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MOTHER-CHILD CONVERSATIONS ABOUT OTHER PEOPLE: THE ROLE OF MOTHERS' PERSONAL INTELLIGENCE

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MOTHER-CHILD CONVERSATIONS ABOUT OTHER PEOPLE: THE ROLE OF

MOTHERS' PERSONAL INTELLIGENCE

BY

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DEDICATION

To the strong and incredible women who have helped shape who I am today: You have come into my life in the form of family, friends, and mentors, and each of you has left a lasting impact for which I am eternally grateful.

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ABSTRACT

MOTHER-CHILD CONVERSATIONS ABOUT OTHER PEOPLE: THE ROLE OF

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Erin M. Kenney

University of New Hampshire, September, 2018

The dissertation focuses on two studies that explore an intriguing context in which variations in personal intelligence are apparent: the way parents talk with their children about other people. Fifty 6-9 year-olds and their mothers participated in Study 1. Study 1 documented individual differences in mother-child conversations about others and their relationship with mothers' personal intelligence and children's conversational variables, and also examined children's use of trait labels and social behavior ratings. Forty-two 4-5 year-olds and 43 7-8 year-olds participated in Study 2 with their mothers. Study 2 replicated many of Study 1 findings, including significant correlations between mothers' conversational variables, children's conversational variables, and an association between mothers' personal intelligence level and personality talk variables. Furthermore, Study 2 extended findings to a younger cohort of participants. Procedures for coding and analysis of personality talk are delineated. Study contributions are described in relation to literature on mother-child reminiscence and personal intelligence.

CHAPTER 1

INTRODUCTION

From a young age children begin the complex process of understanding social cues and

norms. Inherent to this process is the interpretation of the behaviors of others and understanding

personality-relevant information (Brownell, Svetlova, Anderson, Nichols, & Drummond, 2013;

Carpendale & Lewis, 2004; Fivush, Haden, & Reese, 2006; Fivush & Vasudeva, 2002; Haden,

Haine, & Fivush, 2006; Harris, 1995). Parents play a key role in encouraging prosocial behavior

in children and guiding their overall socioemotional development. The importance of parent-

child conversation and its influence on child outcomes such as improved long-term memory and

self-concept is well chronicled in the literature (Kulkofsky, 2011; Leichtman, Pillemer, Wang,

Koreishi, & Han, 2000; Lewis, 1999; Song & Wang, 2013; Wang & Fivush, 2005; Welch-Ross,

Fasig, Farrar; 1999). One unexplored aspect of parent-child conversation is the association

between the way parents talk with their children about other people and children's social

competence and personality understanding.

The two studies here explore whether mothers vary reliably in their reminiscence style –

specifically, might mothers differ in the way they discuss personality and emotions with their

children? Do some mothers have richer, more detailed discussions with their young children

about other people than others do? The studies go on to ask whether, if mothers vary this way,

their conversations model for children how to think and talk about other people and influence

children's own ways of talking and thinking about others. The present studies examine these questions, focusing on whether children's own contributions to discussions about others and their ability to detect and reason about the personalities of others correlate with their parents' personal intelligence and ways of talking with children about other people.

To frame the studies, relevant findings on parent-child conversation, personal intelligence, and personality trait understanding in adults and children are presented.

Parent-Child Conversation

The parent-child relationship is a cornerstone from which children model behavior including social behavior and conversation. Parent-child conversation is a daily activity that fundamentally contributes to children's social and emotional development. Given the importance of these early conversations, conversation content and style are of particular interest. In the memory literature, researchers have demonstrated reliable individual differences in maternal reminiscing. Mothers typically possess an elaborative style that ranges on a continuum from high to low in conversations with their children (e.g., Fivush, 1991; Fivush & Wang, 2005; Leichtman et al., 2000; Lewis, 1999). Elaborative reminiscence is characterized by maternal provision of details about events and evaluative feedback that encourages children's participation in the discussion (Fivush et al., 2006; Haden et al. 2006; McDonnell, Valentino, Comas, & Nuttall, 2016; Song & Wang, 2013). Furthermore, elaborative reminiscence encompasses the inclusion of closed-ended questions (e.g. yes/no), open-ended questions, declarative statements, and elucidative clarifications which serve to add new information or move a conversation forward (Fivush et al., 2006; Hedrick, Souci, Haden, & Ornstein, 2009; Reese, Haden, & Fivush, 1993; Song & Wang, 2013). Feedback from mothers on children's participation - which includes

praise, clarifications, and confirmation of specific details - is an important aspect of elaboration in mother-child speech (Fivush, 1991; Hedrick et al., 2009; Hoff-Ginsberg, 1994; Leichtman et al., 2000; Reese, Haden, & Fivush, 1993). In short, mothers who are elaborative in conversations with their children are actively engaged in the conversation, encouraging their children to speak in more detail while offering a maternal perspective on the conversation. While highly elaborative parent-child conversations are often longer than those lower in elaboration (e.g., Leichtman, et al., 2000), this is not necessarily the case, and it is conversational features that support children's contributions, rather than length, that dictate level of elaboration.

Conversations are a two-way street and the child's role in encouraging their mothers' reminiscence style may be influential as research shows (Fivush, et al. 2006, Hoff-Ginsberg, 1994; Reese et al., 2011; Wang & Fivush, 2005; Welch-Ross et al., 1999). Moreover, a child who has a history of being more elaborative in conversations with a parent is more likely to have longer more elaborative conversations on any given topic (Brownell et al., 2013; Hoff-Ginsberg, 1994; Lewis, 1999). This relationship is seen with children as young as one year, with mothers' contributing more to linguistic experiences when the child offered more one-word utterances in prior conversations (Alexander et al., 2010; Hoff-Ginsberg, 1994; McDonnell et al., 2016). The child's demonstrated language ability prompts the mother to offer more to the conversation, including maternal repetition of child speech and increased closed and open-ended questions. Furthermore, the more the child's talk is related to mother's speech the longer the conversation lasts (Brownell et al., 2013; Hoff-Ginsberg, 1994; McQuaid, Bigelow, McLaughlin, & MacLean, 2008). Likewise, children who talk less in prior conversations and whose talk is not related to maternal contributions have shorter, less elaborative conversations with their mother. This phenomenon appears at an early age, but has been demonstrated with preschool, elementary, and

middle-childhood aged children and their mothers (Brown & Dunn, 1991, 1992; Fivush et al., 2006; Graci & Fivush, 2017; Pearson & Pillow, 2016). These findings do not negate the importance of maternal contribution to conversation, however they do suggest a reciprocal relationship with both child and maternal conversation style playing a part in the quality and quantity of conversation occurring.

Beyond the personal contributions of the mother and child, there are alternative explanations for the range of conversational styles observed during parent-child conversation. Differences in mothers' beliefs regarding the importance and value of talking to children and the time that they have to do so are also a consideration. These beliefs are essential to understanding differences in maternal reminiscence style between culturally disparate mother-child pairs. Research has shown a distinctive difference between collectivist or interdependently-oriented cultures and independently-oriented cultures in narrative environments and linguistic experiences (Fivush, Habermas, Waters, & Zaman, 2011; Fivush & Nelson, 2004; Kulkofsky, Wang, & Koh, 2009; Leichtman, Wang, & Pillemer, 2003; Li, 2004; Wang & Leichtman, 2000). Interdependent cultures emphasize social norms which include group goals and shared identities. In contrast, within independently-oriented cultures socialization accentuates "values which include individuality, personal uniqueness and self-expression" (Leichtman et al., 2003, p. 74). From the basis of this distinctive cultural difference arise regular tendencies in parent-child conversational styles. Prototypical parent-child discussions in interdependently-oriented cultures feature a low elaborative style which places emphasis on appropriate social behavior and the good of the group (Kulkofsky et al., 2009; Leichtman et al., 2003; Wang & Leichtman, 2000). In contrast, parent-child conversations in independently-oriented cultures exemplify the societal importance of independence including frequent references to individual emotions, memories, and personal

details (Kulkofsky et al., 2009; Leichtman et al., 2003; Wang, 2006; Wang & Fivush, 2005). The socialization emphasis placed by majority culture in these societies is therefore in some way impacting or influencing the style and content of conversations between parents and their children.

It is also important to note that cultural differences are not limited to differences inherent between macrosystems of each parent/child pair (Bronfenbrenner, 1979; Harter, 2012). That is to say while each dyad is indeed influenced by the attitudes and ideologies of the majority culture, the influences of ecological systems closer to the pair may also have an impact on parent/child conversation. Considerations of socioeconomic status, education, and social norms that shape the microsystem may provide further or more salient explanations of conversational style and narrative skill (Chae, Kulkofsky, Debaran, Wang, & Hart, 2014, 2016; Fivush & Nelson, 2004; Leyva, Berrocal, & Nolivos, 2014; McDonnell et al., 2016). For example, Chae et al. (2014, 2016) found that lower socioeconomic status was associated with lower available vocabulary and less elaborative narrative style in preschool aged children in the context of a specific event memory. These findings elucidate the impact cultural factors can have on linguistic ability which in turn affects reminiscence style and narrative experience.

Research has demonstrated that conversations about remembered events teach children how to think and talk about the past. Children with highly elaborative mothers tend to possess more detailed event memories and tend to be more detailed in their narrative discussion of past events (Fivush, 1991; Fivush et al., 2011; Fivush et al., 2006; Fivush & Wang, 2005; Kulkofsky, 2011). For instance, a child attending a school field trip takes the time to discuss the exhibits viewed at a museum with her mother at pick-up time. The mother, being highly elaborative in reminiscence style, asks her child about details of the exhibits and seeks more information on the

trip, encouraging her child to share. Studies suggest that the child's long-term memory for details

of the field trip will benefit from this interaction with her highly elaborative mother (Bauer &

Fivush, 2010; Graci & Fivush, 2017; Hudson & Fivush, 1991). Furthermore, the linguistic

experience of sharing the narrative surrounding a specific event within one's life assists

individuals in understanding their meaning both in the short-term and across the life span

(Fivush, Booker, & Graci, 2017; Fivush, Haden, & Adam, 1995; Pillemer, 2009). This socially

relevant practice of sharing key narrative experiences further contributes to the autobiographical

events one remembers long term. Specifically, those memories that are more culturally relevant,

emotionally charged, and/or personally significant are remembered in greater detail and for

longer periods past the original event (Graci & Fivush, 2017; Waters, Bauer, & Fivush, 2014;

Waters, Bohanek, Marin, & Fivush, 2013). This complex developmental process is another

aspect relevant to understanding the relationship between parent-child conversation and

conversational style.

Given the importance of reminiscence style to memory, might a similar mechanism be in

place for thinking, talking about, and remembering people? In view of the importance of

linguistic interactions to sociocultural theory, pointedly the power of said interactions to effect

developmental change, how does parent/child conversation impact children's understanding of

social situations (Hedrick et al. 2009; Vygotsky, 1978)? Previous research on mother-child talk

about social scenarios and emotions suggests that there are individual differences between dyads

in reminiscence style and content (Martin & Green, 2005; Raikes & Thompson, 2008; Song &

Wang, 2013; Welch-Ross, et al., 1999). Mothers who initiate and elaborate on emotion and

internal state talk have children who in turn more frequently reference their personal emotional

state and the emotions and motives of others (Brown & Dunn, 1991, 1992; Brownell et al., 2013;

Garner, Dunsmore, Southam-Gerrow, 2008). Moreover, emotionally elaborative mothers have children who provide more specific and detailed memories of emotionally-charged events (Alexander et al., 2010; McDonnell et al., 2015; McQuaid et al., 2007; Raikes & Thompson, 2008). These findings are discussed in terms of children's social skill development and point to the function of maternal reminiscence as both social and directive in nature.

