

Parental influences on earliest memories

Carole Peterson

Memorial University of Newfoundland, Canada

Andrea Smorti and Franca Tani

University of Florence, Italy

Recently, independent lines of research have indirectly supported the notion that social variables, especially parent–child relationships, have a significant impact on adults’ memories of their early life. In order to directly assess this Italian students were asked to recall as many memories involving parents as they could from before the age of 6 in a 3-minute timed recall task (i.e., memory fluency). They also filled out assessments about parental involvement in their lives as well as the quality of their relationships with their mothers and fathers. We found that, for males, the more involved the parents and the warmer the relationships between sons and both their mothers and their fathers, the more early memories, the more positive early memories, and the more episodic memories men recalled. For women, the warmer the relationship with their mothers, the earlier their earliest memory. Results are discussed in terms of gendered parent–child interactions as well as McAdam’s emergent life-story theory.

Recently, two lines of research have converged on the idea that social variables have a significant impact on people’s memories of their early life, and in particular, parent–child relationships are influential. One of these has investigated the sorts of verbal interactions parents have with their preschoolers and how these influence children’s recall of life events over the subsequent months or few years, and the other has looked at adults’ memories for their early years, especially the concept of infant or childhood amnesia. However, to our knowledge, little extant research has directly explored the connection between parent–child relationships and early memory in adults. In the research reported here we explore how adults’ current perspective on their relationships with their parents may be related to their recall of their earliest years. Both adults’ single

earliest memory as well as the density of their memories from their preschool years is assessed.

A number of reports have shown that the amount and style of parent–child verbal interaction affects children’s subsequent memory of various events in their lives (see reviews in Fivush, Haden, & Reese, 2006; and Nelson & Fivush, 2004). Some parents engage in much more memory-talk than do others (Fivush et al., 2006; McCabe & Peterson, 1991; Ratner, 1984), and they do so in an elaborative way. These parental differences have repeatedly been shown to be related to how much information children later provide in open-ended memory conversations with both parents and researchers (e.g., Fivush et al., 2006; Haden, Haine, & Fivush, 1997; McCabe & Peterson, 1991; Peterson & McCabe, 1994, 2004; Reese & Fivush, 1993). Indeed,

Address correspondence to: Carole Peterson, Psychology Department, St. John’s, Newfoundland, Canada, A1B 3X9. E-mail: carole@mun.ca

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memory itself seems to be affected, since children whose parents talk about target events in an elaborated way subsequently recall more information in standardised memory interviews (Boland, Haden, & Ornstein, 2003; Leichtman, Pillemer, Wang, Koreishi & Han, 2000; Low & Durkin, 2001; McGuigan & Salmon, 2004; Peterson, Sales, Rees, & Fivush, 2007).

This body of research has focused on children's memory rather than on the memories of adults reflecting back across many years on events that occurred in early childhood. The children were still young (preschool or early school-aged), so their memories were of events that had occurred relatively recently, i.e., months or even a couple of years or so earlier. In contrast, research on childhood amnesia has focused on adults' memories for events that occurred many years previously when they had been very young. A number of recent investigations have suggested that social variables influence adults' ability to recall early events in their lives, including culture (MacDonald, Uesiliana, & Hayne, 2000; Wang, 2001, 2003; Wang, Conway, & Hou, 2004), and gender (Davis, 1999; Mullen, 1994; Rubin, 2000). Of particular relevance here, another social variable is the nature of parent-child relationships, specifically how parents interact with their children (Nelson & Fivush, 2004). In fact, both the cultural and gender differences that have been found are typically seen as mediated by the sorts of conversational interactions that take place between parents and children (Davis, 1999; Fivush et al., 2006; Mullen, 1994; Wang, 2003).

