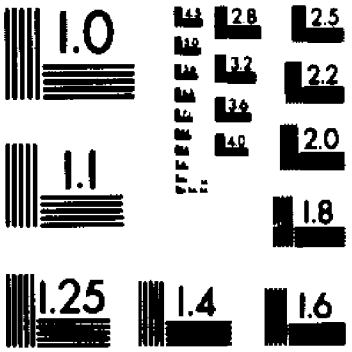

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LEARNING TO REMINISCE: A DEVELOPMENTAL STUDY OF HOW YOUNG CHILDREN TALK ABOUT THE PAST

City University of New York PH.D. 1986

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ABSTRACT

Learning to Reminisce:

A Developmental Study of How Young Children

Talk About the Past

by

Susan Engel

Advisor: Professor Katherine Nelson

This study addresses three related issues: How do young children first come to talk about the past? How does this activity have its own developmental history? What role does maternal input play in the development of talk about the past?

Four mother-child pairs were observed 10 times over a five month period (children's age: 19-24 months). In addition, 6 mother-child dyads at each of three ages (19, 24 and 30 months) were observed once, discussing three events from their past.

Analyses of references to the past from both parts of the study revealed developmental shifts as well as individual differences in style.

As the child gets older, the mother-child pair refers to the past more frequently. Their conversations are longer and include more detail. While at first children participate without contributing information, over time they are increasingly able to add material to these narratives.

Two styles of talking about the past were identified: practical remembering and reminiscing.

Practical remembering pairs refer infrequently to the past. They construct brief spare narratives. Their references to the past are usually in the service of some ongoing activity. In contrast reminiscing dyads refer to the past more frequently. Their narratives are longer, include more embellishments and tend to be more sequential. These dyads usually refer to the past for the sake of telling a story and sharing a memory rather than to clarify some present action. Children of reminiscing dyads contribute more information and are more likely to participate in and prolong

dialogues about the past than children of practical remembering pairs.

Finally the data support the argument that some young children and their mothers co-construct the past. This co-construction undergoes developmental change. At first mothers and children participate in an intersubjective representation of a past event. Over time their dialogic roles become differentiated. As this differention occurs the child internalizes the narrative and develops a personal sense of the past.

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"This is the time to remind ourselves that in most European languages, the term 'history' has an intriguing ambiguity, meaning both what really happens and the narrative of those events."

Ricoeur, P. (1981)

Chapter 1

Introduction

The purpose of this research is to investigate the process by which young children come to talk about experiences from their past. While a great amount of research has been done on how children organize, encode, rehearse and decode memories for various kinds of materials (lists, arrays, objects) we know much less about how young children go about remembering in the context of everyday life. We know even less about how this ability might develop. The present inquiry will focus on the child's emerging ability and proclivity to recall episodes from her past, and communicate these recollections. This activity is assumed to occur most meaningfully within the context of everyday life, in which the child must use the present environment to support and/or cue recollections of her past. Further, this research focuses on mother-child discourse with the aim of discerning the ways in which parents might play an instructive role in helping the child acquire the ability to talk about the past.

Several issues are implicit in this inquiry. The type of memory to be examined must be defined,

including criteria for what counts as evidence of memory behavior. The relationship between memory as a cognitive activity and memory as it is organized and expressed through language must be considered. Finally, the notion that there may be a social basis for this development must be examined. Because these are the underlying issues of the proposed research, a brief review of arguments and research pertaining to each of these issues will be presented.

Children's Memory for Past Events: A Review

A mother reminds her child that they went swimming the day before, and the child smiles and begins a kicking motion with her feet. A mother points to a picture of a red hat and says with a sad look on her face, "See that hat. You had a hat just like that and you threw it out the window yesterday. Bloop, just right out the window. That made me very sad." A 2 1/2-year-old girl smiles at a friend she hasn't seen in several weeks and says, "Ice cream, you gave me ice cream..." referring to an occasion that took place 2 months previously in which the friend shared her ice cream. What do these anecdotes have in common? They are examples of the young child's efforts to master and the mother's efforts to

encourage or teach the skill of talking about specific past episodes. Piaget (1973) made a distinction between memory in the general sense (knowledge that was gained at a previous time) and memory in the strict sense (the recollection of a past experience with some sense of its pastness). Tulving (1972) suggested that untemporally marked memory is semantic memory (storage of definitions and information) while memory for specific experiences is episodic memory. Nelson (1980) claimed that much of the information we use in daily life should be termed general memory (like Piaget's general memory and Tulving's semantic memory) while memory for particular occasions is best conceived of as specific memory. In all three theories the emphasis is placed on the difference between untemporally marked storage of experiences that results in general knowledge and the recollection of specific experiences that involves some sense of the temporal boundaries of that experience. The classic view of young children is that they are poor rememberers. This view stems from an interesting characteristic of research concerning the development of memory. Traditionally children are tested for memory with tasks that probe their ability to organize material for optimum retention, their ability to

monitor their own success at remembering, and finally, their ability to use their memory skills deliberately (See Liben, 1982 for a review; Wellman, Ritter, & Flavell, 1975). While this kind of research has taught us a lot about certain aspects of memory development, it has left other aspects bare. Brown (1975) and Flavell (1978), have both suggested that metamemorial skills are crucial in the acquisition of deliberate organized memory for material and suggest that the development of this metacognition can account for the superiority with age on many memory tasks that involve sorting, tagging, mnemonic strategy, rehearsal, etc.

Unfortunately the emphasis on experimental tasks that require deliberate organization and rehearsal has left us with a view of the very young child as a poor rememberer. This is startling when one considers how much an infant is absorbing and storing every day just to become a competent participant in his or her world. Of course, much of this activity falls under the heading of memory in the general and/or semantic sense, not stored as specific episodes but as knowledge.

Neisser (1983) comments on the surprising fact that while students of memory have done well at

isolating issues implicit in the ability to remember (such as organization, storage strategies, etc.) they have neglected to study when, where, and what people actually do remember. This criticism holds for students of infant and child memory particularly. As Perlmutter (1980) suggests, there is a lot of detailed knowledge about certain aspects of memory skills and demands without an underlying base of naturalistic descriptive data. We have little knowledge of what the early signs might be of memory for the specific past. These signs might reveal themselves at odd and unpredictable moments in the child's life, not to mention in odd and unpredictable forms. Recently, the work of people such as Sachs (1983), Nelson (1984), Perlmutter (1980), Horn-Ratner (1980), Engel, Kyratzis, & Lucariello (1984) and others suggests that children first start referring to the specific past under the age of two. This research suggests that the ability to recall specific episodes starts early in life and has a history that ties it in with language, knowledge and social interaction. The type of memory under investigation here is deliberate recall of a past experience or episode in which the rememberer understands the "pastness" of the recollection.

There has been some research on children's

emerging ability to speak in the past tense. Lois Bloom (1970) analyzed the language of four children over a period of several months. She argued that children learn the syntactic functions of words before learning the correct semantic reference of tense. She suggested that there is an early discrepancy between form and function. This means that while the children in her study used adverbial temporal terms correctly, and often matched them correctly to verb inflections, they did not know what the terms meant. This supported her overall argument that language depends on cognitive development. Friedman (1978) and Brown (1973) concur in finding that utterances before the age of 2 1/2 years are tense free, and that use of the past irregular and past regular begins between 2 and 3 years of age. Cromer (1974) noted that while there is an early use of irregular and regular past, the have perfective (I've eaten this, have you seen this?) comes in quite a bit later (5 or 6 years). He suggests that this is because of the semantic and conceptual complexity involved in denoting past relations or experiences in terms of the present. Similarly, Smith (1980) notes that the use of temporal adverbials comes in well after the use of other adverbials and that relatively complex temporal

expressions are not acquired until about age 5. She notes that there are three times involved in referring to the past: speech time, event time, and reference time. She outlines a first stage in which children (3 1/2 years) can refer correctly to something that happened prior to speech time. In a second stage (4 1/2 years) children can refer to times other than the present from a point of view other than the present. Finally, at the third adult-like stage children can speak from any combination of the times.

At the conceptual level referring to the past in terms of the present involves several abilities the young child may or may not possess. First, it necessitates retaining a representation or sense of one's self in the present on-going situation while simultaneously representing oneself in a displaced context (the context of the past event). Secondly, it involves some kind of conceptual relation between one's past and one's ongoing experience. Nelson in her work on Emily (1984) refers to this as the establishment of a time line (in her work this also includes the future). The child must know that a word has a meaning independent of the ongoing situation. The use of a word or phrase to describe something from the past (the time she ate this morning) can be

meaningfully related to the use of that word or phrase to describe something in the present situation. What you ate this morning can be talked about in relation to what you are eating now.

All of these studies on children's ability to use past forms of the verb suggest that there is a complex relationship between linguistic mastery and underlying conceptual mastery. While the late occurrence of past terms that are complex is explained by the conceptual sophistication their use involves, Bloom (1970) explains the early correct use of adverbials and tense by saying they are mismatched with underlying meaning. A child may use the word "yesterday," for instance, without meaning the same thing that an adult's use of the word "yesterday" means. In fact, it is quite common for young children to acquire a temporal adverbial and then use it fairly indiscriminately to refer to displaced time. "Yesterday" may refer to yesterday, as well as last week, last month and even tomorrow. This suggests that the general conceptual meaning of adverbial temporal terms (that they refer to displaced time) is acquired before the specific semantic meaning of a particular term such as "yesterday" or "tomorrow."

Past and future as dimensions of experience may

be understood before the specifics of the time line are grasped. This leaves the investigator with the problem of knowing how to interpret these linguistic tokens of competence. It also suggests that both syntactic and semantic competence must be looked at to gauge the child's ability. Since the earliest finding of past tense is 2 1/2 years (with a few exceptions, Nelson, 1984; Brown, 1973) it leaves open the question of what understanding of past the child might have before this age. While we have some techniques for determining when a child recognizes a place or object from the past, it is much harder to assess his or her ability to recount or recall specific episodes from the past, or what the use of past terms signifies.

Recognition, Recall and the Use of Cues

The view of the young child as a poor rememberer stems in part from two related characteristics of young children's memory that seem to differ from adults' memory. These two characteristics are young childrens heavy dependence on cues and the superiority of their recognition of items from the past over their ability to recall events from the past.

One conclusion that might be drawn from studies of early recognition and recall (Perlmutter 1980) is

that the less one depends on the environment and the more one can spontaneously bring up something from the past, the more sophisticated the memory system. In other words, dependence on and use of present context to remember is often seen as developmentally immature.

At the most general level recognition is one's ability to respond to something or somewhere experienced before. Recall involves a more deliberate and constructive process that draws less on the environment and more on one's own inner representations (Piaget, 1973).

A further difficulty with the research on infant memory is the question of accuracy. Anecdotal and biographical data on children's memory have been criticized for failing to verify the accuracy of the memories. A few studies have attempted to deal with this by having mothers go over the protocols for accuracy (Ashmead & Perlmutter, 1980).

Research on adults' memory has revealed a host of distortions that adults customarily make (Neisser, 1981; Yarrow, Campbell & Burton, 1970; Purcell, 1952). One interesting implication of this which is compatible with constructive and schematic models of memory (Bartlett, 1932, Paris and Lindauer, 1977) is that distortion is in the nature of recollection.

These models argue that memory is a reconstructive (rather than simply retrieval) process in which the memory is built at the time of remembering and is determined by pre-existing schemas that were partially built or elaborated at the time of the experience.

The reconstruction of past experiences is intimately tied with the way a person organizes experience in general and his knowledge about the items being remembered. New experiences and information are integrated with the knowledge structures the individual already has. Therefore, what the new material is assimilated to will determine how and what one remembers. This view stresses the importance of the social, cognitive, and developmental variables as determinants of how an event is perceived and encoded. Paris and Lindauer (1977), have given an excellent summary of the central tenets of a constructive view of memory:

1. Exact reproduction of recall of an event, especially a meaningful stimulus is rare; memory usually involves transformations of the input.

2. These transformations can involve either omission of information and abstractive

processing (cf. Zangwill, 1972) or the embellishment of the given information with supplemental and implied relationships. Although memory is characterized as holistic and schematic, particular details and figurative information can be remembered and play an important role in memory.

3. Constructive processes are determined jointly by the immediate context, the cognitive ability, and the sociohistorical milieu of the individual.

4. Memory schemata are dynamic and changeable. Information can be recomprehended and transformed during any retrieval of that event or by temporal and structural changes in the schemata to which the event is assimilated. Remembering involves reciprocal interactions between the individual's cognitive schemata and the new information. (p. 37)

Both Bartlett (1932) and Paris and Lindauer (1977) stress the non-static nature of remembering

events and stories. This view of memory suggests that when we look at how children get better at remembering, we must not only look at how accuracy improves but at how assimilation, use of personal and historical context, and integration of preexisting knowledge change as the child develops in all of these areas. (See Paris & Lindauer, 1977; Bartlett, 1932; for fuller discussions of schema and constructivist views of memory.) In discussing the relationship between memory and context Meacham notes

> "... our principal means of judging the accuracy of memories is not through an assessment of their correspondence with the past but rather through a determination of whether or not they provide information that is appropriate or useful in the context of current personality and social conditions."
>
> (Meacham 1977, p. 275)

Neisser (1983) suggests that important events are remembered in terms of one's own understanding of history and one's own relationship to it. This work on adult distortion and reconstruction points up an interesting possibility for research on infant memory. To the extent that distortions and transformations are the rule in adult memory, accuracy may not, in itself, be the most important aspect to look for in young children.

While accuracy may or may not improve with age, it may not be the most important task of the

rememberer. When young children refer to and describe events from their past, the fact that they may not be accurate is less significant than the fact that they are doing something called remembering.

Nelson's study of one child's monologues in the crib shows evidence of fusion of hearsay (stories the child has been told) with actual memories. Nelson suggests that this fusion or, as she puts it, transformation of stories into personal memories, should be studied seriously. In other words, distortion and transformation should be primary foci of developmental research on memory. In fact, recognition studies suggest that accuracy is not in itself a big problem for children (Myers & Perlmutter, 1978; Mandler, in press; Ornstein, 1978) and may only fail when other demands of the task such as putting the description in the right format, and reporting at the appropriate time, draw away from the ability to be accurate.

A further possibility suggested by Nelson & Ross (1980) is that often general memory and specific memory are interwoven or undifferentiated for the young child. This would result in intrusions from general knowledge about an event in the recalling of a specific example of that event. This gives us some

understanding of the possible reasons for inaccuracies without detracting from the fact that the child is in fact remembering. It may be that a child's basis for remembering specific episodes is less differentiated than an adult's.

Memory and Language

Memories can range from private unspoken experiences of the past to those that are communicable to others. When a memory is communicated to another person, it must be put in a verbal form, and this verbal form is usually a narrative one. In fact, this is one of the problems with learning about young children's memory abilities. They are often unable to produce more than one word in referring to an experience (Sachs, 1983). It is difficult to know when a word displays a knowledge of the past in Piaget's strict sense and when it is just an appropriate association to some cue. The narrative form may play a role in the memory system. While many types of memory can occur in isolated images or flashes (for example recognizing a painting) or exist at a procedural or action level (finding one's way), some kinds of memory, in particular memory for specific past episodes, require a kind of mental

sequencing that is integral to the narrative form. Understanding and expressing the relation of a past episode to the situation in which the episode is recalled involves similar demands to those of constructing a narrative in which events are sequenced and placed in a perspective, both spatially and temporally, that reflects the speaker and hearer's point of view as well as the spatial and temporal characteristics of the episode. Neisser has argued that people may only retain a flash of an experience and build it into a narrative after the fact when they perceive the relevance or significance of the event (Neisser, 1983).