Mothers elaboratively enhance children's understanding of the emotional impact of discussed events and the socially relevant norms for the given situation. For instance, a child experiences a squabble with a peer on the playground over whose turn it is to use the slide. The peer sticks his tongue out at the child and the child becomes angry and storms off to find his mother. Relaying the details of the event to his mother, the child shares his perspective on what just occurred on the playground. An elaborative mother may use the opportunity to discuss potential solutions for the problem (e.g. taking turns, using a different playground apparatus, using words to discuss the problem with the peer), using open-ended questions to draw out the child's response and closed-ended questions to relay expectations and clarify details. An emotionally elaborative mother would further draw the child out to explain how he was feeling and how the peer may have been feeling during the event. The commonplace playground scuffle becomes a teachable moment in which a parent may take the opportunity to guide the child's behavior and assist him in finding a socially acceptable solution. A similar conversation could take place an hour later, a day later, a week later, or even longer, the limitation being the mother and child's relevant event memory in the long term (Brown & Dunn, 1992; Hedrick et al., 2009; Waters et al., 2013). While the social and directive functions of parent-child talk are well chronicled, little is known about the effect these have on children's social competence and trait attribution skill (Alea & Bluck, 2003; Bluck, 2003; Fivush & Vasudeva, 2002; Kulkofsky, et al.,

2009; Pillemer, 2009; Waters, Bauer, & Fivush, 2014). The current studies seek to elucidate

these effects and their relation to maternal personal intelligence levels and reminiscence style.

Personal Intelligence

Contemporary intelligence researchers recognize a spectrum of intelligences that together

make up general intelligences and that include verbal-propositional, spatial, quantitative,

emotional (as in ability), and personal intelligences (MacCann, Joseph, Newman, & Roberts,

2014; Mayer, Caruso, & Salovey, 2016; McGrew, 2009). These mental abilities are referred to as

broad intelligences and each is distinct from the next and makes partly distinct predictions.

Personality is defined as the organization of an individual's major psychological systems,

including a person's motives, emotions, mental models of the world, customary socio-emotional

styles (e.g. extraversion), mental abilities and self- control (Bryan & Mayer, 2018; Mayer, 2014).

As such, it is the prototypical member of the particular group of broad intelligences that concern

people – broader than emotional intelligence and more focused on the person than social

intelligence (Bryan & Mayer, 2017; Mayer, Panter, & Caruso, 2017a).

More specifically, personal intelligence helps the individual to "meet his or her own

personal needs and to fit in with (or stand out from) the environment" (Mayer, 2009, p. 46).

Personal intelligence is a measurable ability on which people exhibit reliable differences (Mayer,

Panter & Caruso, 2012, 2017b). Mayer et al. (2012, 2017a) have developed a Test of Personal

Intelligence (TOPI) to assess this reasoning ability. The TOPI comes in several versions. The

TOPI MINI-12 is a well-validated short form appropriate for research when testing time is

limited and that can be used to identify those who possess high and low skill at problem-solving

in the area (Mayer et al., 2017b).

Those high in personal intelligence possess the skills to: a) recognize personally relevant information from observing themselves and others, b) form accurate models of personality from observations of behavior, c) use personally relevant information to guide their choices, and d) systemize their goals, plans, and life narratives (Mayer, 2008, 2009, 2014; Mayer, Caruso, & Panter, 2014; Mayer et al., 2017a). Those low in skill bases for personal intelligence problems-solving areas are less successful at the aforementioned tasks. These personal intelligence problems-solving areas offer key skills for social interaction and development among adults. Theorists have also suggested that TOPI 1.4 scores offer insights into real-world variables such as popularity in social scenarios and success in leadership scenarios and business settings (Mayer, 2008, 2009, 2014; Mayer & Skimmyhorn, 2017; Mayer, Wilson & Hazelwood, 2010).

The present study aims to broaden these real-world scenarios to include the relationship between mothers' personal intelligence and parent-child reminiscence conversations about others, specifically peers and relatives.

Personality Trait Attribution

To date, the burgeoning literature on personal intelligence has focused almost exclusively on adults, but related literature on the development of children's understanding of others is relevant. In children, social interaction plays a critical role in the development of social understanding. Theorists have proposed that the development of children's social understanding involves three key planes of interaction: the child's personal experience of the environment, the child's communicative interaction with others, and the child's understanding of their own and others' experience and beliefs (Carpendale & Lewis, 2004; Chapman, 1992). Research on the development of children's understanding of personality has dealt with trait knowledge

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development and attributional skill (Gnepp & Chilamkurti, 1988; Gonzalez, Zosuls, & Ruble, 2010). Alvarez, Ruble, & Bolger (2001) found that children as young as five possess the ability to evaluate behavior and assign relevant personality traits to the actor. Similar findings were noted in studies of young children and their ability to predict future behaviors from traits (Boseovski, Chiu, & Marcovitch, 2013; Boseovski, Shallwani, & Lee, 2009; Heyman & Gelman, 1998, 2000). Furthermore, children are capable of predicting consistency in an individual's actions when presented with multiple instances of similar behavior in parallel situations (Kalish, 2002; Liu, Gelman, & Wellman, 2007; Rholes, Jones, & Wade, 1988). Of interest, this literature has focused almost exclusively on normative developmental trends and not individual differences. In contrast, the present study is designed to elucidate individual differences in children's abilities related to personality related skills and their mothers' personal intelligence.

These studies examine an unexplored context in which variations in personal intelligence may be present: the way mothers talk with their children about other people. Might mothers who are high in personal intelligence have richer, more detailed discussions with their young children about other people than those who are not?

CHAPTER II

STUDY 1 GOALS AND HYPOTHESES

The purposes of Study 1 were to: a) examine individual differences in mother-child conversations about others, b) examine individual differences among children in the ability to predict social behavior and assign trait labels, and c) explicate the relationship between mothers' personal intelligence ability and mothers' reminiscence style, children's social competence level, and children's ability to predict social behavior and assign trait labels.

Given these purposes, specific predictions regarding potential findings were as follows:

a) There will be differing styles of reminiscing about others between mother-child dyads (as in the memory literature, high to low elaborative mothers). Mothers who are high in Personal Intelligence will have richer, more elaborative ways of talking about and explaining the behaviors of others and the social world than those who are low in Personal Intelligence.

b) There will be individual differences in Personality Scenarios Task scores and Social Competence levels in children of similar ages that will relate to one another.

c) Mothers who are high in Personal Intelligence abilities will have children with higher Personality Scenarios Task scores. Mothers who use a more elaborative style of discussing peer interactions and other people with their children will have children with higher Personality Scenarios Task scores. The predicted pattern is

reminiscent of Leyva, Berrocal, and Nolivos (2014) who observed that parents who provided more resolutions in talking about negative past events had children with better problem-solving skills.

d) Mothers high in Personal Intelligence ability will have children with higher social competence, as measured by mothers' ratings.

CHAPTER III

STUDY 1 METHOD

Participants

Participants were 50 mother-child dyads recruited from local elementary schools and after-care programs. Participants included 26 female and 24 male children (mean age 99.72 months, SD = 10.84, range 76-116 months) enrolled in first, second, or third grade. Mothers were Caucasian (90%) and native English speakers (94%). Ninety percent of mothers had a college or graduate degree. Most mothers were employed in some capacity (80%). Children were of varying birth order with most having at least one sibling (90%). See Table 1 and Table 2 for complete demographic details. One additional child who participated in the study was removed from the sample to avoid violating assumptions of independence as her mother and twin sister were participants.

Table 1. Demographic information for mothers in Study 1.

	Number of Participants	Percent
N=	50	100
Mother's Age (in years)		
20 or younger	1	2
21-29	1	2
30-39	22	44
40-49	23	46
50-59	2	4
60 or older	1	2
Mother's Ethnicity		
Asian	1	2
Black	1	2
Hispanic	2	4
Indian	1	2
White/Non-hispanic	45	90
Other	0	0
Mother's Education		
High school	1	2
Some college	4	8
Associate Degree	4	8
Bachelors Degree	13	26
Graduate Degree	22	44
Post Graduate Degree	6	12
Mother's Employment		
Not employed	6	12
Full-time	30	60
Part-time	10	20
Stay at home mom	4	8

Table 2. Demographic information for children in Study 1.

	Number of Participants	Percent
N=	50	100
Child's Gender		
Female	26	52
Male	24	48
Child's Age (in months)		
70-79	1	2
80-89	9	18
90-99	12	24
100-109	16	32
110-119	12	24
Child's Ethnicity		
Asian	1	2
Black	1	2
Hispanic	2	4
Indian	1	2
White/Non-hispanic	45	90
Other	0	0
Child's Grade in School		
First	8	16
Second	27	54
Third	15	30
Child's Birth Order		
Only child	5	10
First born	22	44
Second born	16	32
Third born	4	8
Fourth Born	2	4
Other	1	2

Procedure

A researcher met with the mother and child in a quiet location convenient to the dyad (e.g. a local library, the dyad's home, a local coffee shop) and explained the study tasks. The researcher administered the Personality Scenarios Task to the child and then sent the mother home with a recorder. The researcher then collected the recorder (approximately one-week later) and emailed access to the online-survey component to the mother. Upon completion of the study participating dyads were compensated twenty to forty dollars (compensation was dependent upon available/approved funding at time of participation).

Parent-Child Measure

Mother-child conversations about personality/behavior.

In written instructions sent home with an audio-recorder, mothers were asked to have a conversation with their child about four specific topics. Mothers were instructed to talk with their children the way they normally would and to take as long as they needed for each topic. Conversations were audio-recorded and later transcribed verbatim. The overall procedure for mother-child conversations is well established (e.g., Fivush, 1991; Fivush, et al., 2006; Leichtman et al., 2000; Song & Wang, 2013) and was adapted for this set of conversation topics.

Mother-child dyads were asked to engage in a conversation regarding four specific prompts on particular topics. Conversation prompts were: 1) comparison of two relatives the child knew well, 2) comparison of the child to others, 3) recollection and discussion of a recent negative interaction with a peer and description of what the peer was like, 4) recollection and discussion of a recent positive interaction with a peer and description of what the peer was like (see Appendix A). Conversation prompts were selected in an attempt to elicit conversation and personality talk in likely event scenarios.

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Measures Completed by Parent

The following measures were administered via Qualtrics survey interface after the dyad completed the parent-child conversation. The mother was able to complete this component at her convenience by means of an emailed survey link. Most mothers completed the survey within 5 days of the parent-child conversation (always post conversation).

Test of Personal Intelligence.

The Test of Personal Intelligence Mini-12 (TOPI MINI-12) is an ability-based measure that takes approximately fifteen minutes to complete. Mothers completed the TOPI MINI-12 in the absence of a researcher, often while the researcher was completing tasks with the child. The TOPI MINI-12 consists of 12 multiple choice questions. These items measure personal intelligence across four sections: "1) recognizing information, 2) forming models, 3) guiding choices, and 4) systematizing plans" (Mayer, Panter, & Caruso, 2017a, p. 301). Each multiple choice item has a single correct answer among four choices. This test has been established as a reliable and valid measure of personal intelligence ability (Mayer, Panter, & Caruso, 2014, 2017b).

Demographic questionnaire.

Relevant demographics were collected for both mother and child. Of note, mothers' level of education, ethnicity, income, and children's birth order were included in demographic collection (see Table 1 and Table 2).

Child's Social Competence Behavior Evaluation.

The Child's Social Competence Behavior Evaluation (CSCBE) was adapted from Song and Wang (2013), LaFreniere & Dumas (1996), & Rudolph, Hammen, and Burge (1995). This measure is designed to evaluate children's social competence and social behavior with peers as

rated by parents. The questionnaire consists of 20 items, each rated on a 5-point Likert-type scale that reflects how frequently the item is true about a child's behavior (e.g., always true versus never true). This measure was adapted by eliminating the additional questionnaire typically given to children as this aspect of the measure is typically administered in a school setting. Furthermore, the questionnaire was not administered to children's teachers as they were not included in the study design and no relevant findings resulted from administration of measure to teachers in previous research (Song & Wang, 2013). Furthermore, the original CSCBE was unable to be obtained in a timely manner for use during study one necessitating the version used in the study with Likert scale labels developed by the researcher (see Appendix B).

Measures Completed by Child

Personality Scenarios Task.

The Personality Scenarios Task (PST) was developed as an independent, novel measure based on Wang and Leichtman's (2000) story beginning task. The goal of this task was to reflect children's ability to detect, describe and predict another's behavior from personality-relevant information about the actions of other people. Personality traits were selected from opposing trait pairs presented in Alvarez et al. (2001). The researcher administered the task to each child individually, and it took children approximately 15 minutes to complete.

