscing. It is important to conceptualize reminiscing not just as a sequence of propositions or clauses, but as a co-constructed narrative. As both a conversation and a narrative, success depends on coherent and cohesive communication. The parental and child reminiscing contributions are readily understood by both the speaker and the listener, and in the case of maternal reminiscing studies, they are understood by an independent listener as well (Reese et al., 2011).

Both coherence and cohesion rely upon multiple domains of language, and although the terms are widely used, they may be used differently across literature in child development and language. For example, a coherent personal narrative makes sense to a listener. It refers to time,

place and events in a logical and meaningful manner (Reese et al., 2011). However, a coherent narrative is supported by cohesion, often through the use of word – level devices that help mark time, sequence, and causation. In child language, cohesion is often studied in terms of morphosyntax. For example, a child language sample may be analyzed for MLU or clausal density (Brown, 1973; M. A. Nippold, 2009). In a narrative context, coherence is often addressed through macrostructures (character, setting, and other story grammar elements) and coherence through microstructures (word level elements such as conjunctions and adverbs) (Channell et al., 2018; Pinto et al., 2019; Plotka & Wang, 2019).

Maternal Reminiscence Conversation and The Co-Construction of Personal Narrative

Given the large body of research connecting elaborative maternal reminiscing conversations and autobiographical memory skills and the connections of autobiographical memory skills and the language of the personal narrative, it would be remiss not to better examine the language within maternal reminiscing conversations (Fivush et al., 2006; Reese et al., 2011; Westby & Culatta, 2016). However, isolating and describing the mechanisms of maternal or child language within the conversation is challenging. While the immediate context of mother and child reminiscing is a conversation, given the substantial amount of research linking detailed maternal conversations about past events and the ability to remember personal experiences, as well as the connection between personal memory skills and the language used to tell stories, it is important to closely examine the language used in these maternal conversations (Fivush et al., 2006; Reese et al., 2011; Westby & Culatta, 2016). However, it is challenging to isolate and describe the specific language mechanics used by either the mother or child within these conversations. Although the immediate context of maternal and child reminiscing involves a conversation, the result is a narrative. The product of the conversation is a narrative.

As detailed above, the ability to tell or retell a complete and reflective personal narrative emerges around age six (Bliss & McCabe, 2006; McCabe & Rollins, 1994; Reese et al., 2011). It requires skillful use of both linguistic microstructure and macrostructure and autobiographical memory skills described within maternal reminiscing studies (Fivush, 2011; Reese et al., 2011). When adults or children independently reminisce in an oral or written autobiographical narrative, the elements that ensure clarity and comprehension are coherence and cohesion. Narratives emerge during reminiscing conversations. Maternal elaboration and language elements of coherence and cohesion are associated with child oral autobiographical memory and narrative skills (Fivush et al., 2010, Plotka & Wang, 2019). It is possible to then analyze mother and child utterances in a reminiscing conversation for markers of complete and coherent personal narratives such as story grammar elements and the microstructures that support coherent personal narratives. However, it is important to note that the ages of children in mother-child reminiscing studies (three to six) may be excluded from some clinical measures of autobiographical narrative (Justice et al., 2010; Reese et al., 2011). A more flexible tool would be one that assesses a wider age range and includes multiple norm-referenced micro- and macrostructures for analysis (Gillam et al., 2017, 2018)

Conversation – Elaboration and Maternal Speech Acts

Drawing on the line of research on elaborative maternal talk, it is vital to acknowledge the role of conversation in maternal elaboration (Cleveland & Reese, 2005; Fivush et al., 2006). Conversations have different requirements than narrative discourse, and conversations are traditionally analyzed differently than narrative language. However, mother and child reminiscing prompted conversations with children still developing conversation skills, so while some traditional descriptors of conversation apply, some will not. Young children may still need

support offering sufficient information in a conversation and to continue the topic in a logical manner (Ackerman, 1978; Grice, 1975; Okanda et al., 2015). Thus, it is likely that within the maternal reminiscing conversation, highly elaborative mothers are scaffolding not just the personal narrative, but also the child's conversational interaction, particularly in elicited conversations or those with specific purposes (Bauer et al., 2007; Cleveland & Reese, 2005; Plotka & Wang, 2019).

In viewing the maternal reminiscing conversation as a scaffolded conversation, the traditional codes associated with elaborative maternal talk become key. Elaboration codes from reminiscing conversation studies (Cleveland & Reese, 2005; Langley et al., 2017; Reese et al., 1993) can then be viewed as maternal and child speech acts that sustain a reminiscing conversation. Highly elaborative mothers may differ in which elaborative speech acts they use, but the sum of their elaborative speech acts differentiates their conversation from less elaborative mothers (Langley et al., 2017). Early concepts of maternal elaboration viewed less elaborative maternal conversational style as "repetitive" (Reese et al., 1993), which gave way to later concepts of highly elaborative mothers using a variety of elaborative linguistic structures, such as open-ended questions and memory elaborations, to code maternal talk. Elaborative talk includes WH-questions, and a variety of yes and no questions, tag questions, and other utterances that shape the conversation and emerging narrative (Fivush et al., 2006; Haden et al., 1997, 2009; Langley et al., 2017). This variety of maternal utterances is featured in both elaborative maternal talk (Cleveland & Reese, 2005) and in the verbal "synchrony" between elaborative mothers and their children, as captured by Kelly (2018).

To date, few studies have conceptualized the mother and child reminiscing study as both a conversation and a co-constructed personal narrative, and they have not connected their

findings to maternal elaboration or to conversational discourse measures. For example, Kelly & Bailey (2013) examined mother and child utterances as narrative micro- and macrostructures and contingent responsiveness. They found that children under age five continued the narrative topic only 62% of the time in their sample (Kelly & Bailey, 2013). They detail how some maternal scaffolding attempts seem more effective than others and suggest that “not all prompts are created equal” (Kelly & Bailey, 2013). Child-noncontingent remarks rarely continued the macrostructure prompted by the mother. Mothers then either assimilated or accommodated the child’s non-contingent information to continue the conversation and shape the narrative. Child non-contingent remarks did not further the narrative. Their later work clarifies the previous findings and further supports adult responsiveness to child reminiscing contribution as an important link in maintaining a reminiscing conversation. Kelly (2018) found maternal utilization of of child contributions was positively associated with child contingent replies and spontaneous use of story elements within a reminiscing conversation.

Contingency is not the only skill that furthers a conversation. Recall that young children under age six may be able to stay on topic but not be able to generate an utterance of sufficient quantity to effectively communicate with a partner (Ackerman, 1978; Ochs et al., 2016). In conversation, partners can interact in a manner that will continue or discontinue the exchange. For example, they can take a conversational turn by affirming the speaker, or repairing a miscommunication, or offering added information on the conversational topic. However, if the turn is ignored or misunderstood and not corrected, it has "misfired “and cannot continue (Schiffrin, 1994). Even if a child continues a conversation, they may not expand or add to the conversation without support. In her unpublished dissertation, Clark (2018) found that children with language impairments infrequently offered new information during MRM conversations.

So, even if a child participates in a conversation, they may not do so in a manner that moves the conversation forward. This is likely where the elaborative speech acts of mothers scaffold the conversation skills to maintain the emerging co-constructed narrative.

Wenner et al 2008 examined maternal supports and child utterances addressing “who, what, when, where, why, and how” (Wenner et al., 2008), finding that parent statements of “when,” “where,” “why” and especially “how” were correlated with child usage of corresponding elements in a fiction task. Bailey et al., 2020 examined narrative macrostructure supports used by mothers in reminiscing and found that mothers differentially scaffold child macrostructure usage from ages three to five. Bailey et al. 2020 found that for younger children, mothers focused on macrostructures such as time, location, setting and main actors. Wenner 2008 also found an emphasis on “when,” “what,” and “where” in conversations with children at about age three. with an emphasis on “why” increasing for children at age five. Their work suggests mothers support more developmentally advanced narratives for older children or adapt to their children’s narrative language skills during reminiscing.

Statement of Purpose

The present study investigated how maternal elaborative style was associated with narrative co-construction and conversational interaction during mother and child reminiscing. It incorporated measures of maternal elaboration, child narrative development, and conversational interactions to better describe how highly and less elaborative mothers and their children utilize narrative micro- and macrostructures in their co-constructed personal narrative. It extended the work of authors such as Clark and Kelly (2018) by comparing the co-constructed personal narrative and the conversational interaction of highly and less elaborative mothers. Four research questions were addressed in the study.

1. Were there statistically significant differences in narrative complexity, as measured by Monitoring Indicators of Scholarly Language (MISL) scores (macrostructure, microstructure, and total), in co-constructed narratives produced by highly elaborative (HE) and less elaborative (LE) mothers and their children?

Hypothesis: Narratives co-produced with elaborative mothers would have higher MISL scores than those produced with less elaborative mothers.

2. Were there statistically significant differences in narrative complexity, as measured by MISL scores in child contributions to the co-constructed narratives produced by children of HE and LE mothers?

Hypothesis: Children of highly elaborative mothers would use more and higher-level narrative structures (more microstructures, more, initiating events, plans and consequences) than the children of less elaborative mothers.

3. Were there statistically significant differences in the speech acts produced by HE and LE mothers?

Hypothesis: HE mothers would use speech significantly differently than LE mothers.

4. Were there significant differences in the total number of turns used by HE and LE mothers and children?

Hypothesis: HE dyads would use significantly more turns during reminiscing than LE dyads.

CHAPTER III: METHODS

Participants

Participants in this study were drawn from a larger longitudinal investigation of children's cognitive development. Children and their parents were recruited from through kindergarten classrooms in local schools via an invitation letter home to all students of the kindergarten teachers who were also participating in the study. A total of 46 mother and child dyads participated in the study. Children's ages ranged from 4.93 to 6.43 years; mean age was 5.5 with a SD of 0.35. The sample included 25 boys and 21 girls. Child ethnicity was 69.6% Caucasian, 2.2% African American, 6.5% Asian/Pacific Islander, and 21.7% mixed-race background. All children in the sample were fluent in English and did not participate in special education services. Parental education statuses included parents with vocational or associate degrees 4.3%, bachelor's degrees 23.9%, master's degrees 28.3%, and PhD/JD/MDs etc. 43.5%. All children in the database sample were fluent in English and did not participate in special education services.