Research described earlier has shown that the ability to report past events using correct tense forms and organization parallels the usual developmental model that predicts autobiographic memory to begin at around 3-4 years of age (Todd & Perlmutter, 1980). Nelson's case study of one child's bedtime talk shows that an important development during the third year is the acquisition of these reporting forms. Umiker-Sebeok (1977) studied children's narratives and found a gradual increase in correct use of past tense and also perspective in telling stories to others. Nelson and her colleagues

in their investigation of script knowledge have stressed the child's ability to organize and report correctly and distinguish between requests for specific events and a general report of an event (Nelson & Gruendel, 1979; Fivush, 1982; Nelson & Hudson, in press).

This work shows the importance in evaluating memory for specific events of the child's emerging ability to put experience into a narrative form. Research that does not require a great deal of linguistic sophistication from children finds that they remember specific things (such as objects and locations) at an earlier age (Perlmutter, 1980; Nelson & Ross, 1980; Todd & Perlmutter, 1980) than studies that call on marrative skills. Does this finding mean that all kinds of memory are available to the child early on, but the only kinds that show are those that don't depend on linguistic sophistication, or does it mean that different sorts of memory develop at different times depending on what symbolic system they are tied to?

Recently there has been increasing focus on the language of memory itself as an emerging capacity in its own right (Sachs, 1983; Eisenberg, 1982; Nelson, 1983; Engel, Kyratzis & Lucariello, 1984). In

particular, there is a growing body of research that specifically scrutinizes language about past episodes in a child's life.

Nelson's work on scripts (Nelson, 1981) points up the importance of distinctions in the child's language between general scripts and specific memories, for instance, differences between "We ate lunch and then we went outside to play" and "We eat lunch and then we go outside and play, or go to the roof." These distinctions in the language are then used as indicators of underlying conceptual distinctions. In addition, Nelson's longitudinal data on the talk of a child in her crib suggest that the child is mastering terms for time that reflect an increasing differentiation of time periods and their use in organizing experience (Nelson, 1984).

Sach's (1983) recent work has focused on the child's ability to talk about the "there and then" as opposed to the much emphasized "here and now" that dominates a toddler's language. According to standard accounts, most of the 16-30 month child's talk is about the here and now (Brown & Bellugi, 1964), but some small part of it is also about the there and then. Sachs' data supports this classic conception of what the child's talk is about. Talk about the there

and then increases in the years between two and four. Drawing on longitudinal data from a mother-child dyad (the child was studied from 20-30 months), Sachs traced the emergence of talk about several kinds of there and then talk--displaced objects, displaced events that had just happened and displaced events that had happened several hours to days ago. She found that there was a close relationship between the child's talk about these aspects of experience and the mother's use of this kind of reference. Successful reference to absent objects, in particular reference to past and future beyond the immediate situation, occurred within the framework of a few highly contained topics, "conversational routines." Over time, displaced reference required less and less contextual support. Sachs concluded that for every abstract use of displaced reference, a more concrete and limited form of the term preceded it. Her work suggests that mother and child interact in drawing on the environmental and conversational context to interpret and use displaced reference, and that the interaction reflects a decreasing dependence on these supports in development.

Eisenberg (1983) has also done research on children's ability to use displaced reference. Again,

drawing on longitudinal data of two little girls, Eisenberg looked for the emerging ability to refer to non-present events. In particular, she focused on the kinds of linguistic demands the parents made on the children. She suggests that children only refer to past events when requested by adults, as if they had yet to learn the point of this kind of activity in and of itself. One interesting note on her findings is that she was looking at American/Mexican children. As Scheifflin (1979) has shown, the demands made upon children by their mothers, and the kinds of talk engaged in between mothers and children shows some cultural variation. Eisenberg's work points to the significance of the linguistic development of memory as a mental activity in itself. Her findings suggest that the importance of this activity may be transmitted from parent to child, and that this emphasis may vary from one culture to another.

Talking about past events involves specific linguistic demands that may or may not coincide with cognitive demands. Sachs points out that talking about a non-present referrent forces the speaker to be much more specific than when the present context provides support for interpretations. For instance, when the child is getting dressed and points to shoe

and says "shoe," the mother has a number of indicators as to what is being referred to. But if the child refers to shoe out of this context, the mother has to guess which shoe and when and in what situation the child is referring to.

Eisenberg and Sachs have both found that discussions of displaced referents usually focus on routine topics. This routine then provides some kind of contextual support for early displaced reference. In addition, as with routines themselves, it provides the child with the chance to rehearse and consolidate new kinds of experience and organizations. Routines refer here to organized sequences of actions that the child engages in on a regular basis. More specifically, these routines are usually shared between mother and child (or other members of the family). Routines such as lunch, naptime, bath time, etc., provide well-known settings and sequences in which actions and objects are familiar and come to be expected by the child. In addition, these routines provide topics of conversation in which the child can be a competent participant because of her strong mental representation of the situation and its components. These kinds of activities are in contrast to more unique activities such as a visit to the zoo

or a trip to Vermont which may include familiar activities and items (animals, driving, etc.) but are novel to the child as a sequence of related events.

Lucariello & Nelson (1982) found that idiosyncratic rather than routine past events were discussed by 2-year-olds and their mothers. This does not necessarily conflict with the findings of Sachs and Eisenberg. It is possible that although the autobiographical events referred to were not routine, but rather unique and isolated, referring to that episode becomes a routine itself. Alternatively, it is possible that the remembered episodes tend to be special instances of routines.

Horn-Ratner (1980) and DeLoache (1983) have both examined dialogues between mothers and children to investigate the emergence of memory language. As Eisenberg has noted, most early displaced reference occurs in a dialogic framework. An exception to this is the longitudinal data on one little girl in her crib (Nelson, 1984). These data show the young child telling herself extended stories about what has happened to her in the past. Both DeLoache and Horn-Ratner have stressed talk in naturalistic settings between mothers and children. DeLoache analyzed book reading sessions between mothers and

children which involve reference to past experiences related to the objects named in the book. DeLoache analyzed (in two related studies) the talk of children between the ages of 15 and 38 months with their mothers while either looking at an alphabet book or looking at a farm scene depicted in a book. In both studies she found that mothers' memory demands on the children matched the child's level. For instance, when the child already had a particular word in her vocabulary, the mother was likely to ask the child to name something pointed to in the picture. When the child did not have the word as part of her vocabulary, the mother was more likely to ask for recognition memory ("where is the doggy?"). In general, she found that as the child develops, the mother asks more and more complex questions and demands more and more input from the child. In addition, she found that mothers ask general knowledge questions of younger children ("What does the dog say?") while they integrate more episodic autobiographical information when talking with older children ("See the doggy; it's like the one we saw when we visited grandma.").

Several linguistic skills can be identified which seem to be necessary to full fledged talk about the past and which show rich developmental patterns. The

research thus far has revealed the following types of linguistic demands placed on the child: the ability to specify time and place, the ability to draw on non-present contextual cues, the ability to sequence events in a narrative form, and the ability to engage in a dialogic form.

Social Origins of Memory

As the studies on memory talk reflect, looking at the language of memory as it develops often involves looking at mother-child interaction. Focusing on mother-child interaction as the locus of talk about the past has theoretical as well as methodological implications.

Bartlett (1932) was among the first to develop the notion that memory has a social basis. Bartlett's schema theory of memory suggested that we reconstruct past episodes or stories around ongoing schemas we have for particular experiences. These schemas or predictive structures are to some extent culturally derived. His work with folk tales and their repetition within a culture showed that cultural categories are drawn upon and strengthened by their use in reconstructing past events and stories. Bartlett argued that individual and social repeated

recall (the representing again and again of a remembered item, whether it be imagistic or verbal; a picture or a story) involved several types of change: blending, condensation, omission, and invention. The final form of a memory is a stable representation that in the case of the individual reflects personal history, and in the case of the social memory reflects social organization and priorities. He stressed the transforming role memory as a process plays on experience as it is stored and then recalled by the individual and/or the social group. His discussion of transformation in memory is a central contribution to the field. In addition, his position that the telling of stories within a community constitutes a form of social memory was a unique and provocative contribution. While we tend to think of memory as an intra-individual process, his studies with groups of people and the links he made between the individual and social forms of recall suggested that memory is also an interpersonal process.

Vygotsky's theory of the zone of proximal development (1978) has relevance to a discussion of the social origins of memory. In brief, Vygotsky argued that there were two measures of a child's cognitive ability in any given domain or on any given

task. There was the amount or level the child could reach on his own without any help or instruction. In addition, there was the level of performance the child could achieve with the instruction of an adult or a more competent peer. The distance between these two levels of performance is called the zone of proximal development. Vygotsky argued that what the child could do with help at one point, he would be able to do on his own with further development. Interpersonal achievement preceded and was a predictor of intrapersonal achievement. While most of his tasks focused on conceptual processes such as sorting and classifying, the model of the zone of proximal development has implications for the development of memory. It is possible to argue that what the child can remember and put into language with help at one stage, she will be able to do on her own at the next stage of development. At a more general level this theory underscores the importance of viewing a cognitive activity such as memory within an interpersonal and social framework. The input of the "other," in many cases a parent, is central to understanding what the child can do, and is learning to do. Recent work by Sigel & Laosa (1982) stresses the role of the parent in initiating and directing the

child's representation of experience. "... the mother says to the child, "where have you been?" The child responds "I have been to school." The mother asks, "What did you do in school today?" The child responds by describing an array of activities. The mother's query prompts the child to reconstruct previous experiences and, in the process of this reconstruction, the child re-presents the experiences to himself or herself." (p. 50)

Neisser (1983) has also stressed the role of social and cultural context in remembering. In his discussion of flashbulb memories ("Where was I when Kennedy was shot?") he suggests that the reason these important events are remembered is our sense right at or after the time that this is culturally and/or historically significant and therefore merits some kind of organization, rehearsal, and retention. Cross cultural classification studies have revealed important cultural differences in the way things are classified and therefore remembered (Cole, Gay, Glick & Sharp, 1971). All of this work highlights the notion that memory involves organization and that this organization reflects cultural influences on mental activities.

Recent work in language acquisition supports the

notion that social input may be central to the development of memory. Snow, among others, pioneered the work that showed that mothers' input was central in the development of early language (Snow 1977). Scheifflin (1979) focused on how this input might differ from one culture to another, and influence how and what develops in the child's language.

Bruner (1975, 1978) first introduced the notion of scaffolding as a way of understanding how mothers' input affects the child's language development. He described three ways in which the mother helps the child learn to talk within formatted or ritualized situations. The first is to scaffold the dialogue. The mother gives a model of the expected dialogue. This allows the child to fill in his parts appropriately. The predictability of the verbal interaction provides slots for him to fill in. Secondly, the mother extends the situations in which different utterances can be used by the child. The third thing the mother does is to keep the child on a forward track in trying out new utterances and types of communication. She is constantly lifting the level of dialogue to a new level so that the child is "led" along. In this way Bruner has described how ritualized interactions allow the other to shape and

reshape the communicative situation in ways that allow the child to be successful communicatively and at the same time to keep moving along developmentally.

Snow has shown that parents elaborate and clarify what their child has said so that when the child says, "I see Grandaddy," the parent responds, "Oh, you saw Grandaddy?" In this simple example, the mother repeats what the child says but puts the verb into the correct tense. In this way the parent takes off from where the child is, but inches the child along to the next stage of language sophistication.

Scollon and Scollon (1979) introduced the notion of vertical construction in mother-child language interaction. They suggest that in dialogues certain kinds of language formats are co-constructed, each participant contributing to the fuller grammatical form. With the young child, the parent will contribute the missing parts of the construction. Often the parent's contribution causes the child to add to her own utterance in a way that makes the child's utterance (as a whole) more complex grammatically. For example:

Child: Soup.

Mother: What are you talking about?

Child: Drink soup.

(Scollon 1979, p.224) In this way the child's utterances become grammatical through a discourse format.

The importance of mother-child interaction in language development has implications for research in memory development. As Horn-Ratner has argued, choosing social (mother-child) situations in which to observe children might yield richer memory talk than could be found observing children individually. But the language data also suggest that the notion of scaffolding and parent input might be central in understanding how a child learns to talk about the past.

> The demands made on the child to remember and recall, which are originally shared by mother and child, aid the child in developing the means to voluntarily remember. Acquisition of memory skills then is thought to be rooted in the social activities of daily life, and parents are seen, at least in part, as instrumental in bringing

about the shift from involuntary to voluntary memory. (Horn-Ratner 1980, p.52)

In addition, past research on how the child learns discourse forms is important to the argument presented here: one central aspect of memory is the ability to put it into the correct form or organization. Nelson has suggested that the narrative forms her subject practices in the crib reflect internalization of cultural forms for organizing memories (Nelson, 1984).

Research has shown that the amount of talk about the past changes over time in mother-child interactions (Moerk, 1975; Eisenberg, 1982; Sachs, 1982). We do not yet know whether an increase in mother-child talk about the past causes the child's developing ability to discuss the past or whether the increase reflects the child's developing ability.

Borrowing from the language research on mother-child interaction, it can be argued that parental input may play a significant role in the acquisition of the language of memory, and perhaps memory itself, in the form of scaffolding, modeling, and elaborating. The work of Bartlett, Vygotsky, Bruner, and Scollon, among others, suggests that there is compelling reason to believe that cognition and

discourse are interdependent in the developmental process. Through discourse (and instruction as in the case of Vygotsky) children achieve what they might not on their own. Moreover, through discourse they can internalize cultural forms such as the narrative form. In the case of memory, discourse may play a central role in several ways. The child may talk about the past in a vertical construction, to borrow Scollon's phrase, in which the mother (or adult) enables the child to build her own report of the past. The mother may be "instructing" the child in the ways that are appropriate to report on the past (what is important to highlight, how to communicate it effectively, how to tie it into ongoing conversation). The parent may serve as a scaffolder, and also as a cultural conduit. Language here is emphasized as the form through which the mother achieves these roles, but also as the form in which this type of memory is realized.

The Soviet view of memory highlights the importance of the social underpinnnings of remembering. In brief, the Soviet theories suggest that the developing child establishes memory as a goal in itself through the acculturation process. That is, remembering is both shaped and transmitted through the socio-historical structure of the society in which the

individual lives. Underlying skills such as organization, rehearsal and retrieval strategies might first be practiced as activities in and of themselves, and only with development become subordinated to the goal of remembering (Meacham, 1977).

Istomina's study of kindergartner's memory for grocery items in a play and a non-play context suggests that children remember better when remembering takes place in a meaningful activity where the goal suits the context (Istomina, 1948). This suggests that even for young children remembering takes place within the context of everyday life and that their success or failure at remembering is tied to the activity's significance within the context.

The Soviet approach emphasizes a perspective central to the proposal presented here: memory (in the present case recall for specific events) is an activity that only becomes distinct as a goal-directed behavior with development. Moreover, the significance of remembering must in part be learned through participation in the culture. The Soviet perspective argues that mental processes (such as remembering) do not function or develop separately from the social system in which they are used.

Summary

The research in this review covers several different topics: children's early memory abilities, the role of language in remembering, and the social origins of memory. When integrated, these studies suggest an area that merits further investigation. While there is substantial empirical knowledge on certain memory skills, not enough is known about how and when young children remember personal events, and how this ability changes over time. Recent research on children's talk about the past suggests that they remember the past before they show competence in more experimentally defined memory tasks. Recent research on the language of memory has also suggested that memory talk undergoes developmental change. Furthermore, dialogue and maternal input have been shown to play a role in this developmental process. Finally, research on the social origins of memory provides a framework for considering what influence social input may have on the early acquisition of the ability to talk about the past.