At the beginning of the PST, the researcher talked with the child to establish rapport (as in Li, 2004 and Wang & Leichtman, 2000). After a level of comfort was established, the researcher said, "You and I are going to play a fun game. I'm going to tell you some things about a person I know. Then we are going to hear a story about that person and you'll get to help me finish the story, okay?" After the child's assent, to prepare the child for the task s/he was presented with a sample story.

Researcher said "This is a picture of Steven (show boy picture).

Here are some things I know about Steven

He likes to keep his bedroom very neat.

He makes up his bed every morning.

He always puts away his toys.

Here is a story about Steven:

He eats his breakfast in the morning at the kitchen table (show picture of cereal). He

finishes the whole bowl of cereal (remove pictures). What does Steven do next? Finish

the story."

The researcher said, "Here, I'll show you how I would do one, okay?" The researcher

then modeled ways to complete the story:

"I think Steven would put his dishes in the sink and put the cereal away because he

always puts away his things."

The researcher then modeled possible answers to a trait question:

Researcher said "Now we are finished the story. Tell me, what is Stephen like? Can you

tell me anything else about what kind of person Stephen is?

In this case, I think Steven is very neat and organized."

The child was then presented with eight vignettes (one at a time) with relevant behavior

information about a single trait and a corresponding story (see Appendix C). With each vignette,

the child was presented with a relevant pictorial illustration of both the primary actor and an

object in the story being told. Before the follow-up questions were asked, the pictures were

moved out of the child's sight. Previous research on children's storytelling has established that

the absence of picture prompts allows for children's oral storytelling to be more fluent and to

reflect a more sophisticated story schema (Spinillo & Pinto, 1994; Wellhousen, 1993). Standard prompts (as established by Li, 2004 and Wang & Leichtman, 2000) were used to elicit complete story endings including: "It's a really neat story. Can you tell me some more?" and "Then what happens?" These prompts were used until the child indicated that the story was over, either by verbal acknowledgement or physical gesture (e.g., shrugging shoulders). After the child completed the story, the researcher asked, "What words can you use to describe (character name)? What is (character name) like?" (the personality trait identification questions).

Analysis

Conversations

Mother-child conversations were transcribed verbatim for coding and analysis purposes. As adapted from Song and Wang (2013), conversations were coded for: 1) elaborations, 2) evaluations, 3) emotion talk, 4) personality trait talk, and 5) physical descriptives (see Table 3). Personality trait talk and physical descriptives coding were not used in Song and Wang (2013).

1) **Elaborations**. – Mothers' and children's speech was coded for elaborations. The unit of coding was propositions. A proposition is defined as a subject-verb construction (e.g., 'He hit me'; Fivush et al., 1995). Elaborations included "times when mothers/children introduced a topic for discussion, moved the conversation to a new aspect or event, or added information regarding a particular aspect" (Song & Wang, 2013, p. 285). Total elaborations were tallied separately for mother's speech and child's speech.

2) **Evaluations**. – Mothers' and children's speech was also coded for evaluations. Mothers' evaluations consisted of "providing evaluative feedback on children's/mothers' previous statement" (Song & Wang, 2013, p. 285). Children's evaluations were characterized as children "giving feedback on mothers' previous statement" (Song & Wang, 2013. p.285).

Evaluations are indications of acknowledging another's contribution to the conversation and could affirm or deny a previous statement's claims (e.g., Child: "And then we went to the zoo?" Mother: "No, we didn't, we went to the aquarium, remember?). Total evaluations were tallied for both mothers' and children's speech.

2) **Emotion talk**. – As in Fivush (1991) emotion terms were coded in mothers' and children's speech. Emotion terms included those that referred to emotional states directly and emotional behaviors (e.g., crying). Additionally, emotion terms included subjective judgments about the child or others (e.g., he was mean at recess, you were nice during snack time) (Song & Wang, 2013). Total emotion talk terms were tallied for both mothers' and children's speech.

3) **Personality trait talk.** – Personality trait terms were coded in mothers' and children's speech. Trait terms included those that referred to trait-relevant behavior and overall personality characteristics (e.g., He always shares his toys; you are a talkative boy). Potential trait-terms were first mined from studies addressing personality traits with similarly aged children (Alvarez et al., 2001; Boseovski et al. 2013; Boseovski et al., 2009; Heyman & Gelman, 1998, 2000). Other trait relevant terms were added upon agreement of coders and/or if met the aforementioned criteria. Total trait terms were tallied for both mothers' and children's speech.

4) **Physical descriptives talk.** – Physical description terms were coded in mothers' and children's speech. Physical descriptives include those that refer to physicality of discussed persons (hair color, height, eye color, etc.). This code was included to reflect other ways of describing individuals and social interactions that are not included in personality trait talk and emotion talk codes.

One researcher coded all of the data. Twenty percent of the data was independently coded by a trained research assistant in order to assess reliability. The assistant was blind to hypotheses

and parent TOPI MINI-12 scores and was not involved in other study aspects. Reliability

analyses on conversation coding revealed high interrater reliability between the two coders (α =

.94). Given the novel nature of the personality talk measure, agreement between coders is

reported separately: agreement was 97% for mothers' personality talk and 99% for children's

personality talk. Disagreements were resolved by discussion.

Table 3. Mother-child conversations coding schema.

Code name	Definition of code	Example
Elaboration	Coded by proposition. Elaborations include times when mothers or children introduced a topic for discussion, moved the conversation to a new aspect or event, or added information regarding a particular aspect.	Mother: "And you put on your jacket to go outside." Child: "My red and blue jacket and I played on the swings."
Evaluation	Coded by proposition. Evaluations included providing evaluative feedback on children's/mothers' previous statement. Evaluations are indications of acknowledging another's contribution to the conversation and could affirm or deny a previous statement's claims.	Child: "And then we went to the zoo?" Mother: "No, we didn't, we went to the aquarium remember?").
Personality Talk	Coded by term. Trait terms included those that referred to trait-relevant behavior and overall personality characteristics. Terms must refer to global characteristics not one time instances of behavior.	She always shares her toys. You are a talkative boy.
Emotion Talk	Coded by term. Emotion terms include those that refer to emotional states directly and emotional behaviors. Additionally, emotion terms include subjective judgments about the child or emotionally charged behavior.	He was mean at recess. She was crying hard.
Physical Descriptives Talk	Coded by term. Physical descriptives include those that refer to physicality of discussed subjects.	Uncle John is taller than Aunt Cathy. You have blonde hair.

Note: All codes applied to both mothers' and children's speech.

Personality Scenarios Task

Responses to story completion questions were scored as 2 for correct with personality trait taken into account, 1 for correct with personality trait not taken into account, and 0 for incorrect/off topic response. Responses to personality trait identification questions were scored as 2 for correct with appropriate trait term, 1 for description of behavior with no trait terms, and 0 for incorrect or off topic responses.

Test of Personal Intelligence MINI - 12

Each multiple-choice item has a single correct answer among four choices. Correct answers received a score of 1 and incorrect answers received a score of 0. A perfect score is a 12 on this measure.

Demographic Questionnaire

Demographics were recorded for each mother and child participant and tallied.

Social Competence Behavior Evaluation

Likert scales were tallied for each item. Items 1, 5, 8, 14, and 19 were removed from the analysis as they reflected depression and anxiety measures embedded in the scale. Items 4, 6, 9, 11, 16, and 18 were reverse scored. Higher scores on the SCBE therefore reflected higher levels of social competence. A SCBE prosocial score was totaled (out of 75 possible points).

From this coding, the following composite variables were obtained: TOPI MINI-12 score, story completion score (PST Part A), personality trait attribution score (PST Part B), Personality Scenarios Task Total score (PST Part A plus PST Part B), Social Competence Behavior Evaluations Prosocial Score, mothers' elaborations, mothers' evaluations, mothers' emotion talk, mothers' personality talk, mothers' physical descriptives, children's elaboration,

children's evaluations, children's emotion talk, children's personality talk, children's physical descriptives, conversation word count, and children's age (in months).

CHAPTER IV

STUDY 1 RESULTS

Correlational analyses were used to evaluate the relationships among the variables. In the following section, results are presented in order of the hypotheses. First, variations in mothers' reminiscing style and relationships among mothers' and children's conversational variables are presented. This is followed by relationships between mothers' measures and conversation variables. Next, findings regarding the tasks themselves are presented. Finally, partial Pearson correlations and Spearman's Rho correlations are offered addressing specific findings from initial analyses. Descriptive statistics for all major variables are reported in Table 4.

Mothers' conversation variables were evaluated for their relationship with other conversation variables (see Table 5). The mother-child conversation task consisted of four conversation topics in a single conversation. Major analyses were conducted on the combined total of all topics giving one composite variable for each conversation (e.g., mother elaborations for topics 1, 2, 3, and 4, totaled and hereby reported as mother elaborations). Mothers who used more elaborations in their talk also used more evaluations ($r(48) = 0.43$, $p < .05$). Mothers who used more elaborations also used more emotion talk and personality talk ($r(48) = 0.62$, $p < .001$; $r(48) = 0.55$, $p < .001$). Mothers' evaluations were predictive of mothers' emotion talk and personality talk ($r(48) = 0.50$, $p < .001$; $r(48) = 0.57$, $p < .001$). Mothers' emotion talk was also correlated with mothers' personality talk ($r(48) = 0.60$, $p < .001$).

Mothers' conversational variables were also related to children's conversational variables. Mothers' elaborations predicted children's elaborations and evaluations ($r(48) = 0.67$, $p < .001$; $r(48) = 0.35$, $p < .05$). Mothers' elaborations correlated with emotion talk and personality talk ($r(48) = 0.40$, $p < .05$; $r(48) = 0.51$, $p < .01$). Similarly, mothers' evaluations predicted children's evaluations and personality talk ($r(48) = 0.88$, $p < .001$; $r(48) = 0.42$, $p < .05$). Mothers' emotion talk predicted children's conversation variables: elaborations, evaluations, emotion talk, personality talk ($r(48) = 0.48$, $p < .001$; $r(48) = 0.45$, $p < .001$; $r(48) = 0.59$, $p < .001$; $r(48) = 0.39$, $p < .05$). Mother's personality talk was correlated with children's conversation variables, including children's elaborations, evaluations, emotion talk and personality talk ($r(48) = 0.36$, $p < .05$; $r(48) = 0.45$, $p < .001$; $r(48) = 0.38$, $p < .05$; $r(48) = 0.70$, $p < .05$). Finally, mother's physical descriptives predicted children's physical descriptives ($r(48) = 0.51$, $p < .001$).

The Test of Personal Intelligence Mini-12 (TOPI MINI-12) scores of the mother were related to mothers' and children's conversation variables in several meaningful ways. Mothers' TOPI MINI-12 scores were predictive of their emotion talk and personality talk ($r(48) = 0.38$, $p < .05$; $r(48) = 0.37$, $p < .05$). Furthermore, mothers' TOPI MINI-12 scores correlated with children's emotion talk and personality talk ($r(48) = 0.31$, $p < .05$; $r(48) = 0.28$, $p < .05$).

Descriptive statistics indicated that in line with predictions (see Table 4), there were differences among children in scores on the Personality Scenarios Task (PST) and the Social Competence Behavior Evaluation (SCBE). Within the PST scores part a (story completion) and part b (personality trait labeling) were highly correlated with each other and with the PST total score ($r(48) = 0.88$, $p < .001$; $r(48) = 0.96$, $p < .001$). Scores on the PST and SCBE were significantly correlated ($r(48) = 0.32$, $p < .05$).

Table 4. Descriptive statistics for Study 1 variables.