Institutional Review Board (IRB) Approval and data security

The investigator was added to UNCG IRB 17-0448 on an existing research database. All data obtained for the current study is electronic and was deidentified and assigned a subject number in the original database before exchange. Those original de-identified subject numbers were used in the present study. Transcripts were shared with the investigation via a shared secure UNCG Box account. The UNCG Box account provides Level 3 security per UNCG Information security practices. Data will be destroyed in Box ten years after the close of active studies.

Pre-existing Transcript Data and Coding

Typed transcripts for the present study were drawn from a single timepoint in the concluded longitudinal study. The study focused on children's language, cognitive, and academic skills as they transitioned into elementary school. Teachers already participating in the study sent letters home in backpacks, asking for mother and child volunteers. Those who volunteered were then contacted and provided with recording equipment and a prompt to record themselves talking about two shared memories together.

The recordings were transcribed into word documents with utterances segmented by talking turns for the mother (P) and child (C). The transcripts were coded for maternal elaboration (ME) using procedures developed by Langley et al. (2017), which were based on methods developed by Reese, Haden, and Fivush (1993). The codes included elaboration, confirmation, association, and metamemory talk (described in Table 1 below, see appendices A and B for samples of coded excerpts).

Every maternal turn was coded for ME codes, which were then added to a total ME sum per episode and the two sums were averaged for the total ME score per mother. These scores reflect the sums and averages of each ME code (see Table 1 below) and not the diversity or distribution of codes. For example, a mother could use on average 10 Elaborations and 10 Confirmations across the transcript and receive an ME score of 20. Another mother may use on average 20 Elaborations and 0 Affirmations and also receive an ME score of 20.

The ME score was then used to divide the sample into Highly Elaborative (HE) and Less Elaborative (LE) dyads by median split. This resulted in 24 HE dyads and 22 LE dyads. HE ME scores ranged from 34 to 119, and LE ME score scores ranged from 7.5 to 33.

Table 1. Pre-existing Maternal Elaboration (ME) Codes

Code	Description
Elaboration [ELAB]	States or asks for added information
Confirmation [CON]	States or asks for added information
Association [ASSOC]	Describes past, future, or related events
Metamemory talk [MELAB]	“Memory” talk using words that reference memory and recall

Narrative analyses

Narrative analyses used the Monitoring Indicators of Scholarly Language (MISL) (Gillam et al., 2017) to examine the macro (story grammar) and microstructures (grammar and tense markers) present in the co-constructed narratives and child only narrative contributions. See Tables 2 and 3 for macro-and microelement descriptions. The MISL allowed calculation of a macrostructure score, microstructure score, and a total MISL score. The MISL has 90-100% inter-rater reliability (Gillam et al., 2017). The total MISL score has an internal consistency reliability of Cronbach’s $a = .79$ if grammaticality is removed from the rubric, thus it was omitted from the current study. The standard MISL rubric was then adapted for the transcripts. For macrostructure, additional codes were added to identify novel initiating events and repeated initiated events to denote if a child or adult first spoke about an initiating event. Setting was added to the criteria for internal responses, plan, actions, and consequences due to the frequent usage of setting, likely because the prompt to discuss a memory often elicited talk about travel

and vacations. Subscale scoring was limited to 0, 1 or 2. A score of 0 indicated that the elements were not present; a score of 1 indicated skills are emerging and have been used at least once; a score of 2 indicated the skill is used with mastery (see Appendix C for original rubric with examples). Note the subscale score of 3 was not used in this study, since complex or elaborated episodes represented by a score of 3 are more typically used by children older than those in the sample (Nippold, 2016).

Table 2. Adapted MISL Macrostructure Elements and Descriptions

Macrostructure Element	Description
Character	People named or referenced
Setting	When and where events happen
Novel Initiating Event	The events that motivate or kick off action, novel denoted the first reference to the event
Repeated Initiating Event	Referencing an initiating event already established in the conversation
Internal Response	Character feelings about the initiating event or setting
Plan	Thoughts stated about how to act on the initiating event/setting
Actions	Actions motivated by initiating event or setting
Consequences	Result of characters actions and the initiating event and setting

0 = Not present, 1 = Emerging, 2 = Mastery

**see Appendix C for detailed scoring rubric*

MISL microstructure elements were similarly scored with a 0,1, or 2. A subscale score of 3 was again omitted for consistency. Note grammaticality was excluded, as it was not recommended to be included in total scores for increased internal consistency (Gillam et al., 2017).

Table 3. Adapted MISL Microstructure Elements and Descriptions

Microstructure Element	Description
Coordinating conjunctions (CC)	words including for, and, nor, but, or, yet, so that join like words or groups of words
Subordinating conjunctions (SC)	words like "that" or "because" that join an independent and dependent clause
Metacognitive verbs (MCV)	metal state verbs like "think" "know" or "remember"
metalinguistic verbs (MLV)	verbs like "said" or "tell" that refer to speaking or writing
Adverbs (ADV)	words that modify or qualify verbs, adjectives, or other adverbs - often expressing time, number, degree, affirmation, or negation
Elaborated noun phrases (ENP) modifiers and nouns	nouns plus at least one modifier

0 = Not present, 1 = Emerging, 2 = Mastery

**see Appendix C for detailed rubric*

Each transcript contained two episodes treated as narrative conversations constructed jointly by the mother and child. Each of the two narratives was scored for micro- and macro – structure usage and averaged into one dyad narrative micro- and microelements subscale score, a micro – and microelement score and a total score for the dyad. Child-only contributions were similarly scored as separate narratives and averaged.

Each transcript was coded in Quirkos, a software that allows for coding and managing text-based data and scored using the MISL; scores were then imported into Statistical Package

for Social Sciences (SPSS). In SPSS, the adult and child codes were tabulated with MISL scores (microstructure, macrostructure and total) for each conversation dyad. See MISL manual for more information on codes and scores (Gillam et al., 2017).

Maternal speech acts analysis

To analyze conversational interaction, maternal turns were analyzed as maternal speech acts or segments of the turn with a defined purpose (see Table 4). Speech acts were coded on Quirkos and exported into Excel. See Appendix D for a sample coded transcript excerpt.

Table 4. Maternal Speech Acts

Macrostructure Element	Description
Affirmations	Words that praise or positively confirm previous utterance
Corrections/Clarifications	A correction or prompt to clarify an utterance
Expansions/Recast	Repeating part of child utterance and adding information/details or rewording for accuracy
Extensions	Contingent remark that adds information or details
Negations	Saying no or otherwise negating the child utterance
“WH” questions	Questions using “who,” “what,” “when,” “where,” “why,” or “how.”
Other	Utterances that are not a part of the conversation, such as comments directed to other children in the room or discussing turning on or off the recording equipment

Reliability

The author trained a rater familiar with MISL scoring in both adapted MISL scoring and maternal speech act coding. The training included each MISL macro and microstructure element sub score, dyad average macro-, micro- and total MISL scoring, and coding of each maternal speech act. The author coded 50% of the total transcripts and then randomly selected 12 coded transcripts (25% of the total sample) for evaluation by a second rater.

The average item-by-item comparison for narrative macro-and microelement sub scores and average MISL macro, micro, and total scores per dyad was 100%, however for maternal speech acts, it was 79%. The raters discussed discrepancies, and the second rater recoded her sample. The rater and author continued to meet to achieve 100% agreement through discussion for maternal speech acts.

After each transcript was coded and scored, the author completed coding on the remaining 50% and completed intra-rater reliability on 12 randomly selected dyad transcripts from the total sample. The average item-by-item agreement for narrative macro-and microelement sub scores and average MISL macro, micro, and total scores per dyad was 100%. The average item-by-item comparison for maternal speech acts was 91%.

Data Analysis

Each transcript was coded for narrative and conversation in Quirkos and exported to Statistical Package for Social Sciences (SPSS). Independent sample t-tests were used to compare total MISL scores, macro and microstructure elements, maternal speech acts, and total conversation turns between HE and LE dyads. Correlation coefficients were also calculated between MISL scores and maternal elaboration.

CHAPTER IV: RESULTS AND DISCUSSION

The Co-Constructed Narrative

The first research question asked whether there were statistically significant differences in the co-constructed narratives produced by HE and LE mother-child dyads. As can be seen in Table 5, the maternal HE group had significantly higher average macrostructure, microstructure, and total narrative scores than the LE group. Effect sizes were large. A higher MISL score indicates that the dually constructed narratives in the maternal HE group contained either more narrative elements or more complex narrative elements. On average, HE dyads had higher scores in use of narrative macroelements. There was a statistically significant difference in the average mean macrostructure score between HE ($M = 8.92$) and LE dyads ($M = 7.46, p = .005$). The average total microstructure score was also higher in the HE Group ($M = 10.79$) than the LE group ($M = 9.73, p = .003$). The Total MISL score is the most reliable score per Gilliam (2017), and it is also significantly higher in the HE dyad ($M = 19.58$) than the LE dyad ($M = 17.18, p = .001$).

However, note the ranges show there are overlaps in performance of individual dyads in each of the three total scores. Higher and lower total MISL scores are found in both groups, but overall, the HE dyads are producing narratives with more frequent and more complex narrative micro and microelements. Additionally, there was a moderate and significant correlation between total MISL scores and maternal elaboration score ($r = .49, p < .001$).

Table 5. Comparison of Average HE and LE Mother and Child Adapted MISL Scores

Average Total Score	Group	<i>M</i>	Range	SD	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Total Macrostructure Score	HE	8.92	5.0 - 13.0	1.74	2.95	0.005**	0.87
	LE	7.46	5.0 - 10.5	1.28			
Total Microstructure Score	HE	10.79	8.0 - 12.0	1	3.12	0.003**	0.92
	LE	9.73	7.0 - 11.5	1.31			
Total MISL Score	HE	19.58	16.5 - 25.0	2.13	3.99	<0.001***	1.17
	LE	17.18	13.5 - 21.5	1.96			

p* < 0.5, *p* < .01, ****p* < .001

As can be seen in Table 6, plan and consequence were the only macrostructure elements that significantly differentiated the two groups. Effect sizes were moderate. HE dyads included talk about plans in 83% (20/24) of their co-constructed narratives compared with 45.5% (10/22) for the LE dyads (Table 3). Talk about plans varied in complexity. For example, use of words like “gonna” to discuss actions (e.g., “You’re gonna bowl next time?”) was scored 1. A more specific use of plans connected to the setting or main episode raised the score to 2. For example, the utterance “had to sneak” was scored 2 because it related to the main episode of a family completing a ropes course together.