Purposes and Predictions

This study examines three questions. The first is: when and in what form, does memory for specific

autobiographical events emerge? There is some consensus that there is a particular kind of memory for past events: personal experiences that are remembered with a sense of their pastness and their place on a personal time line. This kind of memory is termed memory in the strict sense by Piaget (1973), episodic memory by Tulving (1972) and specific memory by Nelson (1980). In each case these psychologists distinguish this type of memory from a more general, knowledge based type of memory that functions without temporal markings.

The second and related question is: what role does language play in this development? As the research in this review suggests, language is one of our best indicators of many natural kinds of memory. This is made evident by researchers' use of, and emphasis on, language as the conveyor of memory. Questions such as what do people remember and how do they organize past episodes are often answered by analyzing what people say. An assumption of this study is that language is also a central component of certain kinds of memory.

The third question is: how might this early development be rooted in social interaction? The focus of this study is the emergence of

autobiographical memory and its social origins. This focus involves several assumptions. It is assumed that there are several substrates of the phenomenon we call memory including neurological, conceptual, and linguistic ability and growth. The aspect referred to as autobiographical memory, memory for a personally experienced specific event, is a particularly linguistic phenomenon, at least in its manifestations. Exceptions to this might include painting a scene from one's past, re-enacting something from the past, or demonstrating recognition of an object, place, or event out of the past. The ability to actually convey a sequence of events as they happened and to place that sequence in its correct historical position within one's life depends on the narrative form. As mentioned earlier, the narrative form allows (demands) one to put a temporal, affective and spatial perspective on a remembered event. While one can have an image of a past event, or even act it out or paint it, without words one cannot communicate that the event is from the past, nor how it relates to the present without language. These are particularly linguistic characteristics of remembering, made possible through devices such as tense, temporal adverbials, connectives and deictics that show the

relationship between two events and between person and experience.

This study examines memory-in-language as an ability that has its own developmental history. While this history is not independent of other developments (conceptual, imagistic, neurological), it is identifiable and distinct. Secondly, the study attempts to demonstrate that mother's input is one type of social influence on children's memory. A mother's role may be unique in a child's experience, but it has implications for the more general question of social influences on cognitive and linguistic development.

The methodology used in this study reflects an emphasis on the need for naturalistic data that observe what children actually do remember and talk about in their everyday lives. While it may not be of vital interest to know what things children do remember, as Neisser, (1983) Perlmutter, (1980) and Nelson (1980) argue, a focus on what children are actually remembering, will probably reveal a greater degree of proficiency, and a wider variety in children's types of memory, than found in previous more experimentally constructed studies.

The data for the study are comprised of

discussions between mothers and children about the past. One part of the study involved naturalistic observations of mother-child pairs over a period of several months. A second part involved single time observations of children at three different ages. In this part mothers were instructed in advance to bring up topics from the past.

Pilot data were collected for both parts of the study. One little girl was tape recorded every two weeks for 5 months, and one child at each of three ages was observed with his or her mother talking about events from the past. In addition the predictions reported below were drawn in part from earlier research on children's talk about the past (Engel, Kryatzis and Lucariello 1984).

Based on these pilot data, developmental shifts along several dimensions were expected. Children were expected to contribute more over time, both quantitatively and qualitatively. In addition, the nature of the mother's linguistic demands and style of reporting the past was expected to change over time, and to some extent, in accordance with shifts seen in the pilot data.

In the pilot study the child at first contributed little to past reference. The mother used a reporting

form that required little input from the child. Her reports carried a series of signals for the child such as "remember when" and "yesterday..." As the child got older the mother made more linguistic demands on the child. Initially the demand was merely to participate linguistically with a repetition or a "yeah." Finally, the mother demanded informational input from the child. At each stage the mother's demands seemed to match the child's performance, suggesting that she was also matching the child's abilities. The cross sectional data were expected to support the developmental shifts seen in the longitudinal data. These data were included to clarify the extent to which different sorts of stimuli in and of themselves affect the child's ability to refer to the past.

One assumption here is that talking about the past is to a large extent a learned ability; one that is taught by the parent. This is in contrast to the position that talking about the past is merely part of larger developmental accomplishments, such as the organization of specific memory and the ability to talk.

The position taken here would be supported by evidence of the following kind. If there are

individual differences in how the past is talked about by mothers, and if children's individual differences correspond to those of their mothers, it would suggest that interaction and social input have a substantive influence on the child's emerging ability to talk about the past.

Chapter 2

Study 1: Method

Subjects

Four mother child pairs were observed. The ages of the four children were 18 months 19 days; 18 months, 3 days; 18 months, 23 days; 19 months 3 days at the beginning of the study and 23 months, 29 days; 23 months, 25 days; 23 months 26 days; and 24 months, 1 day at the end of the study. All subjects were girls and had no siblings. All four pairs were members of white middle class families in which the father worked and the mother was the primary care-giver.

Procedure

The observations began when the children were 18-19 months old and ended at 24 months. As reviewed earlier, this is the time period in which the first real signs of talk about the past emerge (Nelson, 1983; Sachs, 1983; Horn-Ratner, 1980). During this period each dyad was observed for thirty minutes once every two weeks, for a total of ten sessions. During this time, the observer took contextual notes. The

mothers were told that an observational study was being conducted to investigate how mothers and children play and talk together. No more detailed instructions were given and no mention was made of memory. Each mother chose a time of day that was a regular period for them to be alone together and in which there was a lot of verbal interaction between mother and child (for instance, a meal time or play time). The time remained consistent for each dyad across sessions.

Analysis Procedures

All tapes were transcribed verbatim by the experimenter, and were coordinated with the written context notes. All episodes of talk containing reference to the specific past formed the data for analysis. These episodes included monologues ("that was fun last week when we visited with grandma and grandpa. You played with the dog, Elmo, and grandpa took you on a train ride, remember and the conductor came ..."), single utterances ("You hid my shoes last night.") and conversations (M: What did we have for Thanksgiving dinner last week?" C: Cookies(?) M: Yeah, we had cookies, and we had something else, what?"...). The beginnings of an episode were marked

as the first explicit reference by either partner to a past event. This included occasions when the child mentioned something from the past and the next utterance was a clarification by the parent. For example:

C: Pool. Pool.

M: Yes, we went swimming at the pool yesterday.

The end of the episode was marked as the last relevant comment by either partner to the conversation about that past experience. This is a conservative method of choosing episodes since there may have been times when a child mentioned something from the past and the mother did not respond to it. The ramifications of this methodological constraint are discussed at greater length later.

A second coder identified memory episodes for 50% of the data. (Coding instructions are included in Appendix C.) Agreement on number of episodes, and beginnings and ends of episodes was 97%. All the measures reported (except the linguistic analyses p. 68) are based on these episodes of talk. Several terms are used in the following analyses that mean different things to different people. Below a brief description is given of the meanting of these terms as they are used here.

Episodes of talk refers to those conversations or monologues in the data that refer to the past. These episodes have dialogic and topical boundaries that allow them to be extracted from the flow of ongoing conversation between mother and child.

Element refers to a sentence or word that adds new information to a description of a past event.

Events refer to the actual experiences being described in the episodes of talk (a trip to the zoo, dinner last night).

Turn refers to an utterance by one participant that is semantically and dialogically relevant to the other speaker and to the topic.

Narrative - This is the most difficult term to define but perhaps has the most significance for the current discussion and data presentation. In these data narrative is used to describe those sets of utterances (made by one or two speakers) that describe some experience (in these analyses all of the experiences happened in the past). The term narrative implies that these utterances give a sequential description of the past event and that they implicitly or explicitly present the experience in a story form. Temporal and personal perspective are given somewhere within the description. As the analyses will show,

narratives can be long or short, more or less well sequenced, and more or less story-like in their presentation.

Results of Study 1

Developmental Differences in Longitudinal Data

The results of these data are divided into two parts: overall development changes and individual differences. Analyses of the four mother child pairs as one group provides a developmental framework for acquisition of talk about the past. All four dyads showed change over time in the way they talked about the past. The section on individual differences will show that mother-child pairs showed these developmental shifts at different rates and in differing ways. Changes were found for the dyads as units, for the mothers as conversational partners, and for the children as the developmental targets. Developmental shifts will be described in that order.

General Trends

Overall, dyads referred to the past more over time (the average number of episodes was 7.25 at 19 months and 13.0 at 24 months). These episodes of talk

included any discussion of a past experience in which a person, place, object or action was mentioned. These memories range from experiences that happened 16 months before ("This is you when you were three months old") to ones that occurred within the last 24 hours ("Maybe Em put it under the couch last night").

In general, episodes became longer as the children got older. This was measured by number of turns in a conversation. The beginning of a conversation was marked as the first response to an opening statement, and ended with the last relevant response, before a switch was made by one partner in time-frame or topic. For example:

K and L (18 months, 27 days)

Begin M: Michael and Ann came over for dinner.

1 C: Michael.

2 M: Michael - and who came with Michael?

3 C: Ann?

End 4 M: Yes, that's right.

C: down down (struggling to get out of high chair)

This conversation was coded as having four turns. The second utterance in a conversation about the past was counted as the first turn in order to avoid including single utterances (bids for conversation

that are not responded to) in any measure of conversational length. The mean number of turns at 19 months was 2.06 and at 24 months was 3.65.

This finding suggests that one important change in the dyad was a growing tendency to sustain a conversation about the past. In particular, it shows that the child became more active in prolonging and/or enriching the conversation. Contributions that count as turns included: acknowledgments of mother's speech, repetitions of mother's speech, questions, and information. These were counted as turns because they represented the child's effort to stay in the conversation. In addition, there were occasional informational contributions that were gestural but clearly substantive. For instance, when the mother was talking about having hidden the crayons, the child looked first at the mother, then pointed to where the crayons had been hidden, then turned back to the mother. The mother's next turn was to verbalize the child's gesture ("Yeah that's where we hid the crayons ..."). Thus, increasing length of conversations might include transitions on the part of the child in the <u>way</u> he or she contributes to the discussion. While early contributions often consisted of non-substantive turns, later these turns became contributive to the narrative.

In addition to longer conversations about the past episodes contained an increasing number of elements, as the children got older. An element was counted as any item in the narrative that added a piece of information. For example: "the Thanksgiving parade," "You wore a red dress," "We had cookies," are each considered as individual elements. Thus this measure is on content rather than on morphemes or grammatical units. Overall, the average number of elements for a remembered episode increased from 8.75 at 19 months to 21.25 at 24 months (agreement between two coders on this measure was 96%). This shows that not only did mothers and children talk more about the past as the children got older, but that they included more information about the episode.

Maternal contributions to talk about the past changed in the following way: Over time mothers' format for talking about the past tended to shift. In the early months maternal speech was dominated by a monologue or reporting format. For example:

C and K - 18 months, 8 days

M: (looking at photo) You were there. You were three months old. Remember that? Remember that?

That was the first weekend you spent the night like a good girl.

A shift first occurred when the mother included requests for acknowledgments from the child.

K and C - 20 months, 3 days

M: K, what were you for Halloween? Were you a devil?

Another shift occurred when the mother began to request actual information:

K and L - 23 months, 13 days

M: (coming from other room) Did you eat some banana?

Every mother used some of each format at each observation session. But many of the transcripts are dominated by a particular style. In general, requests for acknowledgement were used most frequently during the middle period, while requests for information showed an increase towards the end of the study. (See Table 1) The individual differences section will show that mothers varied in how closely they followed this pattern of shifts.

The type of remembered experience mothers referred to also shifted, although the change was not dramatic and did not occur for all of the dyads. Nevertheless, more of the early episodes focused on

Table 1

Mean Number of Each Type of Format Used by 4 Dyads

	Monologues	Acknowledgement	Information
19 Mos.	4.25	1.75	2.00
21 Mos.	5.25	3.25	2.00
23 Mos.	7.75	2.75	4.00

special instances of routine activities (See Table 2). For instance, a mother discussed the funny thing that the child did at dinner the night before. Thus, the child's general knowledge of the activity could be drawn on to support the particular memory.

In the later months more of the episodes described novel events (Christmas, a special visit somewhere, etc.). These conversations cannot depend as heavily on script or event-based knowledge to support the conversation.

Finally there were overall shifts in the child's contributions to conversations about the past. As might be expected, children contributed increasingly more new information to conversations about the past. At 19 months the average number of child contributions was 1.25 and at 24 months was 5.25.

Summary

These findings document that there is talk about the past at an early age (18-19 months). In fact, the past is referred to even before the children engage in long discussions of anything. Within the young age span studied, talk about the past changed and became more sophisticated from three perspectives: the dyad,

Table 2

Proportion of Novel and Routine Events Described by 4 Dyads

	Novel	Routine
19 mos.	.49	.51
23 mos.	.66	.34

the mother and the child. There tended to be more talk, longer conversations,and more detailed complex description as the children got older. In addition, mothers' talk tended to allow for more dialogic interaction as children became more interested and/or capable of contributing.

Individual Differences in Longitudinal Data

The developmental trends described so far form an analytic structure in which to place and compare any given mother-child pair. While all four dyads talked differently about the past when the children were 24 months old than they had when the children were 19 months old, these shifts were strong and dramatic for some, and much weaker and more scattered for others. In fact, overall developmental shifts found in the four dyads can be attributed largely to two of the four dyads.

In addition to observed overall developmental changes, the four dyads were compared to one another. Strong individual differences were apparent in the way mothers talked about the past and the way in which their children contributed to these conversations.

Two overall styles of talking about the past were identified: a reminisicing style and a practical

remembering style. This distinction is similar to one made by Kyratzis, Lucariello and Nelson (1984) between instructional and recountive episodes of past talk. These differences account for as much variation than change in age. The results will be presented in terms of the two styles, and then the two styles will be compared to one another in terms of their implications for development.

Practical Remembering

One style of talking about the past can be called practical remembering. At a descriptive and somewhat intuitive level some mothers child pairs can be characterized in the following way: They talked about the past fairly infrequently throughout the age span studied. Their conversations were brief and contained few embellishments or details. The function of their past references was often to enhance or clarify some ongoing activity. For example:

M: Here you put the puzzle piece here. Remember how I showed you yesterday?

Two of the four dyads fell into this category, although to varying degrees.

Reminiscing

In contrast was the reminisicing style. It is characterized in the following way: The pairs referred to the past fairly frequently. Conversations about the past were longer than those in the other group, and contained more elements. These mothers often referred to the past without any practical context. In other words, the function of their past reference was to reminisce rather than to clarify or augment some ongoing activity. These narratives seemed much more like stories than reminders. For example:

C. and K: 22 months, 13 days.

M: Michael's coming over later today. What's Michael's mommy's name?

C: Beppy.

M: We went to Beppy's house the other day--well, a couple of weeks ago before we got sick--we had juice and remember? We had lunch.

C: Cheese.

M: That's right we had grilled cheese for lunch ... and Michael hit you over the head a few times, but Beppy saved you ...

The format these mothers used to refer to the past followed a pattern of changes that seemed developmentally geared to the child's changing ability. In the early months this mother's style was dominated by the monologue or reporting format. During the middle months her references are dominated by requests for acknowledgements and yes/no questions. Towards the end of the period her conversations contain more requests for specific information.

The descriptive level of analysis was augmented by quantitative measures designed to assess the relative richness and sophistication of each mother's contribution as well as shifts in each dyad's dialogue over time. When the two styles were compared to one another in terms of specific measures (as opposed to overall qualitative characterizations) analyses reveal differences in the pattern of development. The reminisicing dyads showed greater increase in all measures of length and richness of talk about the past. In contrast, the practical rememberers showed much less change over time. This difference is heightened by the fact that mothers in practical remembering pairs shifted their format in a less coherent developmental pattern than reminisicing mothers.