		M	SD	Range (N)
Elaborations				
	Mother	83.4	46.4	7-198 (50)
	Child	73.7	35.8	17-188 (50)
Evaluations				
	Mother	24.6	25.1	0-117 (50)
	Child	12.2	14.5	0-64 (50)
Emotion Talk				
	Mother	4.4	4.1	0-17 (50)
	Child	4.3	3.8	0-16 (50)
Personality Talk				
	Mother	5.3	6	0-30 (50)
	Child	5.5	5.1	0-19 (50)
Physical Descriptives				
	Mother	2.1	3.6	0-23 (50)
	Child	4.4	4.5	0-19 (50)
TOPI MINI-12 Score				
	Mother	10.4	1.8	4-12 (50)
PST Score				
	Child	25.4	5.3	6-32 (50)
SCBE Prosocial Score				
	Child	28.0	5.4	19-43 (50)

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Table 5. Pearson correlations for Study 1 variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Mother Elaborations	-															
2 Mother Evaluations	0.43*	-														
3 Mother Emotion Talk	0.62**	0.50**	-													
4 Mother Personality Talk	0.55**	0.57**	0.60**	-												
5 Mother Physical Descriptives	0.17	0.01	-0.01	-0.01	-											
6 Child Age (in months)	0.04	-0.22	-0.09	0.18	0.02	-										
7 Child Elaborations	0.67**	0.21	0.48**	0.36*	0.13	0.19	-									
8 Child Evaluations	0.35*	0.88**	0.45**	0.45**	-0.09	-0.13	0.21	-								
9 Child Emotion Talk	0.40*	0.26	0.59**	0.38*	-0.01	-0.01	0.48**	0.29*	-							
10 Child Personality Talk	0.51*	0.42*	0.39*	0.70**	-0.02	0.37*	0.41*	0.37*	0.50**	-						
11 Child Physical descriptives	0.09	0.23	0.02	0.51**	0.51**	-0.09	-0.02	0.17	0.14	0.14	-					
12 TOPI Score	0.19	0.11	0.38**	0.37*	0.13	0.02	0.14	0.12	0.31*	0.28*	0.40	-				
13 PST Part A	0.39*	0.28	0.35*	0.31*	0.14	0.42*	0.41*	0.28*	0.26	0.41*	0.01	0.17	-			
14 PST Part B	0.30*	0.23	0.27	0.27	-0.03	0.51**	0.40*	0.23	0.18	0.40*	-0.09	0.10	0.88**	-		
15 PST Total	0.39*	0.27	0.35*	0.32*	0.07	0.50**	0.45**	0.28*	0.25	0.45**	-0.02	0.14	0.96**	0.96**	-	
16 SCBE Prosocial Total	0.17	0.56**	0.23	0.11	-0.13	-0.22	0.01	0.54**	0.07	0.12	0.18	0.10	0.41*	0.29*	0.32*	-
17 Conversation Word Count	0.77**	0.30*	0.47**	0.35*	0.27	0.08	0.72**	0.30*	0.32*	0.30*	0.03	0.10	0.34*	0.26	0.35*	0.03

Note: * p < .05; ** p < .001

Analyses Controlling for Children's Age

Initial analyses indicated that children's age was correlated with their personality talk ($r(48) = 0.37$, $p < .05$) and their performance on the Personality Scenarios Task (PSTA, $r(48) = 0.42$, $p < .05$; PSTB, $r(48) = 0.51$, $p < .001$; PST total, $r(48) = 0.50$, $p < .001$). Thus, partial correlations controlling for children's age were conducted (see Table 5). Mothers' personality talk was still significantly correlated with children's conversation variables, including children's elaborations, evaluations, emotion talk and personality talk ($r(48) = 0.54$, $p < .001$; $r(48) = 0.55$, $p < .001$; $r(48) = 0.46$, $p < .001$; $r(48) = 0.69$, $p < .001$). Additionally, mothers' TOPI MINI-12 scores were still significantly predictive of children's personality talk ($r(48) = 0.31$, $p < .05$).

Analyses Controlling for Word Count

Conversation word count was significantly correlated with mothers' conversation variables and children's conversation variables. With age partialled out, mothers' elaborations, evaluations, emotion talk, and personality talk were significantly correlated with conversation word count $r(48) = 0.77$, $p < .001$; $r(48) = 0.30$, $p < .05$; $r(48) = 0.47$, $p < .001$; $r(48) = 0.35$, $p < .05$). Likewise, children's elaborations, evaluations, emotion talk, and personality talk were significantly correlated with conversation word count ($r(48) = 0.72$, $p < .001$; $r(48) = 0.30$, $p < .05$; $r(48) = 0.32$, $p < .05$; $r(48) = 0.30$, $p < .05$). Thus, the pattern of correlations was not solely a function of children's age and was still robust with age partialled out.

Partial correlations controlling for conversation word count were also conducted (see Table 6). Mothers' elaborations were significantly correlated with mothers' evaluations, emotion talk, and personality talk ($r(48) = 0.32$, $p < .05$; $r(48) = 0.45$, $p < .001$; $r(48) = 0.47$, $p < .001$). Mothers' evaluations correlated significantly with mothers' emotion talk and personality

talk ($r(48) = 0.42$, $p < .001$; $r(48) = 0.52$, $p < .001$). Mothers' emotion and personality talk were also significantly correlated ($r(48) = 0.52$, $p < .001$). Mothers' conversation variables were also still significantly correlated with children's conversation variables. Mothers' elaborations were significantly correlated with children's evaluations and personality talk ($r(48) = 0.28$, $p < .05$; $r(48) = 0.47$, $p < .001$). Mothers' evaluations correlated significantly with children's evaluations and personality talk ($r(48) = 0.87$, $p < .001$; $r(48) = 0.36$, $p < .05$). Mothers' emotion talk was also predictive of children's emotion and personality talk ($r(48) = 0.53$, $p < .001$; $r(48) = 0.30$, $p < .05$). Mothers' personality talk was still significantly correlated with children's personality talk ($r(48) = 0.66$, $p < .001$). These findings indicate the even when individual differences in conversation length are taken into account, there is still a significant relationship between conversation variables.

Table 6. Pearson correlations for Study 1 variables controlling for child's age.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Mother Elaborations	-															
2 Mother Evaluations	0.45**	-														
3 Mother Emotion Talk	0.62**	0.49**	-													
4 Mother Personality Talk	0.56**	0.63**	0.63**	-												
5 Mother Physical Descriptives	0.16	0.01	-0.01	-0.01	-											
6 Child Age (in months)	-	-	-	-	-	-										
7 Child Elaborations	0.68**	0.26	0.51**	0.34*	0.13	-	-									
8 Child Evaluations	0.36*	0.88**	0.44**	0.49**	-0.09	-	0.25	-								
9 Child Emotion Talk	0.40*	0.27	0.59**	0.39**	-0.01	-	0.49**	0.29*	-							
10 Child Personality Talk	0.54**	0.55**	0.46**	0.69**	-0.03	-	0.37*	0.45**	0.53**	-						
11 Child Physical descriptives	0.09	0.22	0.01	0.11	0.52**	-	-0.01	-0.09	0.07	0.19	-					
12 TOPI Score	0.19	0.12	0.38*	0.38*	0.13	-	0.14	0.13	0.31*	0.29*	0.04	-				
13 PST Part A	0.41*	0.42*	0.43*	0.26	0.15	-	0.37*	0.37*	0.29*	0.30*	0.05	0.17	-			
14 PST Part B	0.33*	0.41*	0.37*	0.21	-0.05	-	0.36*	0.35*	0.20	0.26	-0.05	0.11	0.85**	-		
15 PST Total	0.43**	0.45**	0.46**	0.27	0.07	-	0.42*	0.40*	0.29*	0.33*	0.02	0.15	0.95**	0.95**	-	
16 SCBE Prosocial Total	0.18	0.54**	0.21	0.15	-0.13	-	0.06	0.52**	0.07	0.23	0.16	0.11	0.57**	0.49**	0.51**	-
17 Conversation Word Count	0.77**	0.33*	0.48**	0.34*	0.27	-	-0.72**	0.31*	0.32*	0.29*	0.04	0.10	0.34*	0.26	0.36*	0.16

Note: * p < .05; **p < .001

Table 7. Pearson correlations for Study 1 variables controlling for conversation word count.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Mother Elaborations	-															
2 Mother Evaluations	0.32*	-														
3 Mother Emotion Talk	0.45**	0.42**	-													
4 Mother Personality Talk	0.47**	0.52**	0.52**	-												
5 Mother Physical Descriptives	-0.07	-0.08	-0.16	-0.11	-											
6 Child Age (in months)	-0.04	-0.26	-0.15	0.16	-0.01	-										
7 Child Elaborations	0.28*	-0.02	0.23	0.17	-0.10	0.19	-									
8 Child Evaluations	0.19	0.87**	0.37**	0.39*	-0.19	-0.16	0.01	-								
9 Child Emotion Talk	0.25	0.18	0.53**	0.30*	-0.10	-0.03	0.38*	0.22	-							
10 Child Personality Talk	0.47**	0.36*	0.30*	0.66**	-0.11	0.37**	0.29*	0.31*	0.44**	-						
11 Child Physical descriptives	0.10	0.23	0.01	0.09	0.52**	-0.09	-0.07	0.17	0.07	0.14	-					
12 TOPI Score	0.18	0.08	0.37*	0.36*	0.10	0.01	0.10	0.10	0.29*	0.26	0.03	-				
13 PST Part A	0.22	0.20	0.23	0.22	0.06	0.42*	0.25	0.20	0.17	0.35*	-0.01	0.14	-			
14 PST Part B	0.16	0.17	0.17	0.20	-0.11	0.51**	0.32*	0.17	0.10	0.35*	-0.10	0.08	0.87**	-		
15 PST Total	0.20	0.19	0.22	0.23	-0.03	0.50**	0.31*	0.20	0.16	0.39*	-0.04	0.12	0.95**	0.96**	-	
16 SCBE Prosocial Total	0.23	0.58**	0.24	0.10	-0.14	-0.23	-0.02	0.55**	0.06	0.12	0.18	0.10	0.43*	0.30*	0.33*	-
17 Conversation Word Count	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: * p < .05; **p < .001

Non-Parametric Correlational Analyses

Non-normal distributions were observed for mothers' personality talk, children's personality talk, mother's emotion talk, and children's emotion talk variables. Each of these variables was skewed reflecting the fact that some mother-child dyads failed to use personality or emotion talk (or both) in their conversations. Given these non-normal distributions, non-parametric Spearman's Rho correlations were obtained for all essential analyses. The pattern of significant findings remained the same (see Table 8).

Table 8. Spearman's Rho correlations for Study 1 variables.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1 Mother Elaborations	-															
2 Mother Evaluations	0.31*	-														
3 Mother Emotion Talk	0.65**	0.26	-													
4 Mother Personality Talk	0.60**	0.29*	0.47**	-												
5 Mother Physical Descriptives	0.28*	0.05	0.09	0.06	-											
6 Child Age (in months)	0.06	-0.38*	-0.12	0.19	0.22	-										
7 Child Elaborations	0.68**	0.23	0.48**	0.33*	0.22	0.16	-									
8 Child Evaluations	0.16	0.85**	0.31*	0.24	-0.10	-0.32	0.16	-								
9 Child Emotion Talk	0.49**	0.14	0.65**	0.33*	0.12	-0.03	0.51**	0.31*	-							
10 Child Personality Talk	0.58**	0.25	0.39*	0.74**	0.06	0.39*	0.43*	0.24	0.33*	-						
11 Child Physical descriptives	0.02	0.13	0.01	0.06	0.65**	-0.04	-0.02	-0.10	0.12	0.02	-					
12 TOPI Score	0.22	0.05	0.37**	0.49**	0.12	0.01	0.18	0.05	0.24	0.33*	0.05	-				
13 PST Part A	0.43*	0.17	0.32*	0.35*	0.24	0.38*	0.44**	0.12	0.30*	0.51**	0.09	0.15	-			
14 PST Part B	0.31*	0.08	0.23	0.24	0.40	0.50**	0.40*	0.06	0.18	0.42*	-0.09	0.12	0.76**	-		
15 PST Total	0.43*	0.11	0.35*	0.34*	0.14	0.51**	0.50**	0.11	0.32*	0.55**	-0.01	0.17	0.87**	0.95**	-	
16 SCBE Prosocial Total	0.14	0.48**	0.26	0.90	0.06	-0.16	0.01	0.41*	0.13	0.13	0.20	0.05	0.34*	0.21	0.21	-
17 Conversation Word Count	0.76**	0.26	0.52**	0.41*	0.20	0.13	0.74**	0.21	0.36*	0.46**	0.02	0.09	0.44**	0.33*	0.44**	0.07

Note: * p < .05; **p < .001

CHAPTER V

STUDY 2 JUSTIFICATION

Study 1 investigated an unexplored aspect of parent-child conversation, specifically the way parents talk with their children about other people and the effect this has on children's understanding of personality. By examining mother-child dyads, this study offered a unique perspective, relating social development directly to maternal reminiscence style and implicit personal intelligence abilities. The conveyance of socially relevant information regarding personality and emotion from mother to child is evident in relationships found between these variables. Mothers varied in the degree to which they engaged with their children in rich discussions about people. Mothers who were high in elaboration also tended to be high in evaluations and talk about emotion and personality. In turn, children of mothers who were higher in these elements of speech also tended to use more talk about personality traits and emotions. Mothers higher in personal intelligence, as measured by the TOPI MINI-12, used more personality trait and emotion talk when speaking with their children than mothers lower in personal intelligence. These findings suggest that stable individual differences in mothers' reasoning about personality-related concepts predict how they converse about personality and emotion with their children. These findings require replication and extension to further elucidate the nature of these relationships.