To summarise, one line of research shows that young children's memory for relatively recent events is directly related to the amount of time their parents engaged in memory talk with them, as well as the way in which those memory conversations are structured. The other line of research shows that adults' memory for their earliest experiences are related to social variables, and an important presumed mediator is the amount and type of verbal interaction engaged in by parents in different cultures or by parents of girls versus boys. However, conceptualisations of parent-child relationships typically are much broader than how much or what type of memory-talk takes place. Two important dimensions of parent-child relationships are the affective quality of those relationships (Hodges, Finnegan, & Perry, 1999; Noller & Fitzpatrick, 1993; Russell, Mise, & Bissaker, 2002) and the amount of parental involvement in children's lives (Stattin

& Kerr, 2000). To our knowledge, little research has directly focused on the quality of parent-child relationships or amount of parental involvement and childhood amnesia. This is the focus of the research reported here.

A common assumption is that parents and children who have positive relationships with each other are more likely to spend time in positive communicative interactions (Jackson, Bjistra, Oostra, & Bosma, 1998), including talking about events that have occurred in one's life. Indeed, such memory-talk has been found to be relatively frequent in emotionally positive interactions between family members (Burger & Miller, 1999; Coppola, Vaughn, Cassibba, & Costantini, 2006; Miller, 1994; Vaughn et al., 2006, 2007). As well, parents who are involved with their children monitor their children's lives, know where they are, who they are with, and essentially what is happening in their lives.

THE CURRENT STUDY

Research exploring the importance of parent-child talk for children's subsequent memory as well as research conducted with adults on childhood amnesia both point to the potential influence of parent-child interaction on memory. Parent-child interaction in turn is influenced by the affective quality of parent-child relationships as well as how involved parents are in their children's lives. We reasoned that if there is a positive affective relationship between parent and child, and the parent is involved in their child's life, they are not only more likely to spend time together but are also more likely to talk with each other about the events that occur in their lives. Such memory-talk may help children form memories for events that occurred in their past, especially episodic memories of specific events.

In the present study we assessed both childhood amnesia in young adults and their perspective on the relationship they had with parents. We focused on their memories of events that involved their parents by asking them to recall their earliest years (those before age 6) and to write down as many memories as they could that involved their parents in some way. As well, they identified which memory was their earliest. In terms of parent-child relationships, we assessed the affective quality of their relationship with each parent individually via the Network of Relationships Inventory (Furman & Buhrmester,

1985) as well as overall parental involvement via the Parental Monitoring Scale (Capaldi & Patterson, 1989).

Hypotheses

Research has shown that women tend to recall more memories from childhood than do men (Davis, 1999; Mullen, 1994; Rubin, 2000); we expected this to be true even when respondents are asked to limit their recall to events involving their parents. We also hypothesised that individuals who have more positive relationships with parents would recall more memories from their early years, as well as have an earlier age of first memory. These memories are also more likely to be about episodic events rather than general scripts about repeated events. Likewise, individuals with parents who were more involved in their lives, including being engaged in more monitoring of what they did, would recall more memories overall as well as more episodic memories, and they would also have an earlier age of first memory. However, it is possible that these relationships are mediated by the gender of both respondents and of their parents. Because of little extant research relevant to memory and gender-specific parent-child combinations, the current study is an initial exploration of this issue.

METHOD

Participants

A total of 101 university students from the University of Florence (51 males) were recruited for this study. Age varied from 18 to 28 years, with a mean age of 22 years ($SD = 1.6$). Of these participants, 77% came from the centre of Italy, specifically the area around Florence. Participants came from families of middle or high socioeconomic level, with more than 60% of the parents having a high school diploma or university degree. As well, 71% of the participants had at least one sibling.

Instruments

Questionnaire on early memories. To study the accessibility of participants' memories from early life that included their parents, they were asked to remember as many memories involving parents as

they could from their preschool years, specifically before the age of 6. They were given a sheet of paper with separate lines labelled for memory 1, memory 2, memory 3, etc. Participants were asked to recall as many memories as they could and write a short sentence or two summary of each memory on the different lines. They were given 3 minutes to do this task (timed by the researcher). Afterwards, participants were asked to go back through their list of memories and, for each one, to specify how old they were when the event occurred (in years and months), and the main emotion that was linked to that memory. In addition, they were asked to specify which of their listed memories was their earliest. (Participants were also asked to recall memories from three other periods in their lives, primary school, secondary school, and high school or university, but these data are beyond the scope of the present report.)