The consequences of actions were provided by more than 70% (17/24) of the HE dyads compared to only 40% (9/22) for the LE dyads. Moreover, all but one LE dyad had consequence scores of 0.5 – 1.0. In contrast, 71% of HE dyads had average scores above 1.0 and 20% had

scores of 2.0. Recall that those scores reflect an average of the two narrative episodes per transcript.

In the following example, the child elaborates on the consequence of an eclipse.

C: Oh. It looked like it was dark but it was — it looked like it was turning to night, but it was actually still day.

P: That's right.

C: Just the moon was covering up the sun.

Table 6. Average Mother and Child Macrostructure Elements Subscales

Macrostructure Element	Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Character	HE	1.88	0.28	1.09	0.28	0.32
	LE	1.77	0.37			
Setting	HE	1.77	0.36	0.76	0.45	0.23
	LE	1.68	0.42			
Novel Initiating Event	HE	0.85	0.6	0.64	0.53	0.19
	LE	0.75	0.51			
Repeated Initiating Event	HE	0.25	0.47	0.52	0.61	0.15
	LE	0.18	0.42			
Internal Response	HE	0.65	0.52	1.78	0.08	0.53
	LE	0.39	0.46			
Plan	HE	0.71	0.46	2.21	0.03*	0.65
	LE	0.41	0.45			
Action/Attempt	HE	2	0	1.05	0.3*	0.31
	LE	1.95	0.21			
Consequence	HE	0.69	0.6	2.33	0.02*	0.69
	LE	0.32	0.45			

* $p < 0.5$, ** $p < .01$, *** $p < .001$

Table 7 shows metacognitive verbs were the only microstructure element that significantly differentiated HE and LE dyads at the .05 level. The effect size was in the moderate-large range. Note that subordinating and coordinating conjunctions were approaching significance with p values $<.06$ and moderate effect sizes.

Table 7. Average Mother and Child Microstructure Element Subscales

Microstructure Element	Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Coordinating Conjunctions	HE	2	0	2.02	0.057	0.62
	LE	1.89	0.26			
Subordinating Conjunctions	HE	1.92	0.19	2.03	0.052	0.62
	LE	1.71	0.45			
Metacognitive Verbs	HE	1.92	0.24	2.56	0.015*	0.77
	LE	1.68	0.36			
Metalinguistic Verbs	HE	1.13	0.56	1.22	0.231	0.36
	LE	0.93	0.52			
Adverbs	HE	1.85	0.35	1.72	0.093	0.52
	LE	1.64	0.49			
Elaborated Noun Phrases	HE	1.98	0.1	1.22	0.234	0.37
	LE	1.89	0.34			

* $p < 0.5$, ** $p < .01$, *** $p < .001$

The significantly higher MISL scores of the HE dyads was consistent with previous literature (Fivush et al., 2006; Fivush & Haden, 2005) that found that the co-constructed

reminiscent narratives of HE mother-child dyads had more propositions and elaborations about how and why events occurred than the narratives produced by the LE mother-child dyads. The current study was the first to identify the specific macro- and microstructure elements that differentiate the co-constructed narratives of HE and LE dyads. For example, Kelly and Bailey (2013) showed that mothers who accommodated child remarks, even noncontingent remarks into conversation, were successful in scaffolding contingent remarks with narrative content. The more recent study by Kelly (2018) described how children of mothers with high autonomy support, a construct that overlaps with maternal elaboration, created longer independent narratives with more narrative elements (orientation, complicating action, evaluation, and resolution) based on coding from McCabe and Peterson (1991). Importantly, these studies did not compare narrative complexity between groups of HE and LE mothers.

Wenner et al. (2008) found that maternal macrostructure prompts using “who, what, when, where, why and how” were differentiated by child age, with parents prompting older children for more advanced content with “why” questions. Bailey et al. (2020) also found that age influenced whether narratives contained information about time, location, and main characters. The findings of the present study provided more information about the specific macrostructure elements of a high elaboration style. Talking about what will happen and the consequences of actions has been shown to be a developmentally more complex skill associated with more complete and complex narratives (Applebee, 1978; Bliss & McCabe, 2012; Habermas & de Silveira, 2008; Westby, 1984).

The significant group difference for metacognitive verbs aligns with previous work by Langley, Coffman, & Ornstein (2017) who found that HE dyads used more metamemory talk. Langley et al. (2017) coded maternal talk using a metacognitive word in a clause as

“metamemory talk” which raised the maternal elaboration score. The metacognitive verb “remember” is an example used by many of the HE dyads. In the example below, the word “remember” is modeled in a maternal cue for the shared episode, used to extend a child utterance, and then used in an embedded clause by the child.

P: So, do you remember when we went to the lake over the summer? With the lab?

C: Oh yeah, that big lake?

P: Mhmm. What do you remember about all that?

C: I remember jumping in that big big big big big thing?

P: What big thing?

C: That rock thing that I jumped in.

Additionally, metacognitive talk includes more clausal embedding. Note that Langley, Coffman, and Ornstein (2017) include a clause marked by “that” in metamemory talk so metamemory talk was often associated with subordinating conjunction resulting from the clause introduced by “that.” A clause is unnecessary for a metacognitive code in the MISL, but recall that HE dyads used more subordinating and coordinating conjunctions than the LE dyads. Metamemory talk, as coded by Langley, Coffman, and Ornstein (2017), was also be associated with using subordinating and coordinating conjunctions.

Child Contribution

As seen in Table 8, children of HE mothers had significantly higher average total macrostructure (HE $M = 6.81$, LE $M = 5.84$, $p = 0.032$), microstructure (HE $M = 8.6$, LE $M = 6.23$, $p = 0.001$), and overall Total MISL scores (HE $M = 15.42$, LE $M = 12.07$, $p = 0.001$) than children of LE mothers. The effect size was moderate for macrostructure ($d = 0.65$) and large for microstructure ($d = 1.02$) and total MISL scores ($d = 1.08$). Much like the results found in co-

constructed mother and child narratives, there was overlap in the performance of HE and LE children (see Range, Table 8), yet the group differences remained statistically significant. Children in the HE dyads contributed to the co-constructed narrative using significantly more complete and complex narrative styles than children in LE dyads. The group differences were further supported by a moderate and significant correlation between children’s total MISL score and maternal elaboration ($r = .60, p < .01$).

Table 8. Comparison of Average Child Adapted MISL Scores

MISL Scores	Group	<i>M</i>	<i>SD</i>	Range	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Total Macrostructure	HE	6.81	1.51	4.5 – 9.0	2.22	0.032*	0.65
	LE	5.84	1.46	4.0 – 9.5			
Total Microstructure	HE	8.6	2.29	2.5 – 12.0	3.46	0.001**	1.02
	LE	6.23	2.37	3.0 – 1.0			
Total MISL	HE	15.42	3.47	8.0 – 20.5	3.65	0.001**	1.08
	LE	12.07	2.66	8.0 – 18.5			

* $p < 0.5$, ** $p < .01$, *** $p < .001$

Internal response (IR) was the only child macrostructure that differentiated the two groups (Table 9). Children in the maternal HE group talked significantly more about IR ($M = .5, p = 0.04$) than children in group LE ($M = 0.23$); however, neither group used IRs more than one time on average in both transcript episodes. Recall that IRs were not statistically significant between HE and LE dyads in the co-constructed narratives ($p = 0.08$) and neither HE ($M = 0.65$) or LE ($M = 0.46$) used more than one IR across two episodes.

As can be seen in Table 9, children in the maternal HE group had significantly higher average scores on all the microstructure elements subscales than children in the LE group. Effect sizes were moderate-large. Children in both HE and LE dyads used more than one elaborated noun phrases per transcript (HE $M = 1.8$, LE $M = 1.44$). The use of elaborated noun phrases would be expected in children ages 4-6 who are typically capable of using a variety of nouns and verbs with one or more modifier (Brown, 1973; Hadley, 2020). Metalinguistic verbs were used more frequently in the HE child narrative contributions, but they were not used very often by either group (HE $M = .73$, LE $M = 0.33$).

Similar to the co-constructed narratives, children in the maternal HE group used significantly more metacognitive verbs than children in the LE group ($p < .01$). Both groups used at least one metacognitive verb per transcript. Still, children in the group often used more than one metacognitive verb in the two episodes (HE $M = 1.52$, LE $M = 0.96$). The metacognitive verb “remember” often appears when discussing memories and is included in the prompt for the reminiscing task. It can also introduce a clause. This is illustrated in the example below as a mother and child talk about a trip to the beach.

P: Okay, what do you **remember** about the beach?

C: Can I have your phone?

P: Mhm hm

C: I **remember** that we *that I played in the sand*

Coordinating conjunctions (see Table 3) ($p < .01$) and subordinating conjunctions (see Table 3) ($p < .01$) were used significantly more by children in HE dyads which means that children of HE mothers produced more embedded and conjoined sentences than LE children. Conjoining adds information of equal weight, like listing a series of adjectives or actions (for

example, “we ate and played”. Embedding information helps express relationships and subordination (for example, “the ride that scared Grandma”). In the example below, a mother and child are talking about a visit to an amusement park. Note how the child used subordination and coordination to describe a ride.

P: You didn't get wet? Okay, do you remember any other rides that you rode?

C: Hm

P: You thinking?

C: Mhm hm

P: What else did we ride?

C: We rode a little circle thing *that* goes up in the air *and* spins around

P: Oh, was that one of the rides that you rode with mommy or daddy or with Darcy and Ellie?

C: With Darcy and Ellie

P: Yeah?

C: And Natalie, my sister

P: So you rode the circle thing, was it really scary?

C: No!

P: Or was it more fun than scary?

C: It was more fun than scary.

The significantly greater use of various macro- and microstructure narrative elements by the children of HE mothers has implications for spoken and written language skills. Increased use of microstructure elements is associated with linguistic complexity (Justice et al., 2006), school-age spoken narratives (Gillam et al., 2017; Justice et al., 2006, 2010), written narratives,

and expository discourse (Hall-Mills & Apel, 2015; Nippold, 2009). Macrostructure elements such as initiating events, plans, internal responses, and consequences often contain conjoined and embedded clauses with subordinating and coordinating conjunctions and metacognitive verbs. The more complex narratives produced by the children of HE mothers will likely lead to more advanced literacy skills (Bailey et al., 2020; Fivush et al., 2006).