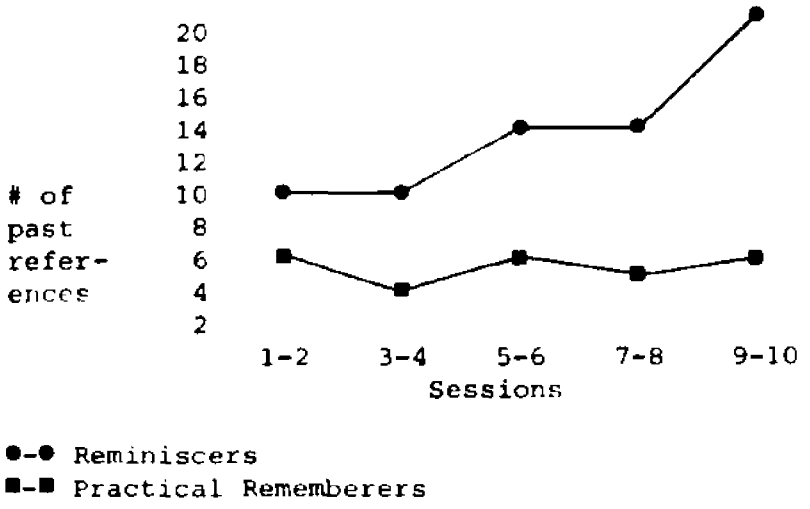
As can be seen in Figure 1, the practical rememberers did not increase the number of times they referred to the specific past from 19 to 24 months. In contrast, the reminiscers more than doubled the number of times they referred to the past (from an average of 8.5 episodes to an average of 20 per session). Note that the difference between the two groups is much less at 19 months than at 24 months.

This finding suggests that not only do the reminiscers recount the past more often at 24 months, but this activity has shown greater change over time than it has for the practical rememberers. As Figure 1 shows, the reminiscers showed almost steady increases in amount of recounting, while the practical rememberers fluctuate within a small range.

How much one talks about the past is only one part of the meaning of the activity. Equally important is what that talk consists of. For instance, if the reminiscers talk about the past frequently, but each reference is short and spare, while the practical rememberers recount few episodes but do so at great length and in great detail, it would be important to know this in assessing what is pertinent to the development of the activity. One

Figure 1

Changes over time in number of past events recalled



problem with measuring aspects of richness is that absolute totals are affected by the overall number of references. In other words, a dyad talking about the past often has a greater possibility of, say, mentioning more elements per observation session than a dyad that refers to the past infrequently. On the other hand, averages and ratios run the risk of diluting single episodes that have a rich content or structure. For this reason, some of the measures reported below are presented in absolute number as well as proportions.

One dimension on which dyads might vary across time, and vary from one another, involves the amount of embellishment in a given narrative. To measure this, every event that was recalled was diagrammed as having a core event ("We went to the park"), usually consisting of an actor, an action and a place or object. Each additional proposition that added new information was counted as an element ("and we saw Doug," "you lost your glove," or "it was freezing cold"). As Table 3 shows, between 19 and 24 months the reminiscers more than triple the number of elements they include in their past talk. The practical rememberers, however, showed almost no

Table 3

Mean number of additional elements for each type of dyad

Child's age	Practical Remembering Dyads	Reminiscing Dyads
19 mos.	6.0	11.5
20 mos.	8.5	8.5
21 mos.	10.0	15.0
22 mos.	4.0	22.0
23 mos.	7.0	35.5

increase over the 5 months in the number of elements they included in their past talk.

When proportions of number of elements to number of episodes were tabulated, the difference between the two groups disappeared (see Table 4). But the reason for this is that reminiscers recounted more episodes in a given session. While they continued throughout the 5-month period to mention several brief episodes (that did not include many elements) they also began including a few highly embellished descriptions of the past within each observation period. Similarly, the practical rememberers recalled so many fewer episodes that a ratio is correspondingly higher. It is important to note that over time they did not include increasingly detailed accounts among their overall number of episodes.

Table 3 shows the absolute change over time of number of elements mentioned at 19 and 24 months. Table 5 shows that (with one exception) reminiscers included in their overall repertoire of narratives at a given month at least one conversation that had a larger number of elements than they had done previously while practical rememberers did not seem to include an increasingly rich narrative at each successive session. This analysis indicates that

Table 4

Proportion of number of elements
to number of episodes for two types of dyads

Child's Age	Practical Remembering Dyads	Reminiscing Dyads
19 Mos.	1.00	.74
20 Mos.	.41	1.00
21 Mos.	.55	.90
22 Mos.	1.12	.66
23 Mos.	.86	.55

Table 5

Highest Number of Elements Mentioned in a Conversation

Child's Age	Practical Remembering Dyads	Reminiscing Dyads
19 mos.	3.0	4.0
20 mos.	4.0	5.0
21 mos.	1.0	3.5
22 mos.	5.0	6.0
23 mos.	4.0	7.5

mothers who reminisced continued to use a variety of formats and levels of elaboration. But they included in this varied array of recounted episodes tokens of increasingly rich or sophisticated remembering.

Another measure of the richness of the talk is the number of turns in a given conversation about the past. If children are more able to participate in talk about the past, the number of turns taken should increase over time. This is a distinct measure from the number of elements they may add to a conversation, since it is possible that before a child is capable of adding information, she begins to show interest and ability in prolonging the conversation using repetitions, nods of the head and simple queries (yes? no?). The average number of turns for the practical rememberers at 19 months was 2.0 and at 24 months was 2.85. Their conversations did not get much longer over time. In contrast, the conversations of reminiscers progressed from an average of 2.12 to 4.45, more than doubling in length by 24 months (see Table 6). The responsibility for maintaining a longer conversation is neither the mother's nor the child's alone, but instead is a joint effort. The mother must make more opportunities, and the child must participate more actively.

Table 6

Mean Number of Turns for Each Type of Dyad

Child's Age	Practical Remembering Dyads	Reminiscing Dyads
19 mos.	2.0	2.12
20 mos.	3.0	2.62
21 mos.	2.83	2.44
22 mos.	1.88	4.30
23 mos.	2.85	4.45

If mothers make more opportunities for their children to participate and demand more input from their children, then over time the format of their talk should include more requests for information. It might follow that there would be a corresponding decrease in the number of monologues or reporting formats the mother included in her talk. Each maternal turn was coded as one of the following format types. If one maternal turn included two distinct format types these were coded separately. A monologue could be of varying lengths, from one sentence to a lengthy passage. Similarly, a request for information might include several sentences, each in question form.

1. Monologue - any description or phrase including information about the past, recounted without questions.
2. Requests for acknowledgements - descriptions or reports that end with a yes/no question requiring a nod, or a word from the child.
3. Requests for information - any question requiring information about the past event.

As can be seen in Table 7, the possibility concerning a decrease in maternal monologues was not confirmed. While the number of requests for information did

Table 7

Proportion of each type of format used by two types of mothers

Child's Age	Practical Remembering Mothers			Reminiscing Mothers*		
	M	RA	RI	M	RA	RI
19 mos.	.33	.33	.42**	.76	.18	.18
20 mos.	.86	.43	.00	.70	.24	.29
21 mos.	.27	.73	.00	.66	.18	.30
22 mos.	.33	.44	.22	.55	.34	.31
23 mos.	.42	.33	.17	.74.	.18	.36

* M - Monologues
RA - Requests for Acknowledgements
RI - Requests for Information

** Some maternal utterances contained more than one format type, accounting for totals exceeding 100%.

increase for the reminiscers, it decreased for the practical rememberers. On the other hand, the number of monologue or reporting forms remained approximately the same (rather than decreasing) for the reminiscers. One explanation for this is that because reminiscers are talking so much more about the past at 24 months, the mothers continue to include frequent examples of all formats. Both groups showed an increase of requests for acknowledgement during the middle of the period studied.

Given the novelty of this new ability on the part of the child (giving information about the past), it seems reasonable to assume that mothers would continue to offer displays of monologue talk or reporting even while they included more requests and demands. As with the other measures reported here, the dyads looked much more similar to one another at 19 months than at 24 months. Again this suggests that shifting style, format and strategy over time describes differences between mother-child pairs as effectively as describing them at any given time.

As Table 8 shows, the balance between novel and routine episodes follows different shifts for the two types of dyads. While practical rememberers began with a preponderance of novel episodes, this balance

Table 8

Proportion of Novel and Routine Episodes described by two types of Dyads

Child's Age	Practical Remembering Dyads		Reminiscing Dyads	
	Novel	Routine	Novel	Routine
19 mos.	.65	.35	.33	.66
20 mos.	.29	.71	.42	.57
21 mos.	.37	.63	.54	.45
22 mos.	.52	.48	.50	.50
23 mos.	.58	.42	.75	.25

fluctuated during the next few months. Toward the end of the study they referred to more novel than routine episodes, but the difference decreased. In contrast the reminiscer began by referring to more routine episodes. This difference decreased during the middle period and shifted in the opposite direction at the end of the study.

Reminiscing mothers may have chosen routine events to discuss early on because the child could draw upon knowledge of the routine to support the memory. Introduction of novel events over the next few months may account for the even balance between the two types of events. By 23 - 24 months these mothers were choosing more unusual events that did not draw on the child's knowledge of routine activities but contained many interesting items to discuss. The practical remembering mother's fluctuations are harder to explain and may not reflect any developmental changes on the child's part.

Finally, as a measure of the child's contributions to talk about the past, the amount of new information the child added to the narrative was measured. This was done in part to separate what the children can do from what the dyads do as cooperative pairs. This is also one way of seeing whether the

differences between the two types of mothers have any meaningful relationship to how children acquire the ability to talk about the past. The children of reminiscers started out by contributing an average of 2 items of information about the past in a 30-minute session, and at 24 months contributed an average of 10 items of new information in a session.

Practical rememberers, on the other hand, at 19 months contributed an average of less than 1 item per session and were contributing about that same number at 24 months. As Figure 2 shows, they did contribute more new information at times within the 5-month period, but their ability showed no overall improvement, and they never contributed more than an average of 1.5 pieces of information.

One problem with an absolute number in this case is that children may only be able to contribute when they are afforded the opportunity. Perhaps the difference between the groups in the number of child contributions can be accounted for by the corresponding difference in number of episodes. In order to evaluate this possibility, a ratio of number of child contributions to overall number of episodes was tabulated. As Figure 3 below shows, this ratio consistently increased for the reminiscers while it

Figure 2

Changes Over Time in Absolute Numbers of Child Contributions

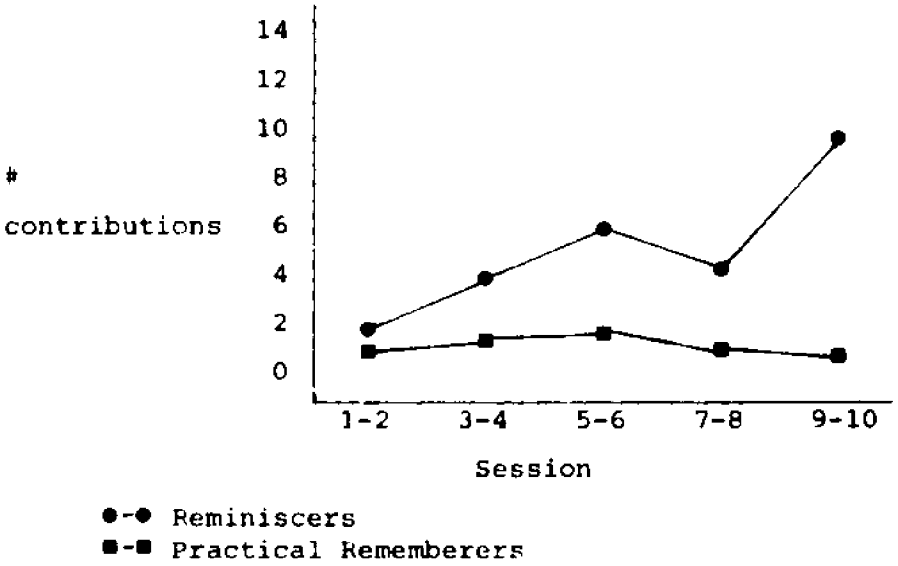
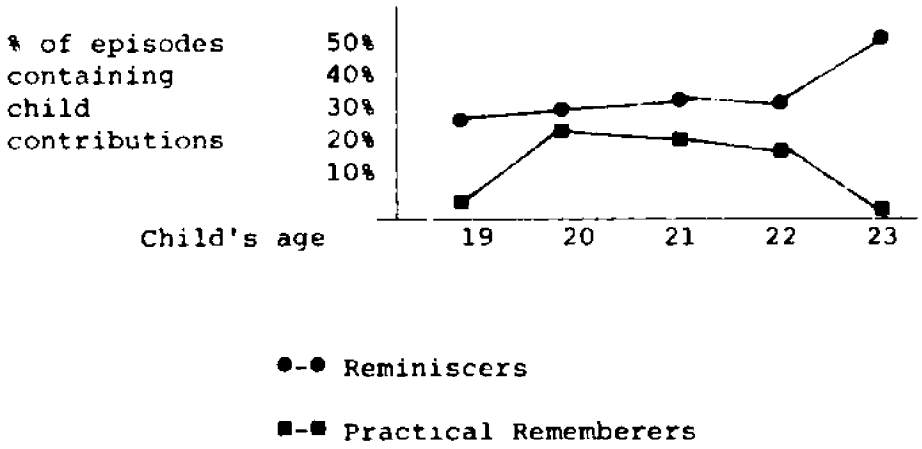


Figure 3

Proportion of episodes containing child contributions for each type of dyad



fluctuated and then decreased for the practical rememberers. This is evidence for the argument that there is a relationship between the amount of talk about the past, the style of that talk (as measured by length of conversations, richness of information and format of speech) on the part of the mother and what the child is capable of recalling within a narrative format.

Along with the number of meaningful contributions, it was anticipated that the children of reminiscers would initiate more memory talk than the children of practical rememberers. As Table 9 shows, this was not so. One explanation for this is that children of practical rememberers may have been interested in talking about the past, but were dependent on their mothers to pick up on their initiations. Therefore, while all children may or may not initiate talk about the past, the difference between the groups can be attributed to how mothers used these initiations to expand, elaborate and in other ways scaffold their children's initial attempts. As noted in the section on analysis procedures, children's initiations that were not elaborated or clarified by the mother were not included. While this is certainly a methodological constraint, it bears on

Table 9

Proportion of episodes initiated by children in each type of dyad

	Practical Remembering Dyads	Reminiscing Dyads
19 mos.	.00	.06
20 mos.	.43	.12
21 mos.	.27	.11
22 mos.	.25	.17
23 mos.	.17	.13

a theoretical assumption. The child is dependent on the dialogic format to realize his ability to talk about the past. If this is the case, then a child's bid that is not picked up by the mother may be lost to the child.

Individual Differences in Linguistic Competence?