Given the promising results of Study 1, Study 2 focuses on replication and extension of these findings. Participants completed a mother-child conversation, the Test of Personal Intelligence Mini - 12 and Demographic Questionnaire, identical to measures in Study 1. The Personality Scenarios Task and Social Competence Behavior Evaluation were eliminated from Study 2 in order to focus on the measures of central importance in a larger sample.

Of specific interest was the potential difference in mother-child conversation apparent between children of different ages. Study 2 included mothers of young children (ages 4 and 5) and older children (ages 7 and 8), in order to explore the relationship between age and conversation variables. Prior studies using descriptive vignettes and story completion tasks (Alvarez et al., 2001; Boseovski et al., 2013) suggest that differences in personality talk should be apparent between younger children and older children. These differences were apparent in the few younger children included as participants in preliminary pilot studies prior to Study 1. These younger children used personality descriptions less frequently than did their older counterparts, but do other relationships between mother and children's conversation variables follow suit? Including both older and younger participants in Study 2 allowed us to test whether the findings of Study 1 can be replicated, and whether they extend to younger children. Children ages 4-5 years were selected for the younger cohort given research findings indicating their ability to discuss personality traits and behaviors (Alvarez et al., 2001; Kalish, 2002).

CHAPTER VI

STUDY 2 GOALS AND HYPOTHESES

The purposes of the study were to: a) examine individual differences in mother-child conversations about others, b) explicate the relationship between mothers' personal intelligence ability and mothers' reminiscence style and children's reminiscence style, and c) explore the relationship between parent conversation variables, child conversation variables and mothers' personal intelligence in two age groups.

Given these purposes, specific predictions regarding potential findings are as follows:

a) There will be differing styles of reminiscing about others between mother-child dyads (as in the memory literature, high versus low elaborative mothers). Parents who are high in personal intelligence ability will have more personally rich ways of talking about and explaining the behaviors of others and the social world than those who are low in personal intelligence ability.

b) Mothers who are high in Personal Intelligence abilities (as measured by TOPI MINI -12) will use more personality talk with their children and have children who likewise use more personality talk.

c) The aforementioned relationships will be evident in children of varying ages. Specifically, children age 4-5 and children age 7-8 will have the same

relationships between parent conversation variables, child conversation variables, and mothers' personal intelligence.

CHAPTER VII

STUDY 2 METHOD

Participants

Participants were 85 mother-child dyads recruited from local early childhood education programs, mothers' groups, and libraries. Dyads were recruited based on child age and are herein organized into a younger cohort (children age 4-5 years) and older cohort (children age 7-8 years).

In the younger cohort, participants included 30 female and 12 male children (mean age 58.57 months, SD = 6.42, range 48-71 months) enrolled in preschool/pre-k, kindergarten, or home-based care. Mothers were Caucasian (86%) and native English speakers (95%). Eighty-six percent of mothers had a college or graduate degree. Most mothers were employed in some capacity (88%). Children were of varying birth order with most having at least one sibling (86%). See Table 9 and Table 10 for complete demographic details.

In the older cohort, participants included 20 female and 23 male children (mean age 96.47 months, SD = 7.60, range 83-109 months) enrolled in first, second, or third grade (or home school equivalent). Mothers were Caucasian (87%) and native English speakers (93%). Seventy-five percent of mothers had a college or graduate degree. Many mothers were employed in some capacity (65%). Children were of varying birth order with most having at least one sibling (93%). See Table 11 and Table 12 for complete demographic details.

Table 9. Demographic information for mothers in Study 2 younger cohort.

	Number of Participants	Percent
N=	42	100
Child's Gender		
Female	30	71
Male	12	29
Child's Age (in months)		
40-49	6	14
50-59	21	50
60-69	13	31
70-79	2	5
Child's Ethnicity		
Asian	0	0
Black	0	0
Hispanic	3	7
Indian	1	2
White/Non-hispanic	36	86
Other	2	5
Child's Grade in School		
Home-based care	14	33
Preschool/Pre-K	19	45
Kindergarten	10	22
Child's Birth Order		
Only child	6	14
First born	19	45
Second born	10	24
Third born	5	13
Fourth Born	1	2
Other	1	2

Table 10. Demographic information for children in Study 2 younger cohort.

	Number of Participants	Percent
N=	42	100
Child's Gender		
Female	30	71
Male	12	29
Child's Age (in months)		
40-49	6	14
50-59	21	50
60-69	13	31
70-79	2	5
Child's Ethnicity		
Asian	0	0
Black	0	0
Hispanic	3	7
Indian	1	2
White/Non-hispanic	36	86
Other	2	5
Child's Grade in School		
Home-based care	14	33
Preschool/Pre-K	19	45
Kindergarten	10	22
Child's Birth Order		
Only child	6	14
First born	19	45
Second born	10	24
Third born	5	13
Fourth Born	1	2
Other	1	2

Table 11. Demographic information for mothers in Study 2 older cohort.

	Number of Participants	Percent
N=	43	100
Mother's Age (in years)		
20 or younger	2	5
21-29	0	0
30-39	26	59
40-49	12	29
50-59	2	5
60 or older	1	2
Mother's Ethnicity		
Asian	2	5
Black	1	2
Hispanic	1	2
Pacific Islander	1	2
White/Non-hispanic	37	87
Other	1	2
Mother's Education		
Less than high school	1	2
High school	2	5
Some college	7	16
Associate Degree	6	14
Bachelors Degree	13	31
Graduate Degree	9	21
Post Graduate Degree	4	9
Other	1	2
Mother's Employment		
Not employed	6	14
Full-time	15	35
Part-time	13	30
Retired	2	5
Stay at home mom	6	14
Other	1	2

Table 11. Demographic information for children in Study 2 older cohort.

	Number of Participants	Percent
N=	43	100
Child's Gender		
Female	20	47
Male	23	53
Child's Age (in months)		
80-89	9	20
90-99	17	40
100-109	17	40
Child's Ethnicity		
Asian	2	5
Black	1	2
Hispanic	1	2
Pacific Islander	1	2
White/Non-hispanic	37	87
Other	1	2
Child's Grade in School		
Home School	12	28
1	9	20
2	16	38
3	6	14
Child's Birth Order		
Only child	3	7
First born	14	32
Second born	12	28
Third born	8	19
Fourth Born	3	7
Other	3	7

Procedure

The dyads were given an audio recorder and instructions to record a conversation in a time and place that was comfortable them. Audio-recorders were either sent home with the dyad from an early childhood education program or personally delivered by the researcher. The researcher then collected the recorder (approximately one week later) and emailed access to the online-survey component to the mother. Upon completion of the study participating dyads were compensated twenty dollars.

Parent-Child Measure

Mother-child conversations about others. This measure was the same as Study 1. For a sample of the mother-child conversation task, see Appendix A.

Measures completed by parent

The following measures were administered via Qualtrics survey interface after the dyad completed the parent-child conversation. The mother was able to complete this component at her convenience by means of an emailed survey link. Most mothers completed the survey within 5 days of the parent-child conversation (always post conversation).

Test of Personal Intelligence. This measure was the same as Study 1.

Demographic questionnaire. This measure was the same as Study 1.

Analysis

Measures Completed by Mother and Child Together

Mother-child conversations about personality/behavior.

Mother-child conversations were transcribed verbatim for coding and analysis purposes. The coding used was the same as Study 1. For a coding scheme chart, see Table 3.

One researcher coded all of the data. Twenty-five percent of the data was independently coded by a trained research assistant in order to assess reliability. The assistant was blind to hypotheses and parent TOPI MINI-12 scores and was not involved in other study aspects. Reliability analyses on conversation coding revealed high interrater reliability between the two coders (α = .82). Given the novel nature of the personality talk measure, agreement between coders is reported separately: agreement between coders was 77% for mothers' personality talk and 69% for children's personality talk. Disagreements were resolved by discussion.

Measures Completed by Parent

Test of Personal Intelligence Mini-12.

This measure was the same as Study 1.

Demographic questionnaire.

This measure was the same as Study 1.

The following variables were included in the analyses that follow: mothers' personal intelligence score, mothers' elaborations, children's elaborations, mothers' evaluations, children's evaluations, mothers' emotion talk, children's emotion talk, mothers' personality trait talk, children's personality trait talk, mothers' physical descriptives, children's physical descriptives, conversation word count, children's age (in months) and demographic information.

CHAPTER VIII

STUDY 2 RESULTS

Correlational analyses were used to evaluate the relationships among the variables. In the

ollowing section, results are presented in order of the hypotheses and separated by cohort

(younger or older). First, variations in mothers' reminiscing style and relationships among

mothers' and children's conversational variables are presented. The mother-child conversation

task consisted of four distinct topics in a single conversation. Major analyses were conducted on

the combined total of all topics giving one composite variable for each conversation (e.g., mother

elaborations for topics 1, 2, 3, and 4, combined). This is followed by relationships between

mothers' measures and conversation variables. Finally, partial Pearson correlations and

Spearman's Rho correlations are used to address specific findings from initial analyses.

Descriptive statistics for all major variables are reported in Table 13 and Table 14.

Younger Cohort

Mothers' conversation variables were evaluated for their relationship with other

conversation variables (see Table 15). Mothers who used more elaborations in their talk also

used more evaluations ($r(40) = 0.83, p < .001$). Mothers who used more elaborations also used

more emotion talk and personality talk ($r(40) = 0.46, p < .001; r(40) = 0.60, p < .001$). Mothers'

evaluations were related to mothers' emotion talk, personality talk and physical descriptives

($r(40) = 0.65$, $p < .05$; $r(40) = 0.42$, $p < .05$; $r(40) = 0.52$, $p < .001$). Mothers' emotion talk was also correlated with mothers' personality talk ($r(40) = 0.45$, $p < .05$).

Mothers' conversational variables were also related to children's conversational variables. Mothers' elaborations predicted children's elaborations and evaluations ($r(40) = 0.76$, $p < .001$; $r(40) = 0.79$, $p < .001$). Mothers' elaborations correlated with children's personality talk ($r(40) = 0.57$, $p < .001$). Similarly, mothers' evaluations predicted children's elaborations and evaluations ($r(40) = 0.68$, $p < .001$; $r(40) = 0.64$, $p < .001$). Mother's evaluations also correlated with children's emotion talk, personality talk, and physical descriptives ($r(40) = 0.34$, $p < .05$; $r(40) = 0.40$, $p < .05$; $r(40) = 0.36$, $p < .05$). Mothers' emotion talk was related to children's conversation variables: elaborations, emotion talk, and personality talk ($r(40) = 0.46$, $p < .05$; $r(40) = 0.74$, $p < .001$; $r(48) = 0.59$, $p < .001$; $r(48) = 0.37$, $p < .05$). Mother's personality talk was correlated with children's conversation variables, including children's elaborations, evaluations, and personality talk ($r(40) = 0.44$, $p < .05$; $r(40) = 0.53$, $p < .001$; $r(40) = 0.84$, $p < .001$). Finally, mother's physical descriptives predicted children's physical descriptives ($r(40) = 0.55$, $p < .001$).

Mothers' Test of Personal Intelligence Mini-12 (TOPI MINI-12) scores of the mother were related to mothers' and children's conversation variables in several meaningful ways. Mothers' TOPI MINI-12 scores were predictive of their own emotion talk and personality talk ($r(40) = 0.31$, $p < .05$; $r(40) = 0.35$, $p < .05$). Additionally, mothers' TOPI MINI-12 scores correlated with children's personality talk ($r(48) = 0.33$, $p < .05$).