Table 9. Child Average Macrostructure Contribution Subscales

Macrostructure Element	Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Character	HE	1.69	0.48	0.04	0.965	0.013
	LE	1.68	0.39			
Setting	HE	1.35	0.48	0.97	0.169	0.286
	LE	1.21	0.57			
Novel Initiating Event	HE	0.1	0.25	0.18	0.86	0.052
	LE	0.09	0.25			
Repeated Initiating Event	HE	0.17	0.41	-0.29	0.774	-0.085
	LE	0.21	0.48			
Internal Response	HE	0.5	0.47	2.12	0.04*	0.626
	LE	0.23	0.4			
Plan	HE	0.48	0.4	0.55	0.077	0.534
	LE	0.25	0.46			
Attempt/Action	HE	1.98	0.1	1.7	0.096	0.502
	LE	1.86	0.32			
Consequence	HE	0.54	0.51	1.44	0.158	0.424
	LE	0.32	0.55			

* $p < 0.5$, ** $p < .01$, *** $p < .001$

Table 10. Child Average Microstructure Element Contribution Subscales

Microstructure Element	Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Subordinating Conjunctions (SC)	HE	1.34	0.61	2.98	0.01**	0.88
	LE	0.79	0.64			
Metacognitive Verbs (MCV)	HE	1.52	0.59	2.89	0.01**	0.84
	LE	0.96	0.74			
Metalinguistic Verbs (MLV)	HE	0.73	0.55	2.68	0.01**	0.8
	LE	0.33	0.43			
Coordinating Conjunctions (CC)	HE	1.86	0.28	3.26	0.02*	0.97
	LE	1.46	0.52			
Adverbs (ADV)	HE	1.66	0.58	2.23	0.03*	0.65
	LE	1.23	0.72			
Elaborated Noun Phrases (ENP)	HE	1.8	0.45	2.28	0.03*	0.67
	LE	1.44	0.6			

* $p < 0.5$, ** $p < .01$, *** $p < .001$

Maternal Speech Acts

As can be seen in Table 11, the only speech acts that did not significantly differentiate the two groups were expansion/recast and request for information, which neither group used often. “Other” was used for utterances such as off-topic remarks on environmental interruptions or utterances addressing other family members and was used similarly in both groups. HE mothers used six speech acts significantly more than LE mothers: negation, WH-questions, Yes/No

questions, affirmations, corrections/clarifications, and extensions. Effect sizes were moderate to large.

Recall that open-ended question elaborations, yes/no question elaborations, confirmations, and metamemory talk were used to differentiate maternal elaboration for the data in the current study (Langley et al., 2017). It was thus not surprising that Wh, yes/no questions, affirmations, and metacognitive verbs also differentiated the HE and LE mothers in the current study. Note the other speech acts that differentiated HE and LE mothers were extensions and negations. These were not directly included in ME coding, although extensions and clarifications can be seen within ME codes for Elaboration, Confirmation, and Association (see Table 1).

Affirmations appear to most strongly associated with maternal elaboration ($r = .84$) followed by Y/N questions ($r = .80$) and Wh - questions ($r = .69$). Early models of maternal elaboration also identified affirmations as key components in HE reminiscing (Haden et al., 2009; Reese et al., 1993). Affirmations were used twice as much in the maternal HE group ($M = 22.1$) as in the LE (11.7) group. Affirmations are used to keep the conversation going and encourage children to continue a conversation, even if it went in surprising directions.

In the example below, the mother and child discuss a family hike. This example shows how the maternal speech acts worked with the child's conversational contributions to affirm and shape the conversation. Instead of discussing the views or wildlife, the child wanted to discuss using the bathroom outside. The mother affirmed the child's contributions (e.g., "Good point," "Mhm," "Yeah") and added extensions and questions to expand the comment into a more detailed narrative reminiscing.

P: Yep. Tell me about that. What do you remember?

C: Going to the bathroom.

P: Going to the bathroom?

C: Up on the mountain.

P: Up on the mountain?

C: Mhm.

P: I don't remember that.

C: Like when we were climbing up there. When we were climbing.

P: You had to stop and go to the bathroom.

C: Yeah. When we were climbing to the mountain.

P: Like on the mountain? Or on the way to the mountain?

C: Yeah. On the way to- I mean, on the mountain but we weren't at the top.

P: We were on the trail somewhere?

C: Yeah.

P: Was it like, in a bathroom or just in the woods.

C: Just in the woods.

P: Oh, okay. Oh! I do remember that now! Yeah. You and ***, in the rocks.

C: Yeah. That was, it was kind of good (1) but it was like a bear's cave. (1)

P: It was.

C: Yeah but it was tiny.

P: There were no bears in there.

C: Yeah.

P: Okay.

C: But I accid- well, I didn't get ***'s shoulder wet, but it got, ***'s shoulder got wet.

P: I do remember that as well.

C: I did not pee on ***'s shoulder. How could I? We were bending down.

P: Good point.

C: And I was not sticking my butt up.

P: Mhm. And she's taller than you.

C: Well, yeah.

P: Yeah. What else do you remember besides peeing?

HE mothers also used three times as many negations as the LE mothers (HE M = 1.21, LE M = 0.42). HE mothers who used negations ensured the child-provided information was accurate before moving on to the next point in the conversation. In the example below, the child mixed up two friends with the same first name, and the parent corrected the child's memory.

P: Jungle chase. And do you remember who gave that to you?

C: Emma Whitfield.

P: Emma Whitfield. And what about, uhh, the gift over there? The bird in the cage?

C: Was that Tillie?

P: I think that's from Emma. Emma.

C: Emma. Who?

P: Remember Emma-

C: Emma Whitfield!

P: Not Emma Whitfield. Emma Green Your- you don't remember her now?

C: Emma Green.

As can be seen in Table 11, HE mothers used twice as many Wh and Yes/No questions than LE mothers. The more frequent questions clearly played an important role in the HE dyads

producing more complex co-constructed narratives than LE dyads. The use of affirmations was also strongly related to maternal elaboration (Fivush et al., 2006; Reese et al., 1993) ($r = .84$.)

HE mothers correct information within the narrative and give cues for children to successfully respond. They also ask a variety of questions to support the children in their responses. In this example, a parent and child discussed what happened when a fire alarm went off while they stayed at a hotel. The parent did not just ask “What happened?” but also cued the child to talk about a sequence of events, how and why events happened, and an internal response. Note this example contains two truncated sections from a single episode.

P: No. Alright and so then the other thing that I wanted you to, do you remember when we were on vacation and the fire alarm went off in the hotel?

C: Yeah.

P: Could you tell us about that? What happened exactly?

C: We were.

P: Go step by step.

C: We were in the hotel sleeping at like three-thirty in the morning the fire alarm went off and we had to do it.

P: Had to do what?

C: We had to find the exit, go out the exit, and then we go outside and wait.

Table 11. Average Speech Acts Used per Dyad by HE and LE Mothers

Speech Act	Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Affirmations	HE	22.1 4	12.8 7	3.5 8	<0.001***	1.06
	LE	11.7 3	5.86			
Expansions/Recasts	HE	2.34	2.58	1.8 8	0.067	1.97
	LE	1.25	1.15			
Extensions	HE	15.6 1	8.06	4.4 2	<0.001***	1.31
	LE	6.92	5.08			
Corrections/Clarifications	HE	0.05	0.04	0.9 8	0.329	0.29
	LE	0.04	0.03			
Negations	HE	1.21	1.33	2.5 9	0.013*	0.77
	LE	0.42	0.64			
Requests for information	HE	0.96	1.36	1.1 5	0.259	0.35
	LE	0.58	0.69			
Wh - questions	HE	15.1 1	8.49	3.6 2	<0.001***	1.07
	LE	8.13	3.99			
Yes/No questions	HE	26.7 7	12.1 5	4.8 1	<.001***	1.42
	LE	13.2 5	6.24			
Other	HE	3.38	3.32	1.6 2	0.115	0.49
	LE	2.06	2.01			

* $p < 0.5$, ** $p < .01$, *** $p < .001$

While the above data described the different quantities of maternal speech acts that differentiate HE and LE reminiscing conversations, it did not address the proportion of maternal speech acts. So, it was unclear if the HE mothers used more affirmations on average due to the length of the conversation in general or if they used more affirming speech acts in proportion to the conversation. A second analysis was run for the proportion of each maternal speech act per the total number of conversational turns for each dyad. (See Table 13 for comparisons of conversational turns and length). When examined as a proportion instead of an average, the significant differences between HE and LE groups disappeared. None of the means or p-values were statistically significant between groups. So, although on average the HE mothers used more affirmations, extensions, negations, WH-questions, and Yes/No questions – they did not use them in any different proportion to the manner in which LE mothers used the very same speech acts.

Table 12. Average Speech Acts Per Conversational Turn by HE and LE Mothers

Maternal Speech Act	Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Affirmations	HE	0.39	0.11	-0.83	0.41	-0.25
	LE	0.42	0.18			
Corrections/Clarifications	HE	0.05	0.04	0.98	0.33	0.29
	LE	0.04	0.03			
Expansions/Recasts	HE	0.02	0.02	-0.63	0.53	-0.19
	LE	0.02	0.02			
Extension	HE	0.31	0.22	1.34	0.19	0.4
	LE	0.24	0.13			
Negations	HE	0.02	0.02	0.95	0.35	0.28
	LE	0.01	0.02			
Other	HE	0.03	0.03	-1.18	0.25	-0.34
	LE	0.04	0.04			
Requests for Information	HE	0.01	0.01	-0.95	0.35	-0.28
	LE	0.01	0.01			
Wh - questions	HE	0.01	0.01	-1.16	0.25	-0.34
	LE	0.02	0.01			
Yes/No questions	HE	0.5	0.19	0.48	0.64	0.14
	LE	0.48	0.17			

The last series of analyses compared maternal turns, child turns, and total words in the HE and LE dyads. As can be seen in Table 10, HE mothers and their children used significantly more conversation turns and words than LE mothers or their children. The effect sizes were large for each turn measure despite the variability in these measures within each group. Interestingly, the number of turns were almost identical for the mothers and children in each dyad.

Conversations between HE mothers and their children were more than twice as long as than conversations between LE mothers and their children. HE mothers used these turns to add detail and to ensure their children remembered all the details of the shared memory. The dramatic differences in the duration of the conversations and co-constructed narratives between the HE and LE dyads means that the group differences in narrative complexity, as measured by the MISL, were likely related to the length of the conversations and narratives, rather than to the mothers' or children's ability to produce the various macro- and microstructure elements. Both groups used the same narrative micro- and macro elements, but there were overall group differences in the adapted MISL scores. In other words, LE mothers and their children were able to produce all the macro- and microstructure elements essential for age-appropriate reminiscing narratives. They may have produced fewer of these elements because the narratives they constructed were shorter than those produced by HE mothers and their children.