One possible explanation for the varying rates of development and capacities to talk about the past among the four dyads is that they are a function of differing language capabilities. In order to examine this possibility, linguistic analyses were performed on the dialogue of each dyad during the period studied. For each conversation about the past in a given transcript, a conversation about the here and now was chosen as a comparison sample. Selection of these conversations was made as follows:

The closest adjacent conversation about the here and now that preceded the target past episode was extracted. The conversation had to be about some present object or action although it could include information about that object or action that was not part of the present context, as long as this information did not refer to the specific past or future. Once the topic of the conversation had been

identified, the beginning was marked as the first specific reference to that topic. The end of the conversation was marked as the last relevant comment. A second coder identified here and now conversations for 50% of the data, agreement between two coders was 82%. In order to make the comparison as balanced as possible, maternal monologues were included as long as the topic was child-directed or oriented (Interestingly there were far fewer monologues in here and now talk then in past talk). On occasion these here and now conversations were separated by several unrelated utterances from the target episode. In addition, in a few instances, succeeding conversations were chosen when these were more adjacent than any preceding dialogue, or where two past conversations were consecutive.

Length of conversations, a child's ability to initiate and contribute to the conversation, and number of elements within a conversation were measured. For each dyad and across all dyads these measures were much higher than they were for conversations about the past. This is to be expected. A supporting context for here and now talk is what makes this kind of talk predominate in this age period. On the other hand, the dyads were much more

similar to one another along these measures than they were when talking about the past. Below Table 10 shows the differences between the two types of dyads for these measures. This suggests that individual differences in reminiscing cannot be accounted for by similar individual differences in dialogic language that is not about the past.

Co-Construction

In addition to characteristics such as increasing length, change in mother's format, etc. there was a quality to some of the conversations about the past that is hard to pin down but important to note. This phenomenon can be called co-construction of the past. These data did not allow a fully systematic or quantitative analysis of co-construction. Individual differences in how co-construction manifested itself and nuances of interaction seemed to demand an interpretive approach. Examples of co-construction and descriptions of how co-construction can be identified are given.[1] One possible description of how young children first construct discourse about the past is that they do it cooperatively with a more competent partner. This means that although they cannot independently construct a complete past

Table 10

Linguistic Characteristics of Here and Now Conversations for Each Type of Dyad

Child's Age	Practical Remembering Dyads	Reminiscing Dyads
	Mean Number of Turns	
19 months	3.25	4.66
23 months	5.40	6.50
	Mean Number of Child Contributions	
19 months	.86	.94
23 months	1.84	1.53
	Mean Number of Elements	
19 months	3.80	3.58
23 months	3.72	4.11

episode, they can contribute to one. With the appropriate support they can recall a complete narrative. The adult's role is to fill in what the child leaves out in a way that completes the narrative.

In episodes where there was more than one statement/response pair, evidence for co-construction was collected. Episodes had to include relevant consecutive contributions to the narrative by both partners. Below is an example of a co-constructed episode:

L and R 23 mos, 4 days

Child and Mother are at home, R has found her toy car from her birthday party.

(showing car to mother)

C: Blue car

M: Yes, that's your blue car from your birthday party. What color car did you give to Benjamin?

C: The green car

M: And to Sarah?

R: The red car and Eliza yellow car....

This is a good example of vertical constructions in memory (Scollon 1979). Beginning with a present object as a cue, mother turns the discussion into memory talk. She also questions R in a way that allows R to contribute meaningfully and correctly, and draws on R's interest (the color of the cars). She also dates the episode (your birthday party). Finally at the end R takes over the activity when she mentions the color of Eliza's car without any prompting. Her mother gets her going, and she takes off on her own. But the memory is made possible through the dialogic format.

One way to view co-construction is that the final narrative consists of contributions from two speakers (in this case mother and child), in which no single contribution offers an independent proposition or description. Each partner depends on the other to frame, orient, or elaborate his or her contribution so that it will fit into the narrative.

For example:

C and K 22 mos, 12 days

C: Boo boo

M: Where's your boo boo? Let me see.

(C stands near Mother, shows Mother bruise on hand)

M: You have a boo boo? Where? Oh yes. Who did that boo boo? Mommy did that boo boo.

Mommy did that boo boo, didn't she? Did Mommy do that boo boo to you?

C: Yeah.

M: What'd she do? She caught your finger in that step stool, huh?

C (touches thumb): Bunny.

M: Yes, it hurt, didn't it?

C: Bunny.

M: Yes, and I put a bandaid on it, remember?

C: Oh.

M: Remember? We showed the doctor last week and he said the nail was coming in just fine. Mother thought she had ruined your manicures for life.

C: (Bangs cymbals.)

M: Those your cymbals?

There are several interesting things about this passage. To identify co-construction, the complete narrative as told by both participants must be analysed:

C has a boo boo.

M gave it to her.

M caught C's finger in the step stool.

It hurt.

M put a bandaid on it.

The doctor saw it last week.

He said it was getting better.

The next step in analysis is to allot responsibility to each participant for various aspects or components of the total narrative.

C initiated this conversation, but it was not clear whether she meant to frame it in terms of a past event. Temporal framing is the mother's job (who gave that to you). M supplied this information, although only after unsuccessfully trying to get C to supply it (who did that boo boo?) M elaborates some more about the origins of the boo boo (on the step stool) and at this point C seems to have internalized enough of M's description to add something to it (Bunny). This addition causes M to add something that is relevant, but probably is not what C intended (yeah, it hurt) but C persists with her contribution although she is dependent on M to turn it into a coherent part of the narrative (Yes, I put a bandaid on it, remember?). It's interesting that the mother asks if C remembers

that since she is the one that has brought it into the narrative. Finally, the mother uses C's emphasis on the bandaid to bring in a different kind of information, the doctor's visit. Therefore C has had a central role in directing the narrative (initiates the topic, puts focus on the bandaid, and therefore the doctor). But the mother is responsible for framing it in terms of the past, for making the connections between the items of conversation, and for maintaining an order that sequences the events both within the dialogue and as they happened.

Co-construction underwent developmental change as the child's role shifts within the dialogue. These changes are easiest to see in reminiscing dyads. As examples in this section show, practical rememberers showed signs of co-construction when the children were older than reminiscing children. Practical rememberers did eventually co-construct and their co-constructions followed the developmental pattern found in reminiscing pairs.

Developmental Shifts in Co-Construction

In the early phases of talking about the past the mother was the central and predominant constructer of the narrative. To the extent that the child showed

interest or offered acknowledgments or place holders, she was participating without contributing substance. This was participatory interaction, because the child was trying to be part of the reminiscing activity, a first stage in reminiscing. The developmental path to representing one's own narrative about the past can be seen as originating in a shared holistic activity in which the child has a somewhat undifferentiated role. She is part of the narrative without actually contributing to it. Over time her role becomes increasingly differentiated.

One sign of the early interdependence between mother and child was that when the child did initiate some bit of information about the past, she depended completely on the mother to interpret it linguistically, expand on it, or put in in the correct temporal perspective. For instance, C and K (19 months, 11 days)

M: Susan's writing -- we write too.

C: Points in her mouth, looking at Mother.

M: That's right -- and yesterday you put it in your mouth.

In this example the child is dependent on the mother to turn her gesture into a comment about a past action. In addition, her mother creates the topical frame in which K can refer to the action (writing). Finally, the mother's discussion is framed as past talk because the child refers to something about writing that is specific and that happened in the past. Neither one would have referred to this particular action without the other participant, and neither one contributes a full statement about the past. In this way it is co-constructed, and can be seen as intersubjective. They are sharing a reconstruction of the past. Later on these co-constructions contain more differentiated roles for mother and child. The child develops an increasingly internalized construction of her past which allows her to contribute meaningful information to a dialogue from her own point of view. In addition, in the example below the child has information about the past that the mother does not. This signifies internalized narratives. It is still a co-construction because without the mother's framing questions and supportive interpretations, the child's piece of information would have no sequence, temporal perspective, or explicit meaning within the current context.

C and K - 21 months, 26 days

C points to a drawing of a ball on the pad: "Ball ball"

M: Who drew that for you? Ball. Who did that? That's very nice! I didn't even know who did that.

C: Gamma.

M: Oh, Gramma Helen did that for you? Did she draw this picture for you the other day when she was here? Oh, that's very nice.

Direct requests for information are not sufficient to create a co-construction. The following example taken from a practical remembering dyad shows an early example of mother's direct questioning that does not lead to co-construction.

A and L at 10/29/84

M: What did we do with the cover of the record?
Do you know what we did, Alex?
C turns to play with toy.

The mother demands that her child pose and articulate internalized knowledge about the past and participate in the dialogue correctly, but she doesn't get any kind of acknowledgement from the child. The following is an interesting illustration of non co-construction, in which the mother recounts aspects of the child's experience and asks questions but where the child does not contribute, on any level:

A and L - 19 mos, 23 days

M: So, L, what did you do this morning with Andrew and Emily?

C: Ya ya

M: Ya ya?

C: Ya ya ya

M: Had a nice time, heh? Did you look at pictures of the kitties? And did you do the puzzle? L, can you say Susie?

(During this conversation C is rocking in her little rocking chair, M is sitting behind her on a couch.) In this example the mother and child do not even share a joint focus much less a construction of the past.

This dyad shows some signs of joint focus on the past and beginning of a shared construction when the child is several months older: At 22 mos, 18 days.

M: Jake had good toys that you liked. Remember, Jake had that nice metal horse and wagon?

C: Yeah.

M: You liked that. You didn't want to share it.

C: Moo like it, moo like it.

M: Oh, Moo would like it?

Moo is L's doll. It is interesting in this instance, in which there are beginning signs of co-construction, that more of the maternal speech is descriptive, and includes fewer direct requests for information. This supports the view that a necessary first step in

constructing the past is that the mother must offer interesting, clear descrption. The child can only participate, at whatever level, if the mother creates a narrative scene in which the child can enter. Initially she does this with attention, and later on with contributions.

What follows is another example of co-construction, from one of the practical remembering dyads. The child is 23 months, and the co-construction is more like early examples of co-construction in the reminiscing dyads.

L and R - 22 mos, 16 days

M: Did Rainie have a birthday?

C: Uh

M: Did you sing?

C: Hum*, happy birthday.

M: Happy birthday?

* Hum means yes in R's vocabulary. There was music.

C: (music)

M: You had music?

The events in the narrative run as follows:

Rainie had a birthday.

R sang happy birthday.

There was music.

The mother initiated the conversation. Her first questions elicit participation without information. Then mother mentions an element from the event, singing. With this information R participated more actively (yes, and happy birthday). This is not necessarily a completely new piece of information since singing at a birthday party is usually "happy birthday," but she has added a specification to the narrative. It is mother's turn to sustain the conversation without adding anything (happy birthday). C adds another detail to the aspect of the event they are discussing, (music), and mother confirms this

while putting it into a temporal and personal perspective, "you had music?"

In this case R shares in the narrative by prolonging attention on a particular aspect of the event and adding details. But much of their dialogue is participatory rather than contributory. This suggests they are at a stage of joint attention to the past rather than joint building of the past. It is possible to interpret the early noninformative contributions of children as efforts to show they are interested in what their mothers are talking about. At the same time, mothers who talk about the past in an engaging way before their children are really ready to contribute information may be trying to interest their children in talking about the past. A description of a past episode is a kind of mental object (Werner & Kaplan, 1963). Early interaction may involve trying to coordinate attention to that mental object. In this process children learn that descriptions of the past are a distinct particular kind of talk.

Co-construction seemed to occur more frequently and at an earlier age in reminiscing dyads. When it did occur in practical rememberers, it followed

developmental shifts similar to those in reminiscers. Early co-construction of the past involved descriptions by the mother to which the child attended or acknowledged verbally and with gestures. Over time the child took more and more responsibility for the narrative content and the episodes look increasingly dialogic.

The reason for identifying the early episodes as co-constructions is that the child is viewed as sharing in the mother's representation of the past. Correspondingly, the mother's narrative is directed toward the child and determined to some extent by the child's interest and attention.

Summary

Analyses of the logitudinal data have shown that the children did get better at talking about the past with their mothers, and that mothers also changed the way they talked about the past as their children got older. But the data showed that 2 of the mothers focus on talk about the past, and that this focus manifests itself in quantity and format of talk. Two of the mothers did not seem to focus on talk about the past. They did not talk about the past a lot, nor did they do so in detail or at length.

Finally early mother-child discourse about the past can be seen as a kind of co-construction, in which each participant contributes in coordination with the other. The balance of this partnership seemed to change with the child's age, as his role became more active. At first there was joint attention to the past and over time the coordination manifested itself in a dialogic format in which both partners helped construct a narrative.

Chapter 3

Study 2: Method

Subjects

Eighteen mother-child pairs participated in the second study. There were six children at each of three ages. The mean ages were 18 months, 26 days; 24 months, 7 days; and 30 months, 14 days. There were equal numbers of boys and girls in each group. Again, all pairs were from white middle-class urban-dwelling families. All but two mothers were the primary care-givers. One mother in the 19-month group and one in the 30-month group had regular full-time work outside of the home.

Design and Procedure

In this study a cross sectional quasi-experimental design was used. Mother-child dyads were observed at each of three ages: 19, 24, and 30 months. Each dyad was tape-recorded once during a 20-40 minute session. Prior to the visit each mother was instructed to refer to three past episodes that the child had experienced in the recent past (last few months). Also, the mother was asked to use three

different cues, one for each memory. (See appendix A for letter sent to mother.) One cue was some object or toy in the room. For example, a mother looked at the napkin she was placing in front of the child at breakfast and said, "See this nice piggy napkin? You remember when we saw Miss Piggy?" Another cue was a picture or a photograph. For example, a mother said to her child, while looking at the L. L. Bean catalogue, "See this nice red hat? It reminds me of your beautiful red hat. The one you threw out of the car." A third cue was to be conversational. For example, a mother said, "So, did you have fund with Grandma and Sidney last night? Did you dance with Sidney? ..."

All mothers signed a letter of consent (see Appendix B).

Analyses

All observation sessions were transcribed verbatim by the observer. The three episodes of talk about the past included in each transcript were extracted for analysis. Criteria for coding were the same as those used in study 1.

Results of Study 2

Developmental Differences

In Study 2, three measures of sophistication and complexity were used to evaluate developmental differences between the three age groups, and to compare responses for the three stimulus types (photo, object, and conversation). Comparisons between the three ages and the three cue types were made using two way anovas. Below these measures are presented.

Number of turns was used to evaluate the dyad's ability and interest in discussing the past under the three conditions (See Table 11). Significant improvement occurred between the 19 and 24 month groups and 19 and 30 month groups ($F_{1,15}$= 18.75 P .01, $F_{1,15}$= 12.93 P .01). The number of turns decreased non-significantly between the 24- and 30-month old groups. There were no significant differences between stimulus types in length of conversation. Agreement between coders for this measure was 96.5%.

The number of elements mentioned within a conversation about the past was used to measure complexity. As with the longitudinal data, number of elements was counted as each detail added to a core event (e.g. "there were candles in your cake," "it was freezing cold there," "Sally was there," "I kicked him").

Table 11

Mean Number of Turns for Each Age in Response to the Three Types of Cues

	Object	Photo	Conversation	Means
19 mos.	1.83	.83	4.00	2.22
24 mos.	30.83	25.33	20.33	25.50
30 mos.	27.83	22.17	14.67	21.56
Means	20.16	16.11	13.0	

As Table 12 shows, there was an overall trend toward increasing number of elements with age. The increase was statistically significant only between the 19 month old and two older groups ($F_{1,15}$ = 7.41 P = .01; $F_{1,15}$ = 7.73 P = .01) There were no differences between conditions and no significant interactions. Intercoder agreement for this measure was 94%.

Finally, as a measure of the child's independent competence at each age and within each condition, amount of new information contributed by the child was measured (see Table 13). Again, in general, children contributed more new information with age. As with the dyadic analyses of number of elements mentioned, this increase was only significant in the 19 and 24 month and 19 and 30 month comparisons ($F_{1,15}$ = 5.95, P < .05 $F_{1,15}$ = 9.80 P < .01). In the conversation condition the number actually decreased slightly between 24 and 30 months. Again, there was no significant difference between the conditions at any of the three ages. Agreement between the two coders was 97%.