Initial analyses indicated that children's age was correlated with multiple variables in the younger cohort including mother evaluations, mother emotion talk, child elaborations and child personality talk ($r(40) = 0.39$, $p < .05$; $r(40) = 0.31$, $p < .05$; $r(40) = 0.45$, $p < .05$; $r(40) = 0.32$, p

< .05). Thus, partial correlations controlling for children's age were conducted (see Table 17). Mother's personality talk was still significantly correlated with children's conversation variables, including children's elaborations, evaluations, and personality talk ($r(40) = 0.37$, $p < .05$; $r(40) = 0.51$, $p < .001$; $r(40) = 0.83$, $p < .001$). Mothers' TOPI MINI-12 scores were still significantly predictive of children's personality talk ($r(40) = 0.38$, $p < .05$). Child age is therefore not a prohibitive factor in significant relationships among conversation variables.

Older Cohort

Mothers' conversation variables were evaluated for their relationship with other conversation variables (see Table 15). Mothers who used more elaborations in their talk also used more evaluations ($r(41) = 0.44$, $p < .05$). Mothers who used more elaborations also used more emotion talk and personality talk ($r(41) = 0.51$, $p < .001$; $r(41) = 0.53$, $p < .001$). Mothers' evaluations were predictive of mothers' emotion talk and personality talk ($r(41) = 0.66$, $p < .001$; $r(41) = 0.35$, $p < .05$).

Mothers' conversational variables were also related to children's conversational variables. Mothers' elaborations predicted children's elaborations and evaluations ($r(41) = 0.71$, $p < .001$; $r(41) = 0.45$, $p < .05$). Mothers' elaborations correlated with children's emotion talk and children's personality talk ($r(41) = 0.42$, $p < .05$; $r(41) = 0.34$, $p < .05$). Similarly, mothers' evaluations predicted children's evaluations and emotion talk ($r(41) = 0.39$, $p < .05$; $r(41) = 0.50$, $p < .001$). Mothers' emotion talk correlated with children's emotion talk ($r(41) = 0.53$, $p < .001$). Mother's personality talk was correlated with children's conversation variables, including children's elaborations, evaluations, and personality talk ($r(41) = 0.33$, $p < .05$; $r(41) = 0.65$, $p <$

.001; $r(41) = 0.35$, $p < .01$). Finally, mother's physical descriptives predicted children's physical descriptives ($r(41) = 0.81$, $p < .001$).

Mother's Test of Personal Intelligence Mini-12 (TOPI MINI-12) scores of the mother were related to mothers' and children's conversation variables in several meaningful ways. Mothers' TOPI MINI-12 scores were predictive of their personality talk ($r(41) = 0.33$, $p < .05$). Likewise, mothers' TOPI MINI-12 scores correlated with children's personality talk ($r(41) = 0.35$, $p < .05$).

Table 13. Descriptive statistics for Study 2 variables in younger cohort.

		M	SD	Range (N)
Elaborations				
	Mother	70.3	37.5	15-194 (42)
	Child	46.1	23.5	6-92 (42)
Evaluations				
	Mother	46.5	26.8	6-101 (42)
	Child	20.1	15.3	1-73 (42)
Emotion Talk				
	Mother	9.5	7.2	0-35 (42)
	Child	6.3	5.1	0-32 (42)
Personality Talk				
	Mother	8.2	7.7	0-27 (42)
	Child	6.8	5.3	0-18 (42)
Physical Descriptives				
	Mother	6.7	5.2	0-24 (42)
	Child	10.1	6.4	1-31 (42)
TOPI MINI-12 Score				
	Mother	9.9	1.9	5-12 (42)

Table 14. Descriptive statistics for Study 2 variables in older cohort.

		M	SD	Range (N)
Elaborations				
	Mother	67.9	37.2	14-154 (43)
	Child	47.2	29.1	8-120 (43)
Evaluations				
	Mother	38.1	26.2	0-94 (43)
	Child			0-61 (43)
Emotion Talk				
	Mother	10.3	10.1	0-42 (43)
	Child			0-22 (43)
Personality Talk				
	Mother	8.1	7.1	0-25 (43)
	Child			0-16 (43)
Physical Descriptives				
	Mother	8.2	9.3	0-54 (43)
	Child			0-61 (43)
TOPI MINI-12 Score				
	Mother	9.9	1.9	5-12 (43)

Table 15. Pearson correlations for Study 2 variables in younger cohort.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Mother Elaborations	-											
2 Mother Evaluations	0.83**	-										
3 Mother Emotion Talk	0.46**	0.65**	-									
4 Mother Personality Talk	0.60**	0.42*	0.45*	-								
5 Mother Physical Descriptives	0.21	0.52**	0.14	0.15	-							
6 Child Age (in months)	0.28	0.39*	0.31*	0.27	0.28	-						
7 Child Elaborations	0.76***	0.68***	0.46*	0.44**	0.41*	0.45*	-					
8 Child Evaluations	0.79***	0.64***	0.28	0.53***	0.42*	0.19	0.58**	-				
9 Child Emotion Talk	0.14	0.34*	0.74**	0.25	-0.22	0.17	0.31*	-0.05	-			
10 Child Personality Talk	0.57***	0.40*	0.37*	0.84**	0.07	0.32*	0.44**	0.49**	0.25	-		
11 Child Physical descriptives	0.21	0.36*	0.29	0.01	0.55**	0.16	0.40*	0.10	0.19	-0.01	-	
12 TOPI Score	0.33*	0.41*	0.31*	0.35*	0.15	0.29	0.32*	0.31*	0.12	0.44*	0.08	-
13 Conversation Word Count	0.80***	0.79***	0.39*	0.33*	0.36*	0.39*	0.65***	0.51*	0.24	0.33*	0.10	0.40*

Note: * p < .05; **p < .001

Table 16. Pearson correlations for Study 2 variables in older cohort.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Mother Elaborations	-											
2 Mother Evaluations	0.44*	-										
3 Mother Emotion Talk	0.51**	0.66**	-									
4 Mother Personality Talk	0.53**	0.35*	0.21	-								
5 Mother Physical Descriptives	0.01	-0.31	-0.18	-0.03	-							
6 Child Age (in months)	0.04	-0.11	-0.03	0.14	-0.01	-						
7 Child Elaborations	0.71**	0.18	0.20	0.33*	0.19	0.02	-					
8 Child Evaluations	0.45*	0.39*	0.12	0.65**	0.13	-0.01	0,36*	-				
9 Child Emotion Talk	0.42*	0.50**	0.53**	0.12	-0.15	0.01	0.35*	0.22	-			
10 Child Personality Talk	0.34*	-0.03	0.07	0.35*	0.07	0.16	0.31*	0.35*	0.20	-		
11 Child Physical descriptives	-0.02	-0.16	-0.16	0.01	0.81**	0.05	0.32*	0.16	0.09	0.04	-	
12 TOPI Score	0.33*	-0.04	0.07	0.33*	-0.23	-0.13	0.05	0.04	0.11	0.35*	-0.24	-
13 Conversation Word Count	0.57**	0.48**	0.35*	0.50**	0.01	-0.12	0.40**	0.34*	0.13	0.09	0.01	0.28

Note: * p < .05; **p < .001

Table 17. Pearson correlations for Study 2 variables in younger cohort controlling for child's age.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Mother Elaborations	-											
2 Mother Evaluations	0.82**	-										
3 Mother Emotion Talk	0.41*	0.60**	-									
4 Mother Personality Talk	0.57**	0.36*	0.40*	-								
5 Mother Physical Descriptives	0.37*	0.47**	0.06	0.08	-							
6 Child Age (in months)	-	-	-	-	-	-						
7 Child Elaborations	0.75**	0.61**	0.38*	0.37*	0.33*	-	-					
8 Child Evaluations	0.78**	0.63**	0.24	0.51**	0.39*	-	0.57**	-				
9 Child Emotion Talk	0.10	0.30*	0.73**	0.22	-0.29	-	0.26^	-0.08	-			
10 Child Personality Talk	0.53**	0.32*	0.30*	0.83**	-0.02	-	0.43*	0.46*	0.24	-		
11 Child Physical descriptives	0.18	0.33*	0.26	-0.04	0.54**	-	0.37*	0.07	0.17	-0.07	-	
12 TOPI Score	0.27^	0.34*	0.24*	0.30^	0.07	-	0.22	0.27^	0.08	0.38*	0.03	-
13 Conversation Word Count	0.78**	0.75**	0.31*	0.26	0.29^	-	0.58**	0.49**	0.24	0.32*	0.04	0.32*

Note: ^ p<.10; * p < .05; **p < .001

Analyses Controlling for Word Count

Conversation word count was significantly correlated with most mothers' conversation variables and children's conversation variables in both cohorts. Therefore, partial correlations controlling for conversation word count were conducted (see Table 18 and Table 19). The pattern of findings remained significant for all study variables.

Table 18. Pearson correlations for Study 2 variables in younger cohort controlling for conversation word count.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Mother Elaborations	-											
2 Mother Evaluations	0.55**	-										
3 Mother Emotion Talk	0.27**	0.60**	-									
4 Mother Personality Talk	0.59**	0.27^	0.37*	-								
5 Mother Physical Descriptives	0.22	0.41*	-0.01	0.03	-							
6 Child Age (in months)	0.06	0.15	0.31*	0.16	0.16	-						
7 Child Elaborations	0.53**	0.35*	0.29^	0.32*	0.24	0.28^	-					
8 Child Evaluations	0.73**	0.44*	0.1	0.45*	0.30^	-0.01	0.38*	-				
9 Child Emotion Talk	-0.09	0.25	0.72**	0.19	-0.34	0.09	0.21	-0.2	-			
10 Child Personality Talk	0.59**	0.15	0.25	0.83**	-0.09	0.19	0.36*	0.36*	0.21	-		
11 Child Physical descriptives	0.22	0.47*	0.28^	-0.03	0.56**	0.14	0.44*	0.05	0.17	-0.06	-	
12 TOPI Score	0.02	0.17	0.18	0.25	0.001	0.16	0.08	0.13	0.03	0.33*	0.04	-
13 Conversation Word Count	-	-	-	-	-	-	-	-	-	-	-	-

Note: ^ p<.01; * p < .05; **p < .001

Table 19. Pearson correlations for Study 2 variables in older cohort controlling for conversation word count.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Mother Elaborations	-											
2 Mother Evaluations	0.23	-										
3 Mother Emotion Talk	0.40*	0.60**	-									
4 Mother Personality Talk	0.34*	0.14	0.05	-								
5 Mother Physical Descriptives	-0.01	-0.36	-0.20	-0.04	-							
6 Child Age (in months)	0.14	-0.06	0.02	0.24	-0.01	-						
7 Child Elaborations	0.64**	-0.02	0.07	0.17	0.21	0.07	-					
8 Child Evaluations	0.33*	0.28^	-0.01	0.59**	0.13	0.04	0.26^	-				
9 Child Emotion Talk	0.42*	0.50**	0.52**	0.06	-0.15	0.02	0.32*	0.18	-			
10 Child Personality Talk	0.35*	-0.09	-0.11	0.35*	0.07	0.17	0.30^	0.34*	0.20	-		
11 Child Physical descriptives	-0.04	-0.19	-0.18	0.01	0.81**	0.05	0.35*	0.17	0.09	0.04	-	
12 TOPI Score	0.22	-0.16	-0.03	0.24	-0.24	-0.10	-0.07	-0.07	0.07	0.34*	-0.25	-
13 Conversation Word Count	-	-	-	-	-	-	-	-	-	-	-	-

Note: ^ p<.01; * p < .05; **p < .001

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Non-Parametric Correlational Analyses

Non-normal distributions were observed for mother's personality talk, children's

personality talk, mothers' emotion talk, and children's emotion talk variables in both cohorts.

Each of these variables was skewed, reflecting the fact that some mother-child dyads failed to

use personality or emotion talk (or both) in their conversations. Given these non-normal

distributions, non-parametric Spearman's Rho correlations were obtained for all essential

analyses. The pattern of significant findings remained the same (see Table 20 and Table 21).