The recalled memories were classified as positive, negative, or neutral as follows: Two raters independently read participants' description of each memory and classified the main emotion linked to each memory as positive when the emotion referred to a basic state of pleasure of the narrator (e.g., joy, satisfaction, love), negative when the emotion referred to a basic state of displeasure of the narrator (e.g., anxiety, pain, sorrow), and neutral when the narrator used negation to express his/her feeling (e.g., not anxious, not excited). The two raters compared their ratings and resolved disagreements through discussion. The alpha coefficient for agreement was high (.81). Memories were also classified as episodic vs scripts as follows: two raters independently read participants' memory descriptions and classified them as episodic memories when these referred to a single event that occurred at a specific time and place (i.e., the first time my parents took me to the seaside) or script memories when these referred to repeated events. This was also expressed using the imperfect tense of the verb, which, in the Italian language, gives the sense of a repeated action (i.e., when my mother read [used to read] me a book during bedtimes). The two raters compared their ratings and resolved disagreements through discussion. The alpha coefficient for agreement was very high (.92).

Questionnaires on parent-child relationships. To study the type of relationships participants had with their parents, two instruments were used.

The first was the Network of Relationships Inventory (NRI) (Furman & Buhrmester, 1985), in the form that measures the quality of relationships with parents. It consists of 42 questions that assess the following 14 relationship qualities: Companionship, Conflict, Instrumental Aid, Antagonism, Intimacy, Nurturance, Affection, Admiration, Reliable Alliance, Support, Criticism, Dominance, Satisfaction, and Punishment. Participants answered questions about their relationships with both mother/stepmother and father/stepfather. Participants were asked to use a standard 5-point Likert scale for answering each of the 42 questions, with the ratings varying from 1 (little or none) to 5 (the most). An example question is: "How much free time do you spend with your mother/father?" Each of the 14 relationship qualities was measured across three items. Responses to the three items assessing each relationship quality were summed and then transformed to a mean score. Thus each relationship was measured by 14 scales, each of which varied from a score of 1 to 5.

Subsequently, according to guidelines by the questionnaire authors, we derived two global scores of *Social Support* and *Negative Interchanges*. The *Social Support* measure consists of the average of the Companionship, Instrumental Aid, Intimacy, Nurturance, Affection, Admiration, Satisfaction, Support, and Reliable Alliance scores. The *Negative Interchanges* measure is the average of the Conflict, Antagonism, Criticism, Dominance, and Punishment scores. Separate scores are derived for the relationship with mother and father. Psychometric analyses reported by the authors revealed that the internal consistencies of the scales scores were satisfactory (M Cronbach's Alpha = .80; Furman, 1996; Furman & Buhrmester, 1985). In an Italian sample internal consistency scores are very good both for mothers (Social Support, Cronbach's Alpha = .90; Negative Interchanges, Cronbach's Alpha = .82) and fathers (Social Support, Cronbach's Alpha = .92; Negative Interchanges, Cronbach's Alpha = .81; Tani & Guarnieri, 2007).

The second scale assessing parent-child relationships was the Adolescents' Report of Parental Monitoring (Capaldi & Patterson, 1989) which measures parental monitoring and involvement in children's lives. This scale consists of seven questions to which participants respond according to a standard 5-point Likert scale ranging from 1 (never) to 5 (almost always or always). The questions ask about parent-child communication

about children's activities outside of home. Examples of the items used in this scale are "Did you inform your parents about activities you were doing or intended to do?", "Did your parents ask you what you did during the day?", "Did you know how to get in touch with your parents when they were out of home?". The total score on the scale is the sum of the seven items, ranging from 7 to 35. Caprara, Pastorelli, Regalia, Scabini, and Bandura (2005) adapted Capaldi's scale on a sample of 380 high-school Italian adolescents (185 boys and 195 girls). The alpha reliability for the scale was .84. The authors found good positive correlations ($r = .42$) between scores derived from the Adolescents' Report of Parental Monitoring and open communication with father and with mother as measured by the Parent-Adolescent Communication Scale, an instrument developed by Barnes and Olson (1982), and negative correlations ($r = -.39$) with escalative conflict with parents as measured by the Parent-Adolescent Disagreement Scale (Honest et al., 1997).