Mothers used the three types of cues to talk about a variety of events. All of the events were novel, rather than aspects of some routine such as

Table 12

Mean Number of Elements For Each Age in Response To the Three Types of Cues

	Object	Photo	Conversation	Means
19 mos.	2.83	2.0	3.17	2.67
24 mos.	11.50	11.50	8.0	10.33
30 mos.	12.33	11.83	7.33	10.55
Means	8.89	8.44	6.17	

Table 13

Mean Number of Informational Contributions From Children For Each Age in Response to the Three Types of Cues

	Object	Photo	Conversation	Means
19 mos.	1.17	.17	.67	.67
24 mos.	3.66	2.66	3.33	3.22
30 mos.	5.50	3.67	2.67	3.95
Means	3.45	2.17	2.22	

Table 14
Mean Number of Elements Mentioned in Two Remembering Styles For Each Age

	Reminiscing Dyads	Practical Remembering Dyads
19 mos.	2.67	2.66
24 mos.	12.92	6.83
30 mos.	13.17	6.33

dinner, or play group. In all three age groups photographs were of special visits or trips, often including an important person, such as a grandmother. In general all three age groups used objects and conversation to stimulate discussions of visits, and holidays, or a visit to the Zoo. In a few instances dyads discussed an event that was signficant only to that particular child such as a fall out of bed, or a fight with another child, or the origin in place, time and person, of a gift or toy.

Reminiscers and Practical Rememberers

Having discerned two stylistic types in the longitudinal data, qualitative criteria were developed that seemed to capture this stylistic difference. These criteria were then used to classify the cross sectional subjects into two types. The critera were:

Reminiscers:
Mothers who elaborate their descriptions, embellish and add detail.

Sequences that are extended.

Descriptions in which events are sequenced.

Descriptions in which the child's contribution is incorporated into the mother's talk.

Descriptions in which mother rephrases her question or moves from one type of question to another.

Practical rememberers:
Mothers who construct spare descriptions, with few embellishments and details, but one or two core items from the past episode.

Short conversations

Items mentioned are not sequenced or put in relation to one another.

Descriptions in which mother does not incorporate child's contribution.

Descriptions in which mother repeats same question over and over again, or drops the questioning after one unsuccessful query.

These criteria were given to a second coder who was instructed to put each dyad in one category or another

by deciding which style best described the pair's performance over all. She was given only the mother's portion of the transcripts, with appropriate spaces indicating a child's turn. The reason for this is that one objective of this analysis was to see if there were corresponding differences between the two groups in the childrens' contributions.[2]

The second coder classified all 18 of the cross sectional transcripts. There was agreement on 16 of these (88.8%) It is interesting to note that the two cases on which there was disagreement were marked by the second coder as borderline (indicating that these two mothers seemed to fit both styles). In both cases of disagreement the investigator's classification was used. One mother in the 19 month group was a reminiscer and five were practical rememberers. There were four reminiscing mothers in both the 24 and 30 month groups, and 2 practical rememberers in each of these groups.

Beyond the relationship between maternal style and child ability, the high level of agreement between the two coders suggests that the stylistic difference is a meaningful one and captures some of the dimensions on which mothers differ in the way they talk about the past.

Comparisons were made between the reminiscing and practical remembering groups using a one way anova, collapsed across cue types and across the 24 and 30 month group.

Because the groups within the 19-month pool were so unevenly distributed bewteen the two styles and because 19-month-olds contribute so little in general, they were left out of the statistical analyses. But percentages on them will be presented in the tables.

Reminiscing dyads mentioned significantly more elements in their narrative than practical rememberers ($F_{(1, 10)} = 6.26$, $p = .03$). While number of elements is part of what constitutes richness of memory and talk and therefore might be seen as part of the classification criteria, classification was done using only mother's portion of speech. Therefore it did not afford a complete view of what was mentioned in a conversation between mother and child.

Number of turns was not included in this analysis because mothers' awareness of the goal of activity made them push harder than they might ordinarily (see page 88 for a discussion of differences between the methodologies in phase 1 and 2 of this study), so that number of turns was not a sensitive gauge of maternal style.

Length of conversation was easy to glean from reading only the mother's part of the transcripts, making this quantitative measure a qualitative factor in sorting the mothers into the two groups.

The number of new informational contributions that the child made was measured. Children of reminiscers contributed significantly more new information than the children of practical rememberers ($F_{(1, 10)} = 6.26$, $p = .03$). As Table 15 shows, this was also true for the 19-month-olds, whose ability to contribute was very limited.

The quantitative analyses show that children do contribute more information as they get older, that mothers and children engage in longer conversations about the past, and that mother and child describe the past in more detail over time. The real leap, however, seems to lie between the 19- and 24-month period. It is not obvious from this study whether this is because children at 24 months hit a ceiling for these characteristics of talk about the past, or whether the findings suggest that children do not go on developing talk about the past in the succeeding six months. It is probably the former. That is, expansion and elaboration are probably the developmental tasks of children just learning to

Table 15

Mean Number of Child Contributions in Two Remembering Styles for Each Age

	Reminiscers	Practical Rememberers
19 mos.	.33	0.00
24 mos.	3.88	2.00
30 mos.	5.08	1.66

engage in conversation about the past and these are achieved by 24 months. Once this elaboration has been established (at whatever level, perhaps depending on remembering style), other aspects become important, such as negotiation of the past between mother and child, efficiency of communication and tuning to one another's focus.

The conversations of thirty-month-old children and their mothers support this interpretation. As children get older there are increasing occurrences of disagreements between mother and child about what really happened. There were no occurrences of disagreement in the 19 month group, 6 in the 24 month group and 10 in the 30 month group. This suggests that the children are internalizing a version of the past, and developing some notion that the past is something people discuss and negotiate.

In addition to an increase in disagreements and negotiations in the talk of thirty-month-olds, the conversations look much more efficient than those of the two younger age groups. Mothers asked for information and got appropriate answers. Mothers were less likely to offer detailed descriptions as a prologue to posing a question about the past. This might account for the lack of increase or slight

decrease in number of elements mentioned. In addition, this efficiency would account for the lack of increase in number of turns is that it took fewer turns to build the narrative.

Variation in conversations associated with different types of cues was expected. However, given the findings on the importance of style, it is not surprising that there was no significant difference between conditions on these measures. The data in both parts of this study suggest that how a mother talks about the past is more important than what she talks about. This also applies to the stimulus she uses to initiate her talk. Mothers who talk about the past a lot probably use a variety of stimuli. Perhaps most interesting of all is that when the children are grouped by age, differences between dyads and differences between the children are not as great as one might expect. But when the children are grouped in terms of their mother's style of talking about the past, there are differences between the groups. This suggests that during the 19-30 month age period individual style accounts for as much or more than age.

Stylistic Differences and Co-Construction at 19, 24 and 30 Months

Even in the 19 month old group there was a difference between mothers in the way they framed the past for their children, and in the way they incorporated their children's responses. In addition, the following examples show how children participated even before they contributed. The first example shows a mother trying to get her child to remember a swimming trip represented in a photograph.

(Childs age: 19 mos, 4 days)

M: Who's that?

D: Dada.

M: Yea, dada. What's dada doing? Whatsa - what are you doing? (pointing to child in photo)

D: Dada.

M: What were you doing there? Do you know what you were doing? What are you doing? What are you playing?

D: Dada.

M: Dada where?

D: Dada.

M: Dada doing what? What are you doing here?

D: Mami

M: Huh?

D: Mami.

M: Mami is there? Mami--she was with us, right? Are you swimming? Are you swimming?

D: Swim.

M: Swim huh? What's this all around?

D: Swim.

M: Swim, right.

D: Dada.

M: Dada.

D: Dada?...

To begin with, the mother asks a direct question. The question is not framed in terms of the past, but in terms of identification. She then slips into past talk by way of a tense change. She is not successful in getting her child to talk about the past at first, but she continues to ask the same question. On the other hand, the talk does have a dialogic structure in that there are turns and that the partners share some object of interest (the photograph). The mother then turns the child's contribution into a contribution about the past event (Mami was there, right). But interestingly the mother does not capitalize on this contribution and begin to build on it, for instance, by talking about what they did with Mami, etc. Instead she returns to the questions she wanted to

ask, which was about the child's activity within the picture (swimming). When the child does respond to the mother's interest in talking about swimming, the mother does not elaborate on this or use it as a starting point for a longer or more fleshed out narrative.

This is an example where co-construction does not really take place. The partners do not build on one another's contributions, shift focus in response to one another, or share in a conception of what is being talked about. It is also an example of a practical remembering dyad.

In the next example the mother and child are looking at a doll clown.

(Childs age: 19 mos, 2 days)

M: You looked like this--remember, the other day we dressed you up like this? Huh? Where'd you go? You went to a party? You went to a halloween party--(C is only partially attentive to M's narrative) Remember? I put pom poms on your dress?

C: Pom pom.

M: Pom poms. And d'you remember what you got at the party?

C: Pom pom.

M: You got pom poms--yeah, we fixed your pom poms up when we came home. And what else did you get? A balloon?

C: Balloon

M: And the pumpkin.

C: Pumpkin, pumpkin, pumpkin.

M: There he is (pointing to pumpkin on table)

C: Pumpkin...

In this example mother frames the discussion in terms of the past from the outset by using past tense, naming a time, and saying: remember? She also begins to describe before asking any direct questions. She names three elements from the event before asking the child for a piece of information (What did you get at the party?).

As in the other example, this child begins to share a focus, on the event by participating in the conversation (pom pom?).

This obviously attracts her attention, and when she sticks with it, her mother switches momentarily to that focus adding to the pom pom bit (Yeah, we fixed your pom poms up when we came home). In incorporating the child's interest, she also sequences that piece of the story, and thus it becomes part of a narrative.

This child does not contribute any new information, but she stays with her mother in the narrative by repeating her mother's words as they come.

In the 24-month group there were also clear differences between mothers who developed sequenced detailed narratives and those who mentioned more isolated, unsequenced, spare aspects of past events. In addition, mothers handled their children's contributions in differing ways. In the next example mother and child are discussing a visit to a restaurant. The child introduces the topic. (Child's age: 24 mos, 6 days)

C: (looks at observer) Uncle Gary - restaurant.

M: He's talking about his Uncle Gary.

C: Uncle Gary.

M: We went with him to a restaurant.

C: Uncle Gary restaurant.

M: Yes, he took us to a restaurant. What did we eat in the restaurant?

C: Noodles.

M: Noodles! That was the name of the restaurant too, yeah, that's very interesting. That was a nice restaurant, wasn't it? And Uncle Gary was there and you had all kinds of noodles. That's all they have on the menu is noodles, and it was

a busy restaurant. Did you talk to people? Did you say hi to everybody in the restaurant? Do you remember that?

C: Remember that.

M: It's a while ago. We went to the restaurant a couple of weeks ago, but it was really nice. And Gary was there with a friend. Uncle Gary.

C: Uncle Gary, restaurant.

M: We pass a lot of restaurants in this neighborhood and he always says Uncle Gary restaurant. That was a really nice evening. You were funny at the restaurant.

C: I funny.

M: Yeah, you were funny. You were talking to people at all the tables, and you said hello and then you told--

C: Hi there!

M: Yes you said that, and then you started talking and you said that you had made a peepee.

C: Potty.

M: Yes because you had just gone to the bathroom. That was really something. They all laughed.

In this example the mother immediately puts the discussion into the past tense and says, "remember

that," to further mark it as a narrative about the past. She explains that this happened a couple of weeks ago. In contrast to the 19-month-old, this child is able from the beginning to answer direct questions about the event. But the mother continues to do a lot of describing and asks for more acknowledgment and shared focus than actual information. The last part of the dialogue is an interesting example of co-construction. The mother tells about the child's visit to other people's tables (and you said hello) and the child adds "hi there" which were his exact words at the time of the event (according to the mother). So while he is picking up on her focus and in a sense repeating what she had said (you said hello), he adds a new piece by inserting a rendition of what he did and she puts his rendition into the past tense, and therefore weaves it back into the narrative (yes, you said that and <u>then</u> you ...) again she establishes the topic (you had made a pee pee) and he repeats and adds simultaneously (potty), and she takes his embellishment of her comment and puts it into sequence within the narrative (yes, because you <u>had just gone</u> to the bathroom ...). In this way they can be seen to share a focus, and build on one another's comments and information about

the event. Note that he clearly contributes to this narrative without any command of past tense or aspect. By inserting appropriate information at the appropriate time into his mother's narrative, he is participating in a narrative about his past.

The following example demonstrates how a reminiscing dyad at this stage make the past into a story. Within this story framework the child appropriates more and more of the narrative. As the story gets repeated the roles shift slightly . Note that even in the first telling the child contributes by keeping the mother going, using a temporal connective (then?).

(Childs age: 24 mos, 1 day)

M: I'm trying to think back about snork. We got snork at the toy store, remember? We went to the toy store and we saw a great big snork--at the toy store.

C: See it?

M: You don't remember?

C: See a great big snork?

M: I have to tell you about it. It was a long time ago. Faith and Mommy and Daddy all went to the toy store and we saw a big big snork.

C: A little snork?

M: And there was a little little snork. And remember what the big snork was doing? The big snork was waving at Faith.

C: Then?

M: And the little snork--you know what the little snork did?

C: Hm?

M: The little snork talked to Daddy and said, "I wanna go with Faith."

C: Then?

M: And so when we left the toy store, after we had looked at all the toys, we left the toy store--Daddy looked in his pocket, and saw snork was there! And he gave it to Faith.

C: Again.

M: One day Faith and Mommy and Daddy all went ... to ... the ... grocery store?

C: Toy store!

M: Toy store! And what did we see?

C: A big snork and a little snork and a big big one and a little little big bird.

M: Oh! What were the big snork and big bird doing?

(M and C play word game on big and little)

M: Little snork. Remember what the little snork did? What did that little snork do?

C: Talk at - talk to ... talk to ... mom have some more coffee.

M: No thanks. I'm drinking juice actually.

C: Mommy tell (story) about toy store.

M: Okay, one day Faith and Mommy and Daddy all went to the toy store and we got there we saw a big snork and the snork was waving at you. There was a big snork and there was a little snork.

C: Snork talk to daddy.

M: Yeah and what did that little snork say?

C: (in snork voice) I want to go to ... I want to go to.

M: Mm - so what happened after we came out of the toy store?

(C wants to have 'water play' and they switch to a discussion of water play.)

To introduce the narrative this mother begins with a central theme: <u>We got snork at the toy store</u> and immediately tags it as a memory ... "remember?" The child participates, shows interest but does not seem to understand that a past experience is being recounted: <u>See it</u>? Mother stresses the remembering aspect of the narrative. "You don't remember? ... it was a long time ago." She begins the narrative and

adds several details. Having set the stage in this way the child can contribute some appropriate information to the narrative. "A little snork"-- This pattern describes the rest of the interaction in which the mother sequences and embellishes. The child keeps the narrative going (then?), and shows her increasing "control" over the narrative. She also wants to "practice" the story. "Again, mommy tell (story) about toy store."

In contrast, the next example shows a mother who does not set the stage for her child's contribution and sticks to one strategy, asking the same question over and over again.

(Child's age: 24 mos, 5 days)
Mother and child are discussing the child's recent birthday party.

M: Did you tell Susan about your party?

C: Party.

M: Did you have a party?

C: Yeah.

M: What song did they sing for you?