Note that when maternal speech act usage was analyzed in proportion to overall conversational turns instead of as an average per the two narrative episodes, the group differences in utilizing affirmations, extensions, negations, WH-questions, and Yes/No questions was not observed. HE mothers and LE mothers used the same speech acts in proportion to the length, measured by total conversational turns.

It is possible that the larger number of turns allowed more time to utilize the narrative macro- and microelements measured by the adapted MISL, but it remains unclear why the conversation persists in HE dyads in a way that is different than in LE dyads. It appears that the HE mothers used more speech acts to affirm and extend the child utterances, resulting in a more complex narrative, but it is unclear why LE dyads do not similarly affirm or extend child contributions.

To see how an HE mother affirms and extends a child's remarks, the following example shows how she shapes the conversation to include more complex causal details. Note how the child contributed brief contingent remarks at first but gradually offered more complex responses commenting on how the boat wrecked, the consequences of the wreck, and the sequence of events. Those details are features of narrative macro-and microstructure elements, and the prompts to continue to offer new and more specific information likely lengthens the conversation by creating more conversational turns.

P: What did, what? Remember when we went sailing this past summer with daddy?

C: Yeah

P: Yeah. Tell me about that. What happened?

C: It wrecked

P: It wrecked [laughs]. Yeah, it capsized, didn't it?

C: Two times

P: Two times, yeah. That was really silly. What happened?

C: Its sail broke off.

P: Yes! The sail broke off. And then what happened?

C: It had to get towed

P: Uh huh, so, a boat, well what. So, it capsized more than once, didn't it?

So, first it capsized, and I was on a sandbar. And what happened?

C: A boat had to tow you there

P: Yeah, a boat had to take me to, to you guys cause you had sailed off without me. And then, while I was on the sandbar, it capsized the first time, right?

Table 13. Group Comparison of Transcript Length Measures

Measure	Group	<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>	Effect Size Cohen's <i>d</i>
Maternal Turns	HE	112.95 (range 45 – 248)	51.30	4.97	< 0.01**	1.47
	LE	56.46 (range 30-95)	20.80			
Child Turns	HE	111.32 (range 44 – 246)	51.01	4.98	< 0.01**	1.47
	LE	54.92 (range 28 – 93)	21.08			
Total Turns	HE	224.27 (range 89 – 494)	102.27	4.98	< 0.01**	1.47
	LE	111.38 (range 58 – 188)	41.83			
Total Words	HE	3038.32 (range 804 – 22600)	4468.59	2.24	0.03*	0.66
	LE	987.63 (range 442 – 1678)	346.44			

* $p < 0.5$, ** $p < .01$, *** $p < .001$

Comparing Co-Constructed and Child Narratives Contributions in HE and LE dyads

There were notable differences between the co-constructed narratives and the child narrative contributions produced by the HE and LE mother-child dyads. In the co-constructed narratives, the only macrostructures that differentiated the two groups were plan and consequence, whereas in the child contributions, the only macrostructure that differentiated the groups was internal response. This finding indicated that the mothers of children of HE mothers were providing the plan and consequence elements whereas their questions and affirmations led to more internal responses about the events. The HE mothers frequently encouraged children to talk about how they felt about a particular event. Did it make them happy, sad, angry, etc.? This created more conversational turns. Children had more opportunities for children to utilize microstructures like adverbs, adjectives, elaborated noun phrases and coordinated and subordinated clauses and to reference more macrostructure elements related to plan, consequence, and internal response.

For the microstructure elements, only metacognitive verbs were significantly differentiated between the two groups at the .05 alpha level in the co-constructed narratives. For the child narrative contribution, all the microstructure elements were used significantly more by the children of HE mothers than the LE children. What caused this discrepancy? For the co-constructed narratives, it was the LE mothers who used most of the microstructure elements in their conversational speech acts, not their children. This was not surprising. The LE mothers were adults using more complex sentences with dependent clauses (subordinating conjunctions). Complex sentences support more talk about plans and consequences (how and why events happen and the thoughts about how to handle events in the narrative). In contrast, for the HE dyads, the children produced more microstructure elements than their mothers. Children were

offering or being prompted to give responses that required more complex narrative microstructure elements. If their mothers produced as many microstructures in their conversational speech acts as their children, their co-constructed narratives would have had more microstructure elements than the LE dyads. Instead, the group difference was a result of the child microstructure scores. The more frequent use of questions, affirmations, and negations by the HE mothers helped their children produce conversational turns with more coordinating/subordinating conjunctions, noun phrase elaborations, adverbs, and metacognitive and metalinguistic verbs. Interestingly, the HE and LE children both produced half of the utterances in the co-constructed narratives. This means that there was no difference in the proportion of contributions children made to the co-constructed narratives. As noted in the previous section, the HE mothers and children produced twice as many conversational turns and words as the LE mothers and children.

The example below is from an HE dyad discussing a solar eclipse. The co-constructed microstructure score was 12, the macrostructure score was 13, and the total MISL score was 25. For the child's narrative, the microstructure score was also 12, the macrostructure score was 8, and the total MISL score was 20. See Tables 4 and 5 for group differences in average total MISL scores.

Coordinating/subordinating conjunctions, noun phrase elaborations, adverbs, and metacognitive and metalinguistic verbs are italicized.

P: Uhuh...And so what did the eclipse look like? So at this point we had our glasses on and we were all looking up at the sky and what happened?

C: Um...we saw the sun...*but one part* was missing!

P: Yeah! That's right! And then what happened?

C: And then...wait...and then when we couldn't see it, we took *our glasses off and* looked up *and* it looks *really*...awesome! It looks like...oh yeah...it looks like the MOON! With the sun's played (indistinct...probably "rays").

P: Yeah, like around the outside of it? It looked like...you could just see the moon with the sun around the outside of it? And we took our glasses off, and what did the outside look like when we took our glasses off? So we took our glasses off, and what did it look like all around us?

C: (laughs quietly) It...it looked *kind of* dark *but not* as dark *as* nighttime *which* was the story *that* we watched. *That* we saw at school.

P: Mmhm.

C: It was *really* dark.

P: Yeah? So it was pretty dark. And, um, what happened? Did you hear anything?

C: (mumbles an indistinct affirmative)

P: What? Yeah. Did you hear it when the moon covered the sun completely? Do you remember that...what was it called?

C: (indistinct sounds)

P: You probably...This is a tough one.

C: Um...I *think* it was called a solar eclipse?

P: Okay! Yeah! Totality? So...When it first happened did you hear anything...?

C: No.

P: What did you do when the moon? When the moon completely covered the sun?

C: They took *their glasses* (off?)

P: And did they make any noise?

C: No.

P: Remember all the people in the park started cheering? We were all excited?

C: Oh yeah, I *forgot* about that!

The next example is from a mother and child from the LE group. They had an average co-constructed microstructure score of 9, macrostructure score of 6, and total MISL score of 15. The child had an average microstructure score of 5, macrostructure score of 6, and a total MISL score of 11.

As they discussed a trip to an animal sanctuary, the mother asked a series of questions but did not affirm or extend the child's responses. In fact, the mother interrupted the child as he was about to use "because" in a subordinating clause (in bold). The child's coordinating/subordinating conjunction, noun phrase elaborations, adverbs, and metacognitive and metalinguistic verbs are italicized.

P: K. There was something else that we did. So we went from Dustin, Florida, and then we went to South Carolina, and then we came to North Carolina, right? And then-

C: I got tired.

P: You got really tired. But after we were here, we went and saw some animals.

C: The zoo.

P: At the Duke

C: At *the Duke Zoo*.

P: Lemur center.

C: Yeah.

P: Do you remember that trip? Could you tell me about it?

C: I'm going to say I like it *because* it's-

P: What did we do there though?

C: Looked at animals.

P: What animals?

C: Uhm.

P: At the Duke Lemur Center?

C: Lemurs!

P: What do Lemurs look like?

C: Ring-tailed. Like Mackey.

P: Was Mackey the favorite lemur that you saw?

C: Yes.

P: Were they- they're were doing something with him. Do you remember what they were doing?

C: (Working him?)

P: Weren't they feeding him something?

C: Yes.

P: Do you remember what ring-tailed lemurs like to eat?

C: No.

P: No ideas? Could you guess?

C: Leaves.

P: Leaves. I think they were feeding him some fruit.

C: Fruit. Fruit. Fruit leaves.

P: Yeah, I think it was grapes or nuts.

C: Grapes *and* nuts.

P: Did you have fun there? Is there anything else that you remember about that place?

C: It was fun and- and I got a Mackey keychain that- that's a ring-tailed lemur.

P: Mkey.

Educational Implications

Educators and caregivers can benefit from understanding that children who participate in highly elaborative reminiscing with caregivers exhibit higher narrative complexity compared to those who engage in less elaborative reminiscing. Interventions and educational programs could focus on promoting caregiver elaboration techniques during parent-child interactions to enhance children's narrative abilities, such as teaching caregivers about narrative development and how to expand upon a child's narrative contribution.

Educators should be aware of the specific narrative macro- and microstructures that young children use. Knowing the importance of using a plan, consequence, metacognitive verbs, internal response, and coordinating and subordinating conjunctions can inform instructional practices aimed at helping children develop more sophisticated narrative skills. Teachers can incorporate activities that explicitly teach these elements of narrative structure into language arts or literacy curricula. Educators should also provide opportunities for extended discussions, storytelling activities, and modeling of narrative techniques to help scaffold children's narrative skills. The study highlights the significant role of reminiscing with highly elaborative support in shaping children's narrative abilities.

Limitations and Future Research

This study confirms an association between highly elaborative maternal conversation and mother and child narrative complexity during reminiscing. It also provides discrete measures of narrative macrostructures and microstructures in both mother and child during reminiscing.

However, it only measures the immediate conversation and does not include other measures such as an independent child narrative or longitudinal language data. To better understand the relationship between maternal elaboration and child narrative, future studies of maternal elaboration and child language skills should include oral and written personal narrative measures. Additionally, future research in caregiver reminiscing should include narrative language measures in the study of child memory skills, particularly autobiographical memory.

The association between metacognitive talk and narrative complexity was strong in these results. Further studies can capture the relationship between metacognitive talk and linguistic reference/clausal embedding in the development of personal and life narrative skills, or as a measure of narrative skill in older school-age children.