Table 20. Spearman's Rho correlations for Study 2 variables in younger cohort.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Mother Elaborations	-											
2 Mother Evaluations	0.86**	-										
3 Mother Emotion Talk	0.55**	0.69**	-									
4 Mother Personality Talk	0.62**	0.43*	0.40*	-								
5 Mother Physical Descriptives	0.48**	0.45*	0.21	0.15	-							
6 Child Age (in months)	0.33*	0.35*	0.25^	0.33*	0.17	-						
7 Child Elaborations	0.81**	0.69**	0.42*	0.49**	0.42*	0.47*	-					
8 Child Evaluations	0.77**	0.63**	0.38*	0.61**	0.42*	0.20	0.65**	-				
9 Child Emotion Talk	0.26^	0.34*	0.56**	0.40*	-0.21	0.12	0.18	0.01	-			
10 Child Personality Talk	0.52**	0.36*	0.35*	0.82**	0.05	0.33*	0.47*	0.46*	0.45*	-		
11 Child Physical descriptives	0.32*	0.42*	0.27^	0.08	0.61**	0.28^	0.48**	0.20	-0.04	0.002	-	
12 TOPI Score	0.34*	0.37*	0.44*	0.32*	0.06	0.31*	0.29^	0.33*	0.19	0.39*	0.11	-
13 Conversation Word Count	0.86**	0.78**	0.51**	0.43*	0.34*	0.42*	0.75**	0.57**	0.39*	0.43*	0.24	0.39*

Note: ^ p < .01; * p < .05; **p < .001

Table 21. Spearman's Rho correlations for Study 2 variables in older cohort.

	1	2	3	4	5	6	7	8	9	10	11	12
1 Mother Elaborations	-											
2 Mother Evaluations	0.42*	-										
3 Mother Emotion Talk	0.57**	0.74**	-									
4 Mother Personality Talk	0.54**	0.29^	0.40*	-								
5 Mother Physical Descriptives	0.24	-0.24	-0.16	0.16	-							
6 Child Age (in months)	0.04	-0.12	-0.10	0.14	-0.03	-						
7 Child Elaborations	0.72**	0.19	0.22	0.38*	0.31*	0.04	-					
8 Child Evaluations	0.40*	0.27^	0.18	0.59**	0.45*	0.03	0.34*	-				
9 Child Emotion Talk	0.60**	0.55**	0.61**	0.25	-0.06	-0.04	0.53**	0.18	-			
10 Child Personality Talk	0.36*	-0.02	0.002	0.38*	0.22	0.10	0.35*	0.37*	0.30	-		
11 Child Physical descriptives	0.22	-0.10	-0.13	0.23	0.57**	0.07	0.56**	0.45*	0.28^	0.26^	-	
12 TOPI Score	0.25	-0.03	0.07	0.38*	-0.19	-0.08	0.001	-0.03	0.10	0.32*	-0.12	-
13 Conversation Word Count	0.60**	0.41*	0.35*	0.51**	0.10	-0.04	0.45*	0.28^	0.28^	0.13	0.10	0.33*

Note: ^ p < .01; * p < .05; **p < .001

CHAPTER IX

DISCUSSION

The present studies examined the ways in which parents talk with their children about other people. The studies included children ranging in age from preschool through late elementary school and documented a strikingly consistent pattern of findings. Both studies indicated that mothers' personal intelligence scores were associated with personality talk with their own and children's personality talk. The findings of both studies showed that maternal conversation variables were related to each other. In addition, maternal conversation variables were associated with changes in child variables. Additionally, children's conversation variables were related to each other.

Test of Personal Intelligence and Personality Talk Relationships

Personal intelligence problem-solving areas offer key skills for social interaction and development among adults. In this study, mothers who scored higher in personal intelligence talked more frequently about personality with their children. This finding suggests a relationship between maternal intelligence and maternal reminiscence style. For example, the following exchange occurred between a mother high in personal intelligence (TOPI MINI – 12 score of 12) and her child (61 month-old female):

"Mother: Yeah, how would you describe Violet? What is she like inside?

Child: A nice girl, a gentle girl, she sticks up for herself, yes.

Mother: So she's assertive also.

Child: Yeah, but not all of the time cause people don't fight with her a lot."

The mother in this conversation not only seeks behavioral descriptions of the friend, but further proffers a potential personality trait term for consistent behavior. After describing Violet including personality and behavioral descriptions, the child is qualifies that the trait term may not be applicable to Violet's behavior in all situations. This exchange can be considered a quintessential depiction of reminiscence between a mother of high personal intelligence and her child. Given that those high in personal intelligence possess the skills to recognize personally relevant information in others and form accurate models of personality from behavior (Mayer et al., 2017a), the relationship between TOPI scores and maternal personality talk suggests that mothers high in personal intelligence are using this skillset during reminiscence with their children.

When one compares this conversation to one of a mother low in personal intelligence, the difference is noteworthy. In the following example, the mother scored low in personal intelligence skill bases (TOPI MINI – 12 score of 5) and is discussing a positive peer interaction with her child (87 month-old male):

"Child: We were playing, we were digging a place that we can dig.

Mother: Oh yeah, and what was Jasper like?

Child: He was having fun because he always likes digging.

Mother: Yeah. Is that it?

Child: Mmmhmm (affirmative)."

This mother who is low in personal intelligence seeks some description of Jasper's behavior from her child. When the child begins to offer details of the behavior, the mother does not extend

the topic to seek more behavioral details or offer personality trait terms and vocabulary to her child. Both brief exchanges reflect reminiscence about children's social interactions, but the quality of conversation is remarkably different. The mother higher in personal intelligence offers more social information to her child, therefore offering a greater opportunity for the child to incorporate information into existing social schemas.

Mothers who scored higher in Personal Intelligence had children who used personality talk more frequently during reminiscence. This finding suggests the skills of the mother in personal intelligence problem solving areas influences the reminiscence style of children during conversations about social scenarios and behavior. Mothers high in personal intelligence discuss personality more frequently with their children and children in turn use personality talk more frequently during the conversation. In this manner, mothers may model rich ways of discussing other people which include evaluations of trait-relevant behavior and provide personality related language.

Maternal Conversation Variables: Inter-Relationships

Previous research has elucidated the relationship between maternal conversation variables. Consistent with this literature, in these two studies mothers who used more elaborations in conversations with their children also use more evaluations. These findings reflect that mothers who frequently add information to conversations with their children are also likely to acknowledge the child's contributions and affirm or deny claims made by the child in the context of conversation. In many studies, elaborations and evaluations are combined into a single variable which is utilized to establish a style of reminiscence exposed by the parent. The range of elaborations and evaluations observed in mothers' speech is consistent with extant

research delineating a continuum from high to low elaborative style in mothers. In the present studies, mothers' elaborations and evaluations correlated with emotion talk at a moderate to high degree. This indicates that mothers' who take the time to be highly elaborate with their children also address feelings and emotions more frequently during said conversations. Furthermore, there was a significant relationship between maternal elaborations and personality talk. This indicates that when discussing conversations about other people, highly elaborative mothers tend to use more personality talk and terminology with their children. It suggests that mothers are proffering vocabulary that evaluates social behavior and this speech includes personality trait terms. The significant relationships between maternal conversation variables therefore offer insights into mothers' overall reminiscence styles, and in particular how the concept of parental elaboration may be broadened to include personality talk.

Children's Conversational Variables: Inter-Relationships

In a similar fashion, children's conversation variables were significantly related to one another. Children who used more elaborations in the conversation also used more evaluations. This finding delineates that children who add new information to the conversation are also evaluative of the contributions of the mother to the conversation. In these evaluations, children may clarify their mothers' additions or acknowledge some aspect of maternal speech. Children's emotion talk was correlated to a moderate degree with personality talk in Study 1 and the older cohort in Study 2. The relationship between emotion talk and personality talk in the younger cohort of Study 2 also approached significance. The relationship between these variables suggests that emotion and personality talk are related aspects of social conversations. Specifically, children who are low in instances of emotion talk will also be low in instances of

personality talk. Children who used more elaborations in conversations with their mother also used more personality talk. These moderate correlations demonstrate children who contribute more information to conversations with their mothers also use more personality trait terms during said discussion. Given these findings, the relationship between reminiscence styles of mother and child are of particular interest.

Inter-Relationships Between Mothers' and Children's Conversational Variables

Consistent with predictions, mothers who used more elaborations and evaluations to facilitate children's participation in discussion had children who were more elaborative. These findings are comparable with extant literature on maternal reminiscence (Fivush, & Wang, 2005; Leichtman et al., 2000; Song & Wang, 2013). The use of evaluations is an effective strategy to engage children in discussion and validate (or correct) children's previous statements (Reese et al. 1993; Song & Wang, 2013). Mothers with higher levels of elaboration also discussed emotions more frequently with their children. Emotion talk is a key aspect of discussions about social interactions, providing information on interpretations of social cues and self-understanding (Fivush & Wang, 2005; Garner et al., 2008).

The significant relationship between maternal elaborations and children's personality talk is compelling. Mothers' elaborations may provide additional social information including social cues, while evaluations provide feedback on children's social appraisals. From this growing body of social information, children may develop social schemas that are key to understanding social cues present in positive and negative interactions with peers (Rudolph et al., 1995). Children who are exposed to richer and more complex social information may form richer social schemas and better be able to use information in future interactions resulting in higher social competence.

Maternal reminiscing style may therefore play a key role in children's social competence and understanding of daily social interactions which are frequently topics of conversation.

For example, the following mother (TOPI MINI – 12 score of 11) and child (98 month-old male) were conversing about the positive interaction with a peer conversation prompt.

" Mother: We're going to talk about instead of a negative thing that happened with people we're going to…

Child: (interrupting) Happy, happy

Mother: Yeah, we're going to talk about a positive, something happy, okay? Alright, so let's talk about a positive interaction with one of your friends and describe what the person was like.

Child: Alright. One of my friends were named Alan and he was very positive and nice and included me a lot.

Mother: Yeah, how so? What was his behavior like?

Child: He let me choose a lot.

Mother: Yeah, that's fun when you have someone…

Child: (interrupting) And he's friendly. Very friendly to me.

Mother: Yeah, I get that. When you have someone that wants to know what you want to do and not always being bossy about what they want to do. He was good about that? He asked you what you wanted to do?

Child: Yep. He listened to me.

Mother: Those are good things, that means he's a good friend, right? And he cares about you? And you care about him, right?

Child: Yep."

This exchange is that of a mother with a high frequency of elaborations, evaluations, and emotion talk. Of note, the mother also frequently references personality and appropriate social behaviors. In this study, mothers who more frequently discussed personality with their children had children who also discussed personality more often. This suggests that mothers model and provide language regarding personality. This modeling may serve to improve children's social schemas, providing more rich understanding of social cues during social interactions (Rudolph et al., 1995). This finding was true of both cohorts in Study 2, an indication that the relationship between mothers' and children's personality talk exists independent of children's age.

Areas for Further Study

This study offers an examination of an unexplored context in which variations in personal intelligence are present: the way mothers talk with their children about other people. Findings contribute to the growing canon of personal intelligence literature and the existing literature on the impact of mother-child conversations on children's development. Additionally, the replication and extension of findings from Study 1 into different aged cohorts of children offer intriguing new avenues for continued research.

The relationship between personal intelligence and mother-child conversation could be extended to include research on fathers, teachers, grandparents or other sources of conversation in children's lives. Including parents and children from other demographics (e.g. socioeconomic status, ethnicity) would also offer an interesting avenue for further study. Furthermore, exploration of the effect of mother-child personality related conversation on children's social development and understanding of personality is of interest.

Given these findings the potential also exists to train mothers in elaborative reminiscing techniques such as use of open-ended questions and evaluative feedback. Contemporary literature regarding the effectiveness of maternal training on children's measured outcomes has begun to emerge (Boland, Haden, & Ornstein, 2003; Reese & Newcombe, 2007). These studies have examined training mothers in rich and elaborative style of reminiscence and have even included emotion-rich conversation training (Van Bergen, Salmon, Dadds, & Allen, 2009). The promising positive results of children's outcomes include increased shared recall and emotion knowledge. Could mothers similarly be trained in personality talk, learning to have elaborative personality-rich conversations with their children? Would these trained parents interact with their children in ways that enhance their developing sense of personality, that is, their own personal intelligence? These are intriguing questions for future research.