C: Happy Birthday.

M: Yeah, how old were you at your party?

C: mm

M: How old?

C: Two.

M: Two?

C: Yeah.

M: Were your friends there?

C: Yeah.

M: Who was at your party?

C: Pat

M: Who? Pat?

M: Who else?

C: Lea.

M: Lea. Who else?

C: Bobby.

M: Bobby and who else?

C: Lea.

M: Lea and who else?

C: Pa.

M: Papa and who else?

C: Lea.

M: Who else?

C: Papa.

M: Who else was there?

C: Lea.

M: Were any of your friends there?

C: Yeah.

M: Who?

C: Zachary.

M: Zachary and who else?

C: Papa.

This child gives several informative answers to his mother. But in contrast to the reminiscing mother who weaves her child's responses into a narrative, this mother continues to try and elicit information. When she hits a wall, she persists, and in response the child begins to repeat the same information over and over again. Very little about the birthday party is described except the names of some guests, and what they sang. There is no sequencing and no detail. Although the child engages very successfully in the question-answer format there does not seem to be much co-construction of a past event.

In the thirty-month-old group co-construction looked somewhat different than it did in the earlier age groups. In dyads with successful co-construction, the child was a more active participant. The mother's job involved less prodding and framing and more direct questioning. The child added information that the mother did not have already.

The following example typifies co-construction in the thirty-month old group:

(Child's age: 30 mos, 4 days)

M: Let's see - we rode on a tractor - did we.

C: I rode on a big tractor.

M: Remember what else you rode on?

C: Yeah.

M: What?

C: A bulldozer.

M: A bulldozer you did. A bulldozer. It's really big.

C: Yeah.

M: You helped drive it, with Uncle Bill.

C: Yeah I put the stand up.

M: Uh huh that's right you did.

C: Yeah/yeah/yeah I move (dat)

M: Uh huh you moved the arm down.

C: Yeah.

M: That makes you go forward ...

In this conversation the mother does not have to set the stage with detail. She begins by mentioning one act and the rest of their conversation is really a fleshing out of this act (riding a tractor, and an addition ... riding the bulldozer). The child adds several interesting and correct details, but the mother and child are still not completely separate in

that they add to one another's information, rather than each individual contributing a separate set of information. This can be seen in the last part of the conversation where the child begins to describe something. "I moved dat ..." but is unable to finish his contribution. The mother knows what he is trying to say and fills it out for him. "Uh huh, you moved the arm down." Together they have represented that particular act. In addition, note that thirty month olds use past tense where neither of the younger age groups did.

In the next example, the mother and child are discussing the child's new bed which she has slept in for the first time last night. It is interesting not only for the child's wonderful way of describing things but also because in this conversation mother and child are trading information. The child has internalized her representation of the experience enough to give information to the mother, and yet her mother's question seems to lead to information that the child might not have included in her representation without the question.

(Childs age: 30 mos, 18 days)

C: And where did you put it? (the blanket)

M: Well, I put it in the closet because I - Molly slept in her bed last night.

C: No and I fall down.

M: She rolled off - and you - did you - when did you roll off that bed?

C: I just - inside I just sleep on-on - on the carpet.

M: But did you roll off that bed in the middle of the night or in the morning?

C: in-in-in inside the middle of the night?

M: You did? Why didn't you call me? I would have come down and put you back up there. You should've called me. Did it hurt?

C: No, it didn't hurt.

M: Oh great.

C: I know, but I slept inside the floor ( ) with my brother and me ...

Besides the sophistication of this dyad's ability to really discuss the past, what is interesting is the child's attempt to place the fall in time, at her mother's request. This is a new maternal demand and may represent a new set of skills the child must tackle in her attempt to reminisce like an adult. In addition this child does not have a brother. Her

fabrication represents an example of the older children's tendency to incorporate fantasy into narrative. The child seems to have internalized a concept of the past as story material, in which all kinds of information can be integrated.

Finally, these two conversations illustrate that the thirty-month-old children and their mothers were more likely to pick an act from an event and describe it in detail, mentioning time and place and feelings rather than listing many separate aspects of the same event. This may reflect the child's increased ability to maintain a focus on a particular act or event without the support of a broad description. There may be a transition in early narratives from broad and shallow to deep and narrow. Co-construction, though different for the thirty month old than for the younger groups, was not a characteristic of all memory talk between 30-month-olds and their mothers.

As an example, in the following excerpt a mother is unable to get her child interested in talking about the event she brings up. Her strategy is much like that of mothers of younger children in that she persists in asking the same question over and over again.

(Child's age: 30 mos, 11 days)

M: What did you do at Connor's birthday party? Hm?

C: --

M: Try and remember. What did you do at Connor's birthday party? Do you remember what you did?

C: --

M: What did you do there?

C: --

M: You did something very silly. I remember. Hm? What did you do with Connor at his party? Can you tell me?

Obviously the mother knows the answer since she knows it was something silly. Her knowledge of the event might provide a great beginning for a co-constructed episode. But she is not successful in getting her child to share her focus on the event.

In the Cross Sectional phase co-construction seemed to primarily occur in dyads where the mother was categorized as a reminiscer. This suggests that sharing a narrative and co-constructing an event from the past only occur where there is a mother who is focusing on past talk for its own sake. It is not surprising to find that a child can only do his or her part in the joint effort if he or she has a mother who

is willing to establish the stage in which the cooperative work can take place. It seems consistent with the rest of the data that there is a more balanced co-construction as children get older but that this development takes place sooner and more apparently in dyads where reminiscing is an important activity.

Cross Sectional vs. Longitudinal Data: Methodological Differences

There is an interesting footnote on the analyses of data from the two studies reported here. Some of the differences between the data in the two sections can be accounted for by the Cross Sectional mothers' knowledge of the goal of the study. In other words, it was clear that the cross sectional mothers were tailoring their questions and responses to their children in an effort to get their children to remember well. One result of this prior awareness was that overall the cross sectional dyads had a longer average number of turns in their conversations. Mothers who might have quit asking a child about a remembered episode after one or two unsuccessful tries continued questioning their children (although mothers do this in differing ways). In the longitudinal part of the study the mothers did not know that talk about the past was of particular interest to the investigator. Therefore their tendency to drop or pursue unsuccessful bids to talk about the past with their children probably more accurately reflects what they usually do. In observing an activity which is still at such a fragile stage of its development (as reminiscing is with 19-30 month olds) experimental

methods can have a large effect on the data. There is always a tension in developmental research between measuring what a child is capable of performing under some optimal conditions, and what she actually does perform under her typical every day conditions. If as in this case, what a mother does seems to have an effect on what a child is capable of, one might ask: does each child whose mother does not elicit a high level of performance perform better with more focused elicitation techniques?

The task given to the mothers in the cross sectional section was given to all four longitudinal dyads at the end of the study (after 10 sessions when each child was 24 months). The two reminiscing mothers constructed full descriptions of events, and incorporated questions to the children. These children were able to answer their mothers and fill in the descriptions. On the other hand both practical remembering mothers had some difficulty interesting their children in the task, constructing a remembering framework. One of these two children didn't respond to any of her mother's questions about the three past events, and the other responded only to the photograph question, and only partially in the past tense. But as with the cross sectional data all four dyads used

more turns when the mothers knew the focus of the study than they did when they were unaware of the experimental focus.

Chapter 4

General Discussion

What Learning To Talk About The Past Involves

This study was designed with the assumption that learning to talk about the past was a cohesive activity that could be traced developmentally and described behaviorally. The question of what activities or skills comprise a behavioral process can also be answered by experimental outcome. In this case the changes over time in the longitudinal data and the between subjects differences in the cross sectional data suggest what skills and processes underlie the activity of talking about the past. To begin with, of course, there is language. As stated in the introduction, language is not only our window on autobiographical recall, it is part of autobiographical recall. Talking about the past involves the development of linguistic skills, not limited to skills that are general and basic to all language use. Our data suggest that children must learn about the narrative form and that this genre of talk not only requires special knowledge and ability, but that it is within this form that children contribute information about their own experience.

What are the characteristics of talk about the past that change in the period studied?

Mothers and children talk more about the past, in more detail, and at greater length over time. Narratives about the past become an increasingly fruitful and interesting form of dialogue for mothers and children. Children engage more in this kind of talk, pay more attention, and contribute more to it. But the interesting changes are not as much in volume as they are in the quality of interaction between mother and child. Over time children participate more and more actively in their mother's narratives. While at first they are 'silent partners,' they become participatory partners and finally contributory partners.

Besides the shift in the balance of partnering, development can be seen in terms of changing roles in the construction of a past event. In the beginning a mother constructs an event for herself and her child. The child may or may not attend to this as a noticeable or distinct form of talk among the things the mother is doing and saying. These early narratives on the part of the mother can be viewed as demonstrations of past talk and simultaneously as

invitations for the child to listen and take part. Mothers of 24 month old children who contribute more about the past are mothers who spoke very 'invitingly' about the past when the child was 18-19 months old. Within a few months the child enters the narrative activity by attending to these descriptions of past events, and even acknowledging them linguistically.

While this is not co-construction in the sense that each partner has an equally active role in the narrative process, it is shared in that the child is 'experiencing' the same narrative as the mother. There are no signs that the child has a separate internalized narrative about the event. Rather, she is part of her mother's narrative insofar as she attends to it. Her mother's description of the past event is the only description there is and is therefore the one she can draw on.

Finally there is a more active type of co-construction when the child contributes to the narrative with information, directs mother and child's attention towards specific aspects of the past event, initiates narrative, and even disagrees with the mothers contributions. In the following conversation, for example, the mother disagrees with one of the child's contributions, and questions a second

contribution. In the second disagreement the child insists on his contribution to the description.

Child's age: 24 months, 17 days:

M: Did you like it when Aunt Judy was here?

C: Yes.

M: Where did she sleep?

C: In Papa Leffel's house.

M: No, she slept in Kate's bed, remember?

C: Go see the ducks.

M: Remember, we went to see the ducks, where you were at the zoo? What else did we see at the zoo?

C: Pinnochio.

M: Pinnochio? At the zoo? I don't remember that.

C: Yes, Pinnochio.

Disagreement between mother and child is both a sign of the fullest form of co-construction and a signal

that the child is internalizing her own representation of the past and therefore drawing away from the shared mutual ones between her and her mother. In addition to changes in the construction of the narrative, there are aspects of the narrative that the child must learn. These characteristics were identified through individual differences as much as through developmental changes.

Talking about the past requires that a series of items or details be sequenced. In these data some mothers did this more than others, and it had an effect on what their children could do. Part of talking about the past is putting the story into a temporal perspective. This involves timing the event (it happened yesterday, it happened when we were at grandmother's, etc.) as well as ordering the activities within the event (one day we went to a store ... and then?) ... This is a good example of something that is not strictly a linguistic or conceptual activity. While things can be sequenced out of language, in pictures or actions, it is within the linguistic format of storytelling that a temporal perspective is placed on a series of events, and the relationship between items is made explicit ("and then"). Nor is this simply a linguistic device.

Ordering can happen in language even before a child has a grasp of temporal connectives. Just adding the right items at the right time in her mother's story shows that the child is learning to contribute to a sequence. For example:

Child's age 24 months, 4 days

M: It was a circus. And the clowns were really funny--they wore funny clothes, they did funny things--One clown got stuck.

C: Got stuck.

M: Up in the air by the high wire--he had to come down--everybody thought he was gonna fall--he didn't fall though--he was okay. You got scared though--

C: He get help.

M: He got help. There was a rope for him to come down.

C: He hurt hands.

M: Yes, but then he was safe. He didn't fall down.

Children must also learn that in telling a story about the past some things are important to talk about

and others are not. They must learn how to tell things in a way someone else will understand. These are communicative skills, but they reflect cultural attitudes about what should be included in a recollection.

Child's age 24 months, 17 days

M: Ok, tell her what you had at the birthday party.

C: Presents.

M: Presents. What else?

C: A red present with dots.

M: Hm? Oh - this one wrapping paper was red with dots on it. When you opened it up, what did you find?

C: A, a farm animal.

In this example the child comments on what wrapping paper his gift came in. This is not a detail the mother was asking about, and although she expands his contribution, she quickly redirects him towards the aspect of the gift that she considers interesting and important. This can be seen as a lesson to the

child in how to tell a good story about his birthday party. Wrapping paper is not so important, but what was in the wrapping paper is important. One noticeable characteristic of the longitudinal data were the many times the mother would say "did you tell Susie ..." even though they did not know that talk about the past was the focus of the observation sessions. These children are learning about the importance of sharing one's past with others. Again, those mothers who did more of this had children who talked more about the past.

Language & Memory

One question that pervades research on early memory is its relationship to language development. In particular, a common question is: Isn't the supposed development of the ability to recall the past merely a function of increased ability to talk? If talking about the past develops in complete synchrony with more general language skills, there are two possible explanations, theoretically opposite to one another. One explanation is that children have ideas and concepts about the past, but must wait for language in order to express their memories. This is the "concepts precede language approach." The second

explanation is that one can't know or think about one's past until there is language to represent that thought. This is the "language leads thought" theory. Our data suggest that neither of these is true. If the first were true, then children would be able to speak about the past as soon as they had the linguistic skills to do so. While acquisition of tense and aspect takes a long time, children as young as 22 months can name non-present objects and actions. If they had fully constructed sequences of the past mentally represented, couldn't they begin naming objects from these sequences as soon as they knew the words for them?

On the other hand, if one expected that autobiographical recall depended on language alone, then in fact one would not expect to see any talk about the past until a child had particular linguistic forms for the past.

Instead what can be seen in these data is that children begin to talk about the past using words and forms they already have command of. But they talk about the past quite a bit before they have the specific linguistic forms for doing so. In other words, some non-linguistic understanding of the past becomes interactive with a linguistic form, and at

this point one begins to see evidence that the child is sharing personal experiences from the past. Moreoever, linguistic forms such as tense and aspect are only one facet of what language provides for the formulations of thought about the past. Our data suggest that sequencing, embellishing, connecting events (all of which can be done with a fairly simple language base if one has a good partner) are all language-based activities that give life to the past.

What accounts for the development of the ability to talk about the past?

Several different influences play a role in the development of past talk. It is no accident that this activity first begins in the months when most children go from one- to two-word phrases. As linguistic competence grows, so do all the activities that involve language. At the same time mental processes such as imaging, sequencing, perspective taking must all play a role in constructing narratives about the past. This study focuses on an external influence: interaction with a socially significant and knowledgeable other, in this case the mother. The data presented in this study show a relationship between the quality and quantity of a mother's talk

about the past and her child's interest and/or ability to talk about the past. The work suggests that those mothers who seem to emphasize descriptions of the past have children who are more able at an earlier age to participate in these discussions. Kyratzis, Lucariello and Nelson (1984) also found that children were more able to contribute to recountive rather than instructional past talk, although in their study the difference between the two types of talk was contextual rather than individual.

The implication of these observations suggests that like many other mental activities, autobiographical memory begins in a social interactive context. With development reminiscing becomes an internal mental activity. Because it begins in an interactive setting it probably bears the influence of social priorities and emphasis throughout an individual's lifetime.