Future research should also expand the ages of children studied and include independent personal narratives and reading data, like the approach taken by Bailey et al. (2020). Future studies should also examine the impact of gender, cultural, and linguistic diversity on maternal reminiscing and child narrative. Also, note this study illustrates differences between HE and LE reminiscing but does not identify why HE and LE mothers and children utilize language differently during reminiscing. Further study could provide some insight into the different usage of narrative elements or maternal speech acts during reminiscing conversations.

Conclusion

Previous studies in maternal reminiscing have measured child language output in terms of elaborations, details, and language propositions (Cleveland & Reese, 2005; Fivush et al., 2006). Some more recent studies have begun to capture narrative elements in the shared or independent child narrative following reminiscing (Bailey et al., 2020; Kelly, 2018; Kelly & Bailey, 2013). The current study used a previously validated measure of narrative complexity, the MISL

(Gillam et al., 2017), to give discrete measures of parent and child microstructure, macrostructure, and total narrative complexity. These new measures confirmed that narrative complexity was associated with maternal elaboration.

Young elementary-age children like those in the study typically can tell a complete narrative (McCabe & Rollins, 1994; Peterson & McCabe, 1983), however the children in the HE dyads had significantly higher MISL scores in their contributions than children in LE dyads. They also participated in longer conversations than their LE dyad peers. Although there are no clear benchmarks in how many conversational turns a four to six-year-old child should be able to sustain, they often need help sustaining a topic and offering sufficient quantity of information to be understood by a listener (Grice, 1975; M. A. 1951- Nippold, 2016; Okanda et al., 2015). Thus, children in HE dyads engaged in narrative construction and conversational interactions that stretched developmental expectations.

Plan, consequence, and metacognitive verbs were the specific macro- and microstructures that differentiated the co-constructed narratives produced in HE and LE dyads. Internal responses and all the microstructure elements differentiated the narratives produced by children of HE and LE mothers. These findings indicated that the LE mothers used most of the microstructure elements in their conversational speech acts, not their children. Only one microstructure element differentiated HE and LE co-constructed narratives. In contrast, for the HE dyads, the children produced more microstructure elements than their mothers, so the children used more microstructure elements. This means that the children in HE dyads were producing significantly more utterances that talked about thinking and feeling and using coordinating and subordinating conjunctions to express relationships between ideas and actions in their narrative contributions than the children of LE mothers.

The findings for the maternal speech acts could be predicted from the way elaboration was measured (Langley et al., 2017). Open-ended question elaborations, yes/no question elaborations, confirmations, and metamemory talk were used to differentiate maternal elaboration for the data used in the current study (Langley et al., 2017). It was thus not surprising that Wh questions, Yes/No questions, affirmations, and metacognitive verbs also differentiated the HE and LE mothers in the current study. Wh-questions corresponded to open-ended questions. Affirmations were strongly associated with maternal elaboration followed by the two question forms, like previous work identifying questions and affirmations in models of high maternal elaboration (Haden et al., 2009; Reese et al., 1993). Affirmations and both question types were used twice as often. The different duration of the conversations and co-constructed narratives stood out. HE dyads produced twice as many conversational turns and words than the LE dyads, although when controlling for length, HE and LE mothers used similar percentages of speech acts per conversational turn. It is unclear if the LE dyads would have produced narratives with similar adapted MISL scores with more conversational turns, or why the HE dyads produced longer conversations compared to the LE dyads. Since this study only compared the two groups, it cannot be concluded why the HE dyads had longer conversations or higher adapted MISL scores.

One issue that arose during the study was the overlap in measurements in maternal elaboration for metamemory talk (Langley et al., 2017) and narrative complexity (Gillam et al., 2017). Since both measures flag the same words, an utterance that used "remember" could raise scores in maternal elaboration (ME) and the metacognitive verbs, microstructure, and total MISL score. Rather than nullifying the results of metacognitive verbs, it is essential to delve into why these constructs hold significant value within each framework. In Langley et al. (2017),

metamemory talk captures how children are prompted to retrieve and rehearse/report memories.

Autobiographical memory is a socially constructed skill honed through reminiscing. In the model of narrative development as measured by the MISL, metacognitive verbs are associated with literate language skills that emerge in elementary-age children, necessary for both success in narrative skills and later literate learning (Gillam et al., 2017, 2018)

In conclusion, the current study used a validated measure of narrative complexity, the MISL, to measure the macro- and microstructure elements of the co-constructed and child narrative contributions produced by the HE and LE mother-child dyads. HE dyads had significantly higher MISL scores than LE dyads indicating that narrative complexity was strongly related to maternal elaboration. The study identified distinct narrative macro and microstructures employed by HE mothers (e.g., plan, consequence, metacognitive verbs) and their children (e.g., internal response, metacognitive verbs, coordinating and subordinating conjunctions) during reminiscing.

Typically, young elementary-age children, like those in this study, can narrate complete stories. However, children in the HE dyads exhibited significantly higher MISL scores in their contributions and engaged in longer conversations compared to their low-elaboration (LE) dyad counterparts. Although there are no established benchmarks for the number of conversational turns a four to six-year-old child should sustain, they often require assistance in maintaining a topic and providing sufficient information for a listener. The significantly greater number of conversational turns and in turn longer narratives produced by the HE dyads indicated that HE mothers provided much more than LE mothers in helping their children remember a shared event. The more complex shared narratives produced by HE dyads were the result of HE mothers using twice as many questions, affirmations, and negations than LE mothers.

Importantly, LE mothers and their children can produce all the macro- and microstructure elements essential for an age-appropriate reminiscence narrative but produce fewer of these elements because the narratives they constructed were shorter than those produced by HE mothers and their children.

There were a number of important educational implications of the findings from this study. The findings highlight the importance of maternal elaboration and awareness of narrative structures in promoting children's language and literacy development. Educators can play a crucial role in supporting children's narrative skills through collaborative efforts with parents and caregivers. Future research should expand the ages of children studied and include independent personal narratives and reading data. Future studies should also examine the impact of gender, cultural, and linguistic diversity on reminiscing and narrative abilities.

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APPENDIX A: HE EPISODE WITH MATERNAL ELABORATION CODES

P: Okay, now let's talk about the beach
OFF REG ATTEN, ASSOC GEN
C: Beachy
PL
P: Okay, what do you remember about the beach?
OFF REG ATTEN; GMQ ELAB
C: Can I have your phone?
OFF
P: Mhm hm
OFF
C: I remember that we that I played in the sand
MELAB
P: Okay, was there a lot of sand?
EV CON; YN ELAB
C: Yes
EV CON
P: What color was the sand?
GMQ ELAB
C: It was, it was very
PL
P: Was it kind of white-ish?
YN ELAB
C: Yeah
EV CON
P: Do you remember the beach – the name of the beach?
YN ELAB
C: Uhm no
EV NEG
P: Was it called Wrightsville?
YN ELAB
C: No
EV NEG
P: Hey, do you remember that we went to a restaurant?
OFF REG ATTEN; YN ELAB
C: Yes
EV CON
P: Uh, who did we see at the restaurant?
GMQ ELAB
C: Uhm my uhm we see we see my uncle
MELAB
P: Yeah, what was - what is your uncle's name?
EV CON; ASSOC GEN
C: Uhm Wallace?

ASSOC GEN

P: Mhm hm Wallace es Dave, David, do you remember he give you gifts, do you remember what did he give you?

ASSOC GEN X2, ST ELAB; GMQ ELAB

C: Cars

MELAB

P: Okay, how many of those cars?

EV CON; GMQ ELAB

C: Uhm I don't know

PL

P: Was it more than one?

YN ELAB

C: Yeah

EV CON

P: Was it more than two?

YN ELAB

C: Yeah

EV CON

P: Was it more than three?

YN ELAB

C: Yeah

EV CON

P: Was it more than four?

YN ELAB

C: Yeah

EV CON

P: Was it more than five?

YN ELAB

C: Yeah

EV CON

P: Was it more than six?

YN ELAB

C: Yeah

EV CON

P: Was it more than seven?

YN ELAB

C: Yeah

EV CON

P: Was it more than eight?

YN ELAB

C: Yeah

EV CON

P: Yes, I think it's about a dozen – that's like twelve of them, twelve thirteen of them, which car is your favorite?

EV CON; ST ELAB; GMQ ELAB

C: My favorite was all of them

MELAB

P: Do you remember what we ate at the restaurant?

GMQ ELAB

C: I don't know

PL

P: Mhm okay so we went to the –

PL

C: Do you know?

MQ

P: I think, I don't remember actually. We probably had fish cause it was so close to the beach.

Do you remember the hotel we stayed in?

ST ELAB X2; YN ELAB

C: Mhm hm

EV CON

P: What do you remember about that hotel?

GMQ ELAB

C: I would go to that hotel again

ASSOC FUTURE

P: Yeah? Why? Why do you want to go to that hotel again?

ASSOC FUTURE X2

C: Cause it had bed – Mommy can I tell you something?

ASSOC FUTURE; OFF

P: Yeah

OFF

C: This time I'll say what you say

OFF

P: Okay

OFF

C: I'll follow what you say

OFF

P: Okay, thank you, okay so on the beach you played with sand, what else, what else, did you do on the beach?

OFF; ST REP; GMQ ELAB

C: I throw sand in the air

MELAB

P: Okay

EV CON

C: I went in a little bit water

MELAB

P: Mhm hm

EV CON

C: And I didn't like it

MELAB

P: Did you get into the yeah you didn't want to get yourself wet...

EV CON; ST ELAB

C: Yeah

EV CON

P: Was it hot?

YN ELAB

C: Nooooo no

EV NEG

P: You don't remember it being hot?

YN REP

C: It's not that hot

EV NEG

P: Mhm

EV CON

C: But just a little bit cool

MREP

P: Okay, uhm I remember it being hot, I remember I had to carry you to wash the sand. I remember you wanted to go to the washroom and I have to carry you there and it was hot. You wouldn't walk on the sand because the sand was too hot

EV CON; ST ELAB X4

C: Ouchies

MELAB

P: Mhm hm

EV CON

C: And it was too spikey

MELAB

P: Mhm hm, what else do you remember about the beach? You remember daddy and mommy? We walked first on the beach the night before

EV CON; GMQ ELAB; YN ELAB; ST ELAB

C: Mhm hm

EV CON

P: Then we...