Study Limitations

There are limitations to this study. The small number of participants limits the breadth and scope of the findings. Additionally, the results are correlational and from a single time point and as such no causal conclusions can be drawn. Longitudinal data would show consistencies and variations in the relationship between mother-child reminiscing and contributions to children's social competence in the long term. Furthermore, the lack of diversity present in the samples limits the ability to indicate findings can be considered representative of the broader population. Previous research findings suggest that mothers and children from other ethnicities or cultures may be more or less likely to discuss personality (e.g., Leichtman et al., 2003). Recruitment of participants was a labor intensive process which involved more than a dozen sites and relied heavily on word of mouth between parents. Future studies may benefit from

establishing long-term relationships with potential recruitment sites to encourage study

participation and facilitate potential longitudinal research design.

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APPENDICES

APPENDIX A

MOTHER CHILD CONVERSATIONS ABOUT OTHERS TASK

We are interested in mother-child conversations about the characteristics of people, including their personalities and behaviors. We would like you to audio record a conversation with your child about the specific topics below at a time that you and your child are alone together. We expect these four conversations to take a total of less than 15 minutes to complete, but you may talk for however long you like.

Please look over the topics below before you talk with your child. When you are ready, we would like you to converse about the following topics with your child in whatever way is natural for you. Please start the audio-recorder before beginning the conversation.

a) Choose two of your relatives that your child knows well and talk about how they are the same or different from one another.

b) Talk about what makes your child the same or different from other people.

c) Ask your child to recall and discuss a recent negative interaction with a peer and describe what the peer was like.

d) Ask your child to recall and discuss a recent positive interaction with a peer and describe what the peer was like.

This task will be audio-recorded and later transcribed for coding and analysis.

APPENDIX B

SOCIAL COMPETENCE BEHAVIOR EVALUATION TASK

Please indicate how frequently following statements are true of your child. Please select the one (and only one) option that best reflects your response to the item.

1) Maintains neutral facial expression (doesn't smile or laugh). ^

    Never True   Seldom True   Sometimes True   Often True   Always True

2) Comforts or assists another child in difficulty.

    Never True   Seldom True   Sometimes True   Often True   Always True

3) Helps with everyday tasks (e.g., cleans up).

    Never True   Seldom True   Sometimes True   Often True   Always True

4) Timid, afraid (e.g., avoids new situations). *

    Never True   Seldom True   Sometimes True   Often True   Always True

5) Sad, unhappy, or depressed. ^

    Never True   Seldom True   Sometimes True   Often True   Always True

6) Inhibited or uneasy in peer group. *

    Never True   Seldom True   Sometimes True   Often True   Always True

7) Works easily in a peer group.

    Never True   Seldom True   Sometimes True   Often True   Always True

8) Inactive. ^

    Never True   Seldom True   Sometimes True   Often True   Always True

9) Watches the other children play. *

    Never True   Seldom True   Sometimes True   Often True   Always True

10) Negotiates solutions to conflicts with other children.

    Never True   Seldom True   Sometimes True   Often True   Always True

11) Remains apart, isolated from the peer group. *

    Never True   Seldom True   Sometimes True   Often True   Always True

12) Takes other children and their point of view into account.

    Never True   Seldom True   Sometimes True   Often True   Always True

13) Cooperates with other children in group activities.

    Never True   Seldom True   Sometimes True   Often True   Always True

14) Tired. ^

    Never True   Seldom True   Sometimes True   Often True   Always True

15) Takes care of toys.

    Never True   Seldom True   Sometimes True   Often True   Always True

16) Doesn't talk or interact during group activities with other children. *

    Never True   Seldom True   Sometimes True   Often True   Always True

17) Attentive toward younger children. ^

    Never True   Seldom True   Sometimes True   Often True   Always True

18) Goes unnoticed in a group of children. *

    Never True   Seldom True   Sometimes True   Often True   Always True

19) Worries. ^

    Never True   Seldom True   Sometimes True   Often True   Always True

20) Accepts compromises when reasons are given.

    Never True   Seldom True   Sometimes True   Often True   Always True

*Note: * Item reversed during scoring, ^ Item excluded from prosocial score.*

APPENDIX C

PERSONALITY SCENARIOS TASK

Training vignettes

male character, trait- forgetful, valence- mostly negative trait

Here is a picture of Kevin (*show boy picture)*.
Here are some things I know about Kevin
       Kevin lost his coat at school.
       Kevin often leaves his homework at home instead of bringing it to school.
       Kevin was playing with a toy outside, but he left it in the yard overnight.

Here is a story about Kevin:
       One day, Kevin brought a matchbox car with him when he went to the grocery store with his mother (*show picture of cart)*. He carried the matchbox car around the store with him while they were shopping. He put the car down on a shelf while he was looking at a box of cereal (*remove picture*). What happened next? Finish the story.
Possible Correct Answers: (he leaves the toy behind, he forgets the toy on the shelf, etc.)

What words can you use to describe Kevin?
       Possible Correct Traits: forgetful, irresponsible, careless, etc.

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female character, trait- energetic, valence- mostly positive trait

Here is a picture of Kelly (*show girl picture)*.
Here are some things I know about Kelly:
       She likes to run around during recess.
       She likes to jump on the trampoline with her sister.
       She always climbs and plays on the playscape at the park.

Here is a story about Kelly:
       Kelly is sitting in her backyard when a soccer ball rolls into it (*show picture of ball)*. Her friend runs over to get the ball. Kelly's neighbor asks her to come play in a soccer game with her (*remove picture)*. What does she do next? Finish the story.

Possible Correct Answers: (asks her mom to play, runs over to play, says yes, etc.)

What words can you use to describe Kelly?
Possible traits: energetic, sporty, etc.

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male character, trait-neat, valence- mostly positive

This is a picture of Steven (*show boy picture*).
Here are some things I know about Steven
  He likes to keep his bedroom very neat.
  He makes up his bed every morning.
  He always puts away his toys.

Here is story about Steven:
  He eats his breakfast in the morning at the kitchen table (*show picture of cereal*). He finishes the whole bowl of cereal (*remove picture*). What does Steven do next? Finish the story.

  Possible Correct Answers: (Puts away the cereal bowl, puts in the sink/dishwasher, cleans up after himself, etc.)

What words can you use to describe Steven?

Possible Correct Traits: Neat, clean, organized, etc.

---

female character, trait- selfish, valence – mostly negative trait

This is a picture of Sarah (*show girl picture)*.
Here are some things I know about Sarah:
  She does not share her toys with her brothers.
  She does not take turns with the sand toys at the park.
  She says no when friends ask to play with her dolls.

Here is story about Sarah:
  She is going to the movies with a friend from school (*show popcorn and tickets picture*). Sarah's Mom buys her a popcorn to eat while she watches the movie(*remove picture*). What does Sarah do next? Finish the story.

  Possible Correct Answers: (Refuses to share popcorn, says no, keeps popcorn for herself, etc.)

What words can you use to describe Sarah?

Possible Correct Traits: Selfish, mean, not nice, etc.

female character, trait – tough, valence – mostly positive trait

This is a picture of Anne (show girl picture).
Here are some things I know about Anne
       She does not cry very often.
       She likes to wrestle with her brother and sister.
       She does not get upset when a classmate is mean to her.

Here is story about Anne:
       Anne is riding her bike in her driveway (show picture of bike). She loses her balance and falls down. What does Anne do next? Finish the story.

       Possible Correct Answers: (Gets up, picks up the bike, keeps playing etc.)

What words can you use to describe Anne?

Possible Correct Traits: Tough, strong, fierce, etc.

---

male character, trait- generous, valence – mostly positive trait

This is a picture of Paul (*show boy picture*).
Here are some things I know about Paul.
       He likes to share his toys with his brother.
       He takes turns with other children on the swings at the park.
       When he has extra food in his lunch, he often gives it away to friends.

Here is story about Paul:
       Paul is playing in the pool in his back yard (show picture of pool). He is having fun with his beachball and rubber duck. A friend comes to play in the pool with Paul (*remove picture*). What does Paul do next? Finish the story.

       Possible Correct Answers: (Shares the ball, invites child to play in pool, takes turn with ball etc.)

What words can you use to describe Paul?

       Possible Correct Traits: Generous, kind, nice, etc.

---

male character, trait- messy, valence- mostly negative trait

This is a picture of Joshua (*show picture of boy*).
Here are some things I know about Joshua.
      His clothes are stained and wrinkled.
      He does not pick up his toys and they are all over his bedroom.
      His desk at school is messy with papers and pencils falling out of it.

Here is story about Joshua:
      Joshua is having a snack after school (*show picture of drink*). He is eating crackers and a glass of milk. He accidentally spills his drink all over the table (*remove picture*). What does Joshua do next? Finish the story.

      Possible Correct Answers: (Leaves the drink there, ignores the spill, leaves it messy, etc.)

What words can you use to describe Joshua?

Possible Correct Traits: Messy, dirty, disorganized etc.

---

male character, trait-sensitive, valence- mostly negative trait

This is a picture of Thomas (*show boy picture*).
Here are some things I know about Thomas
      He cries when a friend gets hurt.
      He gets very upset when classmates won't share with him.
      When he hears someone else is sad, he tries to cheer them up.

Here is story about Thomas:
      Thomas is playing with his teddy bear (*show picture of teddy bear)*. While he is playing, his teddy bears bow tie falls off and his stuffing starts to fall out (*remove picture)*. What does Thomas do next? Finish the story.

      Possible Correct Answers: (Cries, runs to his parent, is sad, etc)

What words can you use to describe Thomas?

Possible Correct Traits: Sensitive, quiet, shy, etc.

female character, trait- brave, valence- mostly positive trait

Here is a picture of Kristen (*show girl picture)*.
Here are some things I know about Kristen
       She does not cry when the doctor gives her a shot.
       She does not need a nightlight to go to bed at night.
       She likes to watch movies with monsters in them.

Here is a story about Kristen:
       Kristen is camping with her friends and everyone is asleep, but her. (show picture of tent). She hears a noise outside the tent. Kristen can not tell what the noise is. (r*emove picture)* What does she do next? Finish the story.

Possible Correct Answers: (Goes to see what the sound is, looks out the window to see what noise is, etc.)

What words can you use to describe Kristen?
Possible traits: brave, not afraid, etc.

---

female character, trait- afraid, valence – mostly negative trait

This is a picture of Kim (*show girl picture*).
Here are some things I know about Kim.
       She is scared of many things like the dark and bugs.
       She does not like to try new things.
       She is often worried something bad will happen to her.

Here is story about Kim:
       Kim goes shopping at the mall with her family (*show picture of shopping bag).* They are walking around the mall going to different stores. Kim sees a poster of a monster movie in a store window (*remove picture)*. What happens next? Finish the story.

       Possible Correct Answers: (Kim gets scared, hides behind parents, runs away, etc.)

What words can you use to describe Kim?

Possible Correct Traits: Afraid, scared, wimpy etc.

APPENDIX D

IRB APPROVAL LETTER

University *of* New Hampshire

Research Integrity Services, Service Building
51 College Road, Durham, NH 03824-3585
Fax: 603-862-3564

26-Feb-2018

Leichtman, Michelle D
Psychology
McConnell Hall Rm 440
Durham, NH 03824-2602

IRB #: 6185
Study: The Development of Children's Thinking About Personality
Review Level: Expedited
Approval Expiration Date: 12-Mar-2019

The Institutional Review Board for the Protection of Human Subjects in Research (IRB) has reviewed and approved your request for time extension for this study. Approval for this study expires on the date indicated above. At the end of the approval period you will be asked to submit a report with regard to the involvement of human subjects. If your study is still active, you may apply for extension of IRB approval through this office.

Researchers who conduct studies involving human subjects have responsibilities as outlined in the document, *Responsibilities of Directors of Research Studies Involving Human Subjects.* This document is available at http://unh.edu/research/irb-application-resources or from me.

If you have questions or concerns about your study or this approval, please feel free to contact me at 603-862-2003 or Julie.simpson@unh.edu. Please refer to the IRB # above in all correspondence related to this study. The IRB wishes you success with your research.

For the IRB,

Julie F. Simpson
Director

cc: File
Kenney, Erin