Why some of the mothers in this study seemed to reminisce more than others is a somewhat different question, and one that is not answered by this study. But descriptions of the dyads in the longitudinal study suggest some possible connections. Mothers who establish routines for their children seem to talk about the past more. In these data the establishment

of routines refers to the organization and regularity of everyday activities in which a child participates. For instance, one dyad eats breakfast at about the same time each day. Breakfast involves a fairly regular set of procedures: first you sit down, then mother serves toast and juice and cereal, then mother sits down at a table next to you. This child always has a play period in her room after breakfast, and then a 20 minute nap. After this she gets dressed and goes to the park. This is in contrast to a dyad who eats breakfast anywhere from 5 a.m. to 10 a.m. Some days she sits down for breakfast and other days she eats 'on the run.' Some days mother eats with her and some days mother is doing other things during the child's breakfast. Activities after breakfast range from nap, to play with mother, to babysitter to a visit to the park. In these data the children who are experiencing everything in terms of sequence are more likely to sequence the distant past as well as ongoing activity. Routines (and talk about routines) tend to encourage an organization of experience in terms of time. Children who have a well-developed sense of time and order have a framework in which to understand and place experiences from another time, and to begin

to see the relation of those past experiences to current time.

Cultural Transmission of a Genre

What are mothers doing when they talk to their young children about the past? The dialogues gathered as part of this study suggest that while mothers may have no conscious motive save talking about interesting things and sharing experience with their child, there is an underlying motivation for descriptions of a shared past. Adults pass along a way of viewing the past and a form for talking about the past. This study has avoided the issue of whether talk about the past is a complete representation of thought about the past. Instead, past narratives are considered to be a kind of linguistic genre (Dore 1985).

Differences between mothers suggest that several things are passed from mother to child that can be viewed as a set of lessons about talking about the past. One lesson concerns the importance of talk about the past. Some mothers like to do it, think it's important, or just find it an easy way to engage their child, and others don't. Mothers in the cross sectional part of the study varied in their answers to

the question posed to many of them at the end of the thirty-minute session: "Do you often talk about the past with your child?" These answers ranged from: "No never," to "yes, first I worked on a sense of the past; now I am working on a sense of the future." Some mothers use talk about the past in a practical way: "It helps me know what he does during the day while I am at work."

A second lesson has to do with how the past should be talked about, whether in terms of actions, feelings, other people, isolated elements or sequences. These data suggest that mothers differ along this dimension and while the children were not old enough to reflect these differences in their own talk, the strong relationship between maternal style and child ability suggests that there will also be a relationship between maternal style and child's style. In a sense we have rudimentary evidence for this in the fact that the child of a sequencer is more likely to contribute in a sequential manner to her mother's narratives. This suggests that children learn how to tell a story about their past.

Finally, children are learning that the past is constructed. This is particularly apparent at the later ages when children begin to interject a fantasy

into their memory talk and are corrected by their mothers. While they are learning the distinctions between reality and fantasy in general, they are learning that talk about the past is a way of telling a story and that not all kind of statements can be inserted into the story, that it has a point of view, a perspective, and a particular set of elements that make it a good or interesting or meaningful story. Children whose mothers do not talk about the past a lot when they are young may develop in two different directions. Some may begin to talk about the past later. That is, their mothers may become reminiscers when the children are older. This might be an unconscious attunement on the mother's part to the readiness of her particular child. On the other hand, some mothers (or parents) may just not ever stress talk about the past. These children may never consider talk about the past to be important, interesting, or a fruitful way of describing experience and thought. These may be the children who are not storytellers, or never have a strong sense of autobiography.

Summary

This study was designed to address three issues:

How does talk about the past change in the period between 19-24 months when children are first beginning to refer to their past?

Is there a particular activity called reminiscing with its own identifiable history and characteristics?

Do children learn to talk about the past within a social context, and is there a cultural or social influence on how a child talks about the past?

The data from both parts of the study show that talk about the past changes in frequency, length, and detail during the age span studied. In addition to overall changes for the dyad as a remembering unit, mother's way of talking about the past changed, and children's ability to contribute to past narrative increased. The answers to the second and third issues turned out to be interrelated.

Some mothers were found to reminisce while others were found to engage in a different kind of remembering. This other type, practical remembering, was briefer, more utilitarian and less story-like than the reminiscing. In this study, cultural influence was interpreted as maternal influence on the child. Mothers who reminisced with their children had children who were more able to contribute to narratives about the past. Children of practical

rememberers were less likely to contribute, sustain a dialogue about the past, and to attend to a shared narrative. This is evidence for the argument that talk about the past does reflect maternal/social influence.

Finally, evidence was found for the notion that in the early months of this activity remembering is a shared interpersonal activity. Mother and child remember jointly. The roles within this joint activity change. At first the mother is the active member of the team, and the child is the listener or audience. At a second stage the child acknowledges her mother's narrative, sustains dialogue through repetition and simple queries. Simultaneously the mother begins to demand more participation from her child by using different linguistic forms to shape the narrative. At a third stage the child can contribute actual information to the narrative, direct the narrative in a particular direction and disagree with mother about what happened. What begins as a merged somewhat undifferentiated construction of the past becomes increasingly articulated and dialogic with respect to the roles of the two participants creating the narrative.

Conclusions and Implications for Future Research

The results of this study support the argument that remembering begins as an interpersonal activity and becomes intrapersonal over time. The process by which the children came to talk about the past demonstrates Vygotsky's proposition that what a child can do with the help or input of an adult at one point predicts what he or she will be able to do on his or her own at a later point. These data suggest that cultural or personal styles have an effect on the child's internalized mental activity.

The relationship found between maternal style and children's performance lends weight to Bartlett and Vygotsky's emphasis on the role of culture in the way people organize and express their experiences. The importance of interaction in understanding the phenomena indicates that some kinds of mental activities must be viewed as interactive processes. Not only does a social context facilitate performance; it seems, to shape performance.

Vygotsky and Bartlett (among others) stressed the role of culture and social interaction in mental processes such as remembering. Researchers in child language have stressed the role of mother's input in

language acquisition. In the present study mother-child pairs were chosen as a prime example of a socially meaningfully, interactive unit. It is an empirical question whether mothers enjoy a special status as teachers of thinking and talking. Further research on the role of interaction and social input on early development needs to examine the effect or lack of it of paternal and peer input, for example. Future research must examine what characteristics determine the effectiveness of an individual's input to a developing child. For example, does amount and frequency of exposure between adult and child matter? Is there some special emotional connection between mother and child that makes mother's input more influential than the input of fathers or other caregivers?

As with most research, this study has led to more questions than conclusive answers. Among these questions the following seem to merit further investigation: what if any are the long lasting effects of stylistic differences in remembering on children's proclivity or ability to recall their past experiences? Do early stylistic differences in remembering have an effefct on how older children

construct narratives, or on their notion of what constitutes a good story?

This study provides an account of naturally occurring conversations about the past between mothers and children. A further step might be to gain more control over the experiences to be recounted, in order to evaluate the process of construction that takes place between mother and child. Finally, this research was an attempt to demonstrate the role of social itneraction in the development of remembering. In order to specify the role of social and cultural input in remembering adults and children from many social and cultural groups must be compared. These comparisons might answer questions such as: how many different styles of remembring are there? What do these differences stem from? Do different groups of people place varying emphases on the meaning and importance of remembering?

One outcome of this investigation was the rich corpus of descriptions about the past between mothers and their young children. In light of earlier claims that children didn't remember the past before they were three or four, these rich examples suggest that remembering must be looked at in a natrualistic context.

In order to understand how people remember, we must see them remembering where, when and how they want to and need to. Analysis of intereaction in varied complex everyday settings involves difficult, often shifting, interpretive methods. It is hoped that these kinds of analyses tell at least one part of the story.

FOOTNOTES

1. It is hoped that the descriptions and analyses of co-construction presented here will provide a conceptual basis for a more systematic and possibly quantitative analysis of a larger data base in the future.

2. While it was strategic to separate child from mother in this analysis, one point of this research is to show that mother and child are part of an intersubjective unit.

Appendix A

Dear

Just so you know what to expect when I visit on , I will come and observe you and playing and/or talking together (whatever you might ordinarily do at that time). During the thirty minutes or so please bring up (talk about) 3 different things from the past (visits, places, people, etc.). For one of these things use something in the room like a toy or an object to help spur the memory.

For another use a picture or photograph.

For the third don't use anything but the conversation itself.

Feel free to talk about these three events in any order and in any way that is natural and easy for you. Participation can be in any amount or style. I am interested in whatever does or does not happen between you. If any of this is unclear, feel free to give me a call or ask me about it when I get to your house.

I look forward to seeing both of you.

Sincerely,

Susan Engel

Appendix B

Permission Form

I _____ agree to participate, with my
Name
child _____, in Susan Engel's study "How
Child's Name
young children learn to talk about the past." I understand that she will tape record conversations between me and my child. I understand the nature of the study to my satisfaction, and can ask questions of Susan Engel or her advisor Katherine Nelson at any time during the study. I understand that the material collected will be used for research purposes only and will be confidential.

_____
Name

_____
Date

Appendix C

Coding Instructions for Longitudinal and Cross sectional Data

1. Indicate first sentence of conversation about the past. If child initiated, use Mother's response to determine content and temporality of child's utterance.

2. Assign number to conversation, relecting position among total conversations about the past in that transcript.

3. Indicate last utterance in conversation: last relevant comment by either participant.

4. Form of mother's speech: Monologue, Request for Acknowledgement, Request for Information.

   Monologue-- Any report or statement by mother that does not include any demands for verbal participation from the child.

   Request for Acknowledgement - Any utterance by the mother that requires a yes or no, or some sign from the child that he or she is listening. Even if the child does not comply, mark it as a RA if the mother pauses and waits for the child to acknowledge her comments.

   Request for Information - Any reference to the past that includes a demand for the child to provide specific information about the event being discussed.

5. Child's Contribution - Each child contribution or utterance must be characterized as one of the following:

   Repetition: A repetition of something the mother has just said about the past event.
   Verbal Acknowledgement - Usually in the form of a yes or no.
   Gestural Acknowledgement - A nod or shake of the head.

New Information - Any contribution to the description that has not appeared in the other's talk--may be spontaneous or mother-initiated.

Wrong Information/Fantasy Material - Any contribution from the child which is contradicted by the mother.

6. Function of the mother's speech - Does the purpose of the mother's talk seem to be

   To tell a story
   Clarify something in the ongoing context
   Test the child's knowledge
   Gain information from the child

7. Elaboration of description - Identify main point of story, or focal event. Count number of addition details or elements mentioned in the conversation. The unit here is conceptual rather than verbal--a detail may be a word or a sentence. It should describe a component of the event.

8. Identify who initiates conversation.

9. Number of turns in conversation: Begin with first relevant response to the initiating comment about the past event. Count each succeeding relevant response as another turn. The last relevant response ends the sequence. If a child's turn is clearly relevant and the mother's succeeding turn marks a switch in topic, the child's turn is the last. If the child's turn is ambiguous as to relevancy, use the mother's succeeding comment as a guide.

10. For Cross Section Data - Label each conversation in terms of cue type: Photo, object or conversation.

Appendix D

A Description of Each Dyad

The four dyads who participated in the longitudinal part of the study can be described individually. These descriptions should enhance the quantitative analyses and augment the overall interpretation of talk about the past. Each dyad will be described briefly, primarily in terms of the mother-child interaction, the quality of their routine within the observation period, particularly how these characteristics seem to relate to their conversations about the past.

While the dyads fell into two stylistic groups, each mother-child pair can be described individually. These individual descriptions will show that to some extent the styles are not dichotomus but continuous and that each dyad fell at a slightly different point on the continuum between reminiscing and practical remembering.

C & K

C and K talked about the past most. They typified the reminiscing style on all measures. There was more talk overall between these two than in the

other dyads. The mother focused almost completely on the child's behavior. The observation sessions were spent in K's room. K would play and her mother would sit in a rocking chair guiding her play, discussing it, and sometimes playing with her. K was a very active child, moving about the room, playing with several different toys over a thirty-minute period. C's talk was filled with questions and comments on K's behavior. In addition, C would constantly turn K's non-verbal gestures into language. C seemed adept at interpreting and incorporating K's gestures. In the memory talk this was also apparent. In the early months K's mother often referred to events that K could not possibly remember, or ones in which K's contribution could only be minimal (for instance, discussing last year's Christmas party). Her past references were often marked with tags such as "remember when?" Her references made good, if brief stories, often mentioning people, special details and places. In other words, C offered a lot for K to latch on to. For example:

K. and C. - 18 mos. 22 days

C. Touches head

M: Yes, that's right. We fell off the last time and went bang bang on our head.

C: (Pretend cries.)

M: Yes, it hurt. That's right. And remember Mommy told you to hold on.

Towards the end of the study, as K became more and more capable of contributing to these narratives, the "stories" retained their rich character. Both mother and child put a lot of energy into "telling." As with most of their activity, talk about the past was highly animated. The high degree of narration of ongoing activity in the form of comments, warnings, and encouragement suggest that there is a relationship between descriptive talk in general and descriptions of the past.

K and L

The second reminscing dyad falls somewhat lower on the continuum. This dyad was usually just finishing breakfast and going into L's room to clean up and play during the sessions. K and L had a lot of word games and playful rituals. They often sang songs in which each had a part (you say potato and I say potato). In the early sessions their talk about the past was brief but always clearly delineated an event (e.g."Michael and Anne came for dinner, didn't they?")

The majority of their conversations about the past were about people's visits to them, or their visits somewhere else. These two played a lot and much of it was pretense play with dolls, doll houses and blocks. Towards the end of the five-month period quite a bit of their talk about the past became incorporated into play. For instance, while setting up a tea party for the dolls:

K and L - 23 mos., 7 days

M: Did you cut up the banana?

C: Yes.

M: Did you give any to the bear?

C: No.

Some of this talk was about play episodes:

M: We made cigars out of these blocks when we were in the cab, right?

R and L

The third dyad was usually having breakfast during the observation. These two were very efficient at communication, and often spent much of the time negotiating what to have for breakfast. Similarly, their memory sequences are brief but effective, both in terms of communication and in terms of description. For example:

L and R 21 mos, 1 day:

R is pulling up her socks, looking at her mother and saying "Zoe Zoe"

M: (after a confused pause) Oh is that the way Kerry and Zoe were pulling up their socks when they visited you?

C Nods.

R got more efficient at giving information over time, but the sequences did not get longer or richer. For example: 23 mos, 26 days, M and C are looking at photographs of their trip to Italy several months ago. M points to a picture of a dog.

M: Remember that dog? He was Marcella's dog. You liked him.

C: Moshe Moshe

M: That's right; that was Mozelle. I didn't know you remembered his name.

M goes on to another picture.

It was as if this mother did not exploit the opportunities that arose to discuss the past.

A and L

Finally the fourth dyad typified the practical rememberer. Their routine was very uneven. Sometimes they were eating breakfast, sometimes cleaning up,

sometimes playing and sometimes doing a little of each within the thirty-minute period. Very little of their talk or play was richly descriptive, or even contained prolonged joint focus on a topic. Much of their talk (particularly the mother's) focused on emotional states, in particular the child's fear or discomfort (about teething, new babysitters, etc.). Their talk about the past showed the least increase over time. On the other hand, this child could be surprisingly verbal. Her vocabulary was large, as was the vocabulary her mother used with her. One notable aspect of their talk about the past is that on occasion they picked potentially rich and sophisticated topics for memory talk, such as their trip to New Hampshire. On more than one occasion A initiated these conversations. But the two did not seem to 'come together'. Either they focused on different points, or the mother failed to elaborate or extend the talk. For example:

A and L 22 mos, 11 days

C is looking at picture of birds in a book. Earlier

M had mentioned that they had seen some of these birds on their last trip to New Hampshire.

c: Hampshire?

M: Yes. When we were in New Hampshire, we went looking for birds, didn't we? That's right.

c: Looking birds. Looking birds.

M: Yes. I'm yes. I'm going to get some long underwear. I'll be right back.

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