PL

C: I remember, I just remember you fought

MELAB

P: Oh, you remember that mommy and daddy had a fight

EV CON

C: Mhm hm

EV CON

P: Oh that was bad cause both of us got too tired, yeah? Let's think about something else other than mommy and daddy had a fight

YN ELAB; ASSOC GEN

C: Sometimes the Bernstein Bears has a fight

OFF

P: Oh, sometimes Bernstein Bears had fight and what did they do?

OFF X2

C: They uhm brother and sisters talk them

OFF

P: Mhm hm, then they forgave each other and then they become good again, right?

OFF X2

C: Mhm hm, just like you guys

OFF X2

P: Mhm hm, just like mommy and daddy yeah

OFF X2

C: Mhm hm

OFF

P: And so I remember you don't like having sand in your hair?

YN ELAB

C: Yeah or in my eyes

EV CON; MELAB

P: Oh, In your eyes, did the sand get in your eyes?

EV CON; YN ELAB

C: Yeah

EV CON

P: And do you remember we put sunscreen on you?

YN ELAB

C: Do you remember when I had sand on my hands – pretend I was playing in the sand and then my eye was itchy and then I did this?

MELAB X4

P: Oh, you rub your eye

EV CON

C: And then you had to put in the towel

MELAB

P: I used the towel to get the sand out of your eyes

EV CON

C: Mhm hm

EV CON

P: Mhm hm I remember using a small bucket and getting you water

EV CON; ST ELAB X2

C: Yeah for my sandcastle

EV CON X2 MELAB

P: Okay and also I remember you put dolphin shapes and you made a sand a dolphins

EV CON; ST ELAB X2

C: Yeah EV CON X2

EV CON X2

P: You remember it?

RM

C: I miss the beach

ASSOC GEN

P: Aw you miss the beach?

ASSOC GEN

C: Yeah I really like it

ASSOC GEN X2

P: We'll go to the beach

ASSOC FUTURE

C: Can I have more time? ASSOC FUTURE
P: Do you, yeah, do you remember when you were playing in the sand and there were big bug coming? Came?
YN ELAB
C: Yeah
EV CON
P: Uh
PL
C: I trapped it
MELAB
P: Oh, you trapped the big bug?
EV CON
C: Uh huh
EV CON
P: Did the big bug die? Was it killed?
YN ELAB
C: I don't know
PL
P: Or you just trapped it and forgot about it?
YN ELAB
C: Uh huh
EV CON
P: I see, do you remember there were other kids there?
YN ELAB
C: Mhm hm
EV CON
P: Yeah
EV CON
C: I wanted that big shovel
MELAB
P: Oh, oh I remember we talked to that kid and he let you play with that shovel, right?
YN ELAB
C: Yeah
EV CON
P: That was very nice of him
ST ELAB
C: I didn't know that
MM
P: You don't remember?
MM
C: Ummm, I wish I had that big shovel for the whole day
ASSOC GEN
P: Oh
ASSOC GEN
C: Remember when I wanted that dump truck that he had?
MELAB

P: Mhm
P: Mhm
EV CON
C: And I didn't bring mine
MELAB
P: Yeah huh
EV CON
C: That was sad
MELAB
P: Oh
PL
C: I didn't bring mine
MREP
P: Oh
PL
C: Now I'm going to bring my dump truck to the beach
ASSOC FUTURE
P: Next time
ASSOC FUTURE
C: And my fire truck
ASSOC FUTURE
P: Okay
ASSOC FUTURE
C: Next time
ASSOC FUTURE
P: Okay, it sounds like a good plan
ASSOC FUTURE
C: Make alarm to me to bring those two guys
ASSOC FUTURE X2
P: Do you think you'll ever try to get in the ocean?
ASSOC FUTURE
C: Just a little bit
ASSOC FUTURE
P: Just a little bit, mhm do you remember seeing kids and people getting in and swim in the sea?
ASSOC FUTURE; YN ELAB
C: Yeah, I cannot swim
EV CON; ASSOC GEN
P: You cannot swim
ASSOC GEN
C: Cause I'm afraid of sharks, I'm afraid they will like pretend – pretend uhm this is the shark's mouth
ASSOC GEN X2
P: Mhm hm
ASSOC GEN X2
C: Woah, sorry uhm and I'm swimming

ASSOC GEN X2 P: Mhm hm

ASSOC GEN X2

C: And then I thought and then I thought this was a playing area and so I accidentally got in here and then it closed me and then I finally know it's a shark

ASSOC GEN X4

P: Oh

ASSOC GEN

C: And then ahhh

ASSOC GEN

P: So when we went to the beach, did you see any shark?

YN ELAB

C: No

EV NEG

P: Oh okay, do you remember uhm, when we were on the beach, there was a uh a truck...

ST ELAB

C: A truck?

EV CON

P: Do you remember a truck?

YN REP

C: That dump truck?

EV CON

P: The big one and it's a real one uhm

ST ELAB X2

C: Real one?!

EV CON

P: Yeah, beach guard was driving it

EV CON; ST ELAB

C: Oh yeah, it wasn't a dump truck!

EV CON; MELAB

P: Mhm hm

EV CON

C: No

EV CON

P: Mhm no it wasn't a dump truck, it was a rescue truck

EV CON; ST ELAB

C: Uh huh

EV CON

P: And the beach guard was driving it

ST REP

C: Uh huh

EV CON

P: You remember? He drove all the way to the beach, closer to the water, and he was telling people they need to come back

RM; ST ELAB X3

C: Why?

MQ

P: So they don't get too far out, they might be pushed away by the waves, the big waves. Do you remember those lifeguards sitting on the tall tall

ST ELAB X3; YN ELAB

C: Yeah, when I was little you put me up

EV CON; ASSOC EVENT

P: Yeah, we climbed that when you were little. Next time, maybe we can climb that again

ASSOC EVENT; ASSOC FUT

C: Yeah but one of the lifeguards are sitting on it

ASSOC FUTURE X2

P: We went there after the day is already uh it's over, the lifeguards left already. You and daddy and I, we climbed up, remember?

ASSOC EVENT X4

C: Did I sit in the seat?

ASSOC EVENT

P: Yeah you did, you don't remember now?

ASSOC EVENT X2

C: No

ASSOC EVENT

P: Oh, what do you remember about the beach?

GMQ ELAB

C: I remember everything!

MELAB

P: Tell me at least three things that you remember about the beach?

GMQ REP

C: I don't know anything

PL

P: You remember about the sand?

YN REP

C: Yes

EV CON

P: You remember about the bug

ST REP

C: Yes

EV CON

P: You remember about the lifeguard sitting up high

ST REP

C: Yeah

EV CON

P: You remember, do you remember, daddy brought back fish and chips?

YN ELAB

C: Yeah

EV CON

P: Do you remember that?

YN REP

C: Remember

PL

P: Do you remember the snacks we had?
YN ELAB
C: Oooh, yeah, I love those snacks. Remember that thing I was tryna take off?
EV CON; ASSOC GEN, MELAB
P: Oh, it was very chewy?
YN ELAB
C: Yeah
EV CON
P: What was that?
GMQ ELAB
C: It was some kind of no that daddy brung
MELAB
P: Was it turkey jerky?
YN ELAB
C: Uh huh, turkey jerky!
EV CON
P: Ahh
PL
C: I love that turkey jerky!
ASSOC GEN
P: Okay
ASSOC GEN
C: Did we throw it away?
MELAB
P: Uh we finished it and then we threw the wrapping, the container, away
ST ELAB...X2
C: Aw I like turkey jerky
ASSOC GEN
P: Aw you like turkey jerky
ASSOC GEN
C: Uh huh
ASSOC GEN
P: What other snacks do you remember we had on the beach?
GMQ ELAB
C: Goldfish?
MELAB
P: Yeah we had Goldfish
EV CON
C: Cereal?
MELAB
P: Oh, we had cereal.
EV CON
C: Uhm crackers
MELAB
P: We also had
PL C: Chips

MELAB

P: Mhm hm yeah

EV CON

C: Crackers

MREP

P: Crackers and chips yes

EV CON; ST REP

C: Did we have – no, not jelly

MELAB

P: No, we didn't have jelly, we had drinks

EV CON; ST ELAB

C: Yeah

EV CON

P: And water

ST ELAB

C: I just had some kind of drink

MREP

P: Mhm hm, it was cold water

ST ELAB

C: Yeah

EV CON

P: Mhm, do you remember we had a cold drink container?

YN ELAB

C: Mhm hm

EV CON

P: And we sat on it, do you remember we put a towel on the sand and sat on the towel?

ST ELAB; YN ELAB X2

C: What towel?

MQ

P: We sat on a chair, two chairs, right? We have two beach chairs.

YN ELAB; ST ELAB

C: Uh, I sat on I sat on yours

MELAB

P: Yeah, what color was the beach chair?

EV CON; GMQ ELAB

C: Red and mostly black

MELAB X2

P: Yeah, there's dark dots on it

EV CONX2; ST ELAB

C: Yeah

EV CON

P: Cause uhm

PL

C: Sand

PL

P: What about the umbrella, do you remember the umbrella?

YN ELAB

C: Yeah! Actually, we didn't have an umbrella. Actually, we had two
EV CON; MELAB

P: Yes, we had two and they were huge, right?

EV CON; YN ELAB

C: Yeah

EV CON

P: Daddy had to bury it in the sand

ST ELAB

C: Yeah

EV CON

P: And in the end one broke

ST ELAB

C: Yeah

EV CON

P: We had to throw

ST ELAB

C: And we had to get a guy's, you know

MELAB

P: Daddy was trying to give the uhm the stick part, I mean the support away and they didn't want it, do you remember that?

ST ELAB X2; RM

C: Yeah, but remember if it was too heavy for daddy, I would have to dig in the sand

EV CON X2; MELAB

P: Uh huh yes, we dig deep in the sand and then bury the stick and bury the sand

EV CON; ST ELAB X3

C: So could do it like this and hold the umbrella

MELAB

P: So was it a good time, did you have a good time at the beach?

ST ELAB; YNQ ELAB

C: Yeah

EV CON

P: Would you like to do that again?

ASSOC FUTURE

C: Yes

ASSOC FUTURE

P: Okay

ASSOC FUTURE

C: I really want to do that

ASSOC FUTURE

P: Okay, alrighty, say bye bye

OFF REG ATTEN X2; OFF

C: Bye

OFF

P: ALRIGHT OKAY WE DONE

APPENDIX B: LE EPISODE WITH ME CODES

P: Mokay. So the first one I wanted to talk to you about is: Do you remember after we visited your Grandma's house, we went on a road trip. Do you remember the first place that we went to?

OFF REG ATTEN; ASSOC GEN; ST ELAB X2; YN ELAB

C: Uhm, I forget.

PL

P: It had sand.

ST ELAB

C: The beach!

MELAB

P: The beach. Do you remember the name of the city that it- the beach was in?

EV CON; GMQ ELAB

C: North Carolina.

MELAB

P: Noo- the ci- the other one.

EV NEG; ST ELAB

C: Mm. Nuh uh.

EV NEG

P: It was in Dustin, Florida.

ST ELAB

C: (Baka?)

UN

P: Yeah. Do remember what we did there? What we did in Dustin, Florida? *pause* Me and your dad and your brother went on a big boat. And we saw animals in the water, right?

GMQ ELAB; ST ELAB X3; YN ELAB

C: Yeah.

EV CON X4

P: What were they?

GMQ ELAB

C: Dolphins.

MELAB

P: Uhm, do you remember how many dolphins that we saw?

EV CON; GMQ ELAB

C: Six hundred.

MELAB

P: No, we did not see six hundred. *pause* Did we see any? It was kind of yucky that day.

Huh?

EV NEG; YN REP; YN ELAB

C: Yeah.

EV CON X2

P: I think we saw only one.

ST ELAB

C: One.

EV CON

P: What else do you remember about that trip? Did you like it?

GMQ ELAB; YN ELAB

C: Yes.

EV CON

P: What did you like the most about it?

GMQ ELAB

C: Riding back on- to play on the sand.

MELAB

P: Did you like playing on the sand?

YN REP

C: Yes.

EV CON

P: Did you build a sandcastle?

YN ELAB

C: No.

EV NEG

P: Did you swim in the ocean?

YN ELAB

C: No.

EV NEG

P: Was it scary?

YN ELAB

C: Mmmm. No.

EV NEG

P: K

EV CON

APPENDIX C: MISL RUBRIC



Monitoring Indicators of Scholarly Language Gillam & Gillam (2010)

Story Grammar Element	Description	Examples	Description	Examples	Description	Examples	Description	Examples
Character Salt Code = CH	0 Points: No character is included, or only ambiguous pronouns are used.	<u>They</u> were walking. <u>She</u> and <u>him</u> were walking.	1 Point: Includes at least one character using non-specific labels (pronouns, nouns) WITH a determiner "the" or "a".	Once there was <u>a boy</u> walking. <u>The boy</u> was walking.	2 Points: Includes at least 1 character using a "name" for the character Note: Only code each character one time.	Once there was a boy named <u>Charles</u> .	3 points: Includes more than 1 character using specific name	There was a boy named <u>Charles</u> , a girl named <u>Connie</u> , and a mom named <u>Jody</u> .
Setting Salt Code = S	0 Points: No reference to a specific time or place.	The boy and girl were walking.	1 Point: Includes reference to a general place or time (*not necessarily related to a "story")	The boy and the girl were <u>outside</u> . The space ship came from <u>outer space</u> .	2 points: 1 reference to a specific place or time in the same story. (*must be related specifically to the story).	Once there was a boy and a girl walking in <u>Central Park</u> .	3 points: Includes 2 or more references to specific places and/or times (in the same story).	<u>Last week</u> there was a boy and a girl walking in <u>Central Park</u> . They lived in <u>Logan</u> .
Initiating Event Salt Code = IE Event that motivates/elicits action "starts the story" *Note: The IE must be explicitly stated by the child, not inferred by the scorer.	0 Points: A problem or "starting" event is not stated.	The girl looked at the boy. The boy and girl were walking in the park. The boy is next to a car. There is a tree.	1 Point: Includes at least one event or problem that does not motivate/elicit an action from the character	<u>A spaceship landed</u> in the park (potential initiating event). There were aliens laughing and a dog running and a table... (no action/attempts related to potential IE)	2 points: Includes at least one event or problem that elicits an active response from the character(s).	A spaceship landed in the park (IE). The girl ran (A) out to say "hi" to the aliens.	3 points: 2 or more IE's in one story (complex episode)	A spaceship landed in the park (IE) The girl ran (A) out to say "hi" to them. They became friends (C). Then, the spaceship caught on fire (IE). They ran to get some water.

Mental verbs Salt Code: M Mental Verbs: decided, thought, wanted	0 points	No mental verbs.	1 point: 1 mental verb.	The boy <u>thought</u> it was hot.	2 points: 2 DIFFERENT mental verbs explicitly stated.	He <u>decided</u> to go and meet the aliens. He planned to get to them.	3 points: 3 or more different mental verbs explicitly stated.	He <u>decided</u> to go and meet the aliens. The girl thought he was brave and he decided to act that way.
Linguistic verbs Salt Code: L Linguistic Verbs: said, told, yelled	0 points	No linguistic verbs.	1 point: 1 linguistic verb.	The boy said, "NO!"	2 points: 2 DIFFERENT linguistic verbs explicitly stated.	The boy said, "no," and the girl yelled, "stop!"	3 points: 3 or more different linguistic verbs explicitly stated.	The girl told him he was brave. He said, "thanks," and she said, "you are welcome."
Adverbs Salt Code: ADV Note: Additional examples below chart.	0 points	No adverbs	1 point: One adverb that conveys tone, attitude, time, or manner, degree or reason and modifies a verb, adjective, negation, or another adverb.	<u>Sometimes</u> , they like to watch aliens. He is <u>very</u> good.	2 points: Two different adverbs	The boy and the girl were <u>very</u> scared. They left <u>quickly</u> .	3 points: 3 or more different adverbs.	The aliens yelled <u>loudly</u> . "Don't come over here." <u>Surprisingly</u> , the kids went anyway. <u>After</u> that, they were all friends.
Elaborated Noun Phrases Salt Code: ENP (articles, possessives, determiners, quantifiers, wh-words, big, black, funny) Note: Additional Examples below chart	0 points	No noun phrase elaboration. He saw spaceship.	1 point: A noun phrase contains one modifier that precedes the noun	Her brother saw the spaceship. The dog is happy. Two aliens came out.	2 points: A noun phrase that contains 2 different modifiers that precedes the noun.	<u>The black</u> dog saw the spaceship.	3 points: Noun phrases in which 3 or more different modifiers precede the noun.	<u>The old, black</u> dog was sick.
Grammaticality	0 points	3 or more grammatical errors	1 point	2 grammatical errors	2 points	1 grammatical error	3 points	No grammatical errors
Tense	0 points	3 or more tense changes	1 point	2 tense changes	2 points	1 tense change	3 points	No tense changes

Based on the research and contributions of many including: Anderson, 2010; Curen-ton & Justice, 2004; Greenhalgh & Strong, 2001; Hughes, McGillivray & Schmidek, 1997; Petersen, Gillam & Gillam, 2008; Pellegrini, 1985.

*Contributions from Michelle Merrill, Karen Tumbow, Brittney Lamb, Sara Hegsted, Julise Jager, Allison Hancock, Abbie Olszewski.

Date _____
Story used to elicit narrative _____
Total macrostructure score _____
Total microstructure score _____

Additional Examples of Microstructure elements (not an exhaustive list)

Coordinating conjunctions may include and, and then, then, for, or, yet, but, nor, and so. They are used to coordinate clauses (The boy ran back home but he got there too late). We do not give credit when they are used to coordinate nouns in a noun phrase (The boy and the girl) or verbs in a verb phrase (They were running and playing).

Subordinating conjunctions include *after, although, as, because, if, for, like, once, since, that (but that, in that, in order that, such that), unless, when, where, while*. These words set up a hierarchical relationship between clauses. You must have 2 clauses to have a subordinating conjunction. "That" in the sentence, "I saw that." is not subordinating. "That" in the sentence, "I saw that you really liked him," is subordinating.

Adverbs may relate to time (e.g., *all of a sudden, suddenly, again, now, tomorrow, yesterday, then*), manner (e.g., *somehow, well, slowly, accidentally*), degree (e.g., *very, each, some, almost, barely, much*), number (e.g., *first, second*), affirmation or negation (e.g., *definitely, really, never, not*).

Elaborated Noun Phrases are a group of words comprising of a noun with one or more modifiers providing additional information about the noun. Modifiers may include articles (e.g., *a, an, the*), possessives (e.g., *my, his, their*), demonstratives (e.g., *this, that, those*), quantifiers (e.g., *every, each, some*), wh-words (e.g., *what, which, whichever*), and true adjectives (e.g., *tall, long, ugly*).

Simple Elaborated Noun Phrases consist of a single modifier and a noun. Examples include *one day*, *big doggy* (adjective + noun), *that girl* (determiner + noun), and *those ones* (demonstrative + noun). **Complex Elaborated Noun Phrase (CENP)** consist of two or more modifiers and a noun. Examples include *big red house* (adjective + adjective + noun), *a tall tree* (article + adjective + noun), and *some mean boys* (quantifier + adjective + noun).

Mental Verbs are a type of verb that are used differently than active verbs and are not used in progressive tenses. Mental verbs may include *think, know, believe, imagine, feel, consider, suppose, decide, forget, see, hear, and remember*.

Linguistic Verbs target the verbs that relate to the acts of writing and speaking which may include *read, write, say, tell, speak, shout, answer, call, reply, whisper, and yell*.

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APPENDIX D: TRANSCRIPT EXCERPT WITH SPEECH ACT CODES

P: We looked up in the sky and saw something that was gonna happen at a specific time. [EXTENSION] Can you remember? [Y/N QUESTION]

C: (gasps and yells) The eclipse!

P: Yeah! [AFFIRMATION]

C: Yes!

P: So what state was it in again? [WH-QUESTION] Do you remember?[Y/N] QUESTION

C: No, I didn't remember.

P: Okay, [AFFIRMATION]it was South Carolina [CORRECTION/CLARIFICATION]. So we drove there [EXTENSION], and we stayed overnight [EXTENSION]. And we stayed...and we stayed...

C: I remember we stayed...

P: (interrupting) We stayed at a hotel. [EXTENSION] The night before.[EXTENSION] I can't remember if you guys went Swimming. Did ya? [Y/N]

C: (indistinct negative response) Mmummn.

P: Okay. [AFFIRMATION]So then the next day we went to a park! [EXTENSION](1) Okay! We went to the park and we waited for the eclipse[EXTENSION (1)]. Do you remember what you were doing at the park? While we were waiting? [Y/N QUESTION].