Procedure

Participants were recruited while they were in class during university courses. They were told about the goals of this research project on memory, and that we wanted them to recall as many memories that included their parents as they could from a specified period of their lives. The aims of the questionnaires on relationships were also explained. When participants understood the nature of the tasks, the first timed recall session took place. There were a total of four timed recall sessions, always administered in the same order: memories about the preschool years (under age 6), primary school, secondary school, and high school or university. Each of these timed recall sessions lasted for 3 minutes, and they alternated with an untimed period during which participants described their age at the time of each memory as well as the emotion involved. The whole task took about 40 minutes. The research was conducted in accordance with the guidelines for the ethical treatment of human participants of the American Psychological Association. Prior permission was obtained from the University Dean and President as well as each course professor. Participants provided their individual consent and could withdraw from participating at any time.

RESULTS

The total number of memories about parents that were retrieved by participants during their timed 3-minute retrieval period is presented first, as well as the breakdown of these memories into positive, negative, and neutral memories, and episodic or script. This is followed by data relevant to the age of participants' earliest memory. Subsequently, correlational analyses are presented that relate these recall variables to participants' ratings of the quality of their relationships with their parents. Because assumptions of normal distribution were violated for the memory data, ANOVAs and regression analyses used a loglinear transformation with base 10. For the correlations, the Spearman *rho* non-parametric correlation procedure was used.

Memory fluency

On average, participants recalled 4.4 memories involving their parents from their early life (see Table 1). Of these, approximately 72% involved positive emotions, 25% involved negative emotions, and 4% were neutral. A one-way ANOVA was calculated on the total number of memories and then repeated separately for each of the different emotional types of memories, with gender the between-participants variable. There was a tendency for women to recall more memories overall than men, $F(1, 99) = 2.92, p = .09$ ($M_s = 4.7$ vs 4.0 for women and men, respectively), and women recalled significantly more positive memories than did men, $F(1, 99) = 6.60, p = .012$ ($M_s = 3.5$ vs 2.7 for women and men, respectively). However, the number of memories about negative and neutral events did not differ

by gender, $F(1, 99) = 0.65, p > .05$, and $F(1, 99) = 0.14, p > .05$, respectively. There was no difference between men and women in the number of episodic or script memories they produced, $F(1, 99) = 0.02, p > .05$, and $F(1, 99) = 3.13, p > .05$.

Age of earliest memory

The mean age of earliest memory for our sample was 3.46 years (see Table 1). A one-way ANOVA on the age of earliest memory, with gender the between-participants variable, was nonsignificant, $F(1, 98) = 0.25, p > .05$. Thus, there was no difference between males and females in how old they were at the time of their first memory.

Parent-child relationship quality and memory

Correlations were computed (Spearman's *rho*) between the variables assessed in the two questionnaires on the quality of parent-child interaction and the number of memories participants recalled, including the number of positive, negative, and neutral ones and the number of episodic and script ones. The measures on parent-child interaction included the affective quality (positive or negative) of the parent-child relationship for mother and father separately as well as the degree of parental involvement. These correlations are found in Table 2.

Males who had a more positive parent-child relationship with both their mother and their father, as well as having parents who were more involved in their lives, recalled more memories overall. They also recalled more memories that had a positive affective tone and more memories

TABLE 1
Age of earliest memory and total number of memories recalled

	Male		Female		Both genders	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age of earliest memory	3.51	1.08	3.41	0.93	3.46	1.01
Total # memories	4.02	2.13	4.70	2.01	4.36	2.09
# Positive memories	2.78	1.79	3.54	1.84	3.16	1.85
# Negative memories	1.18	1.21	1.00	0.97	1.09	1.10
# Neutral memories	0.20	0.53	0.16	0.42	0.18	0.48
# Episodic memories	2.10	1.88	2.08	1.12	2.09	2.00
# Script memories	1.92	1.72	2.62	2.22	2.27	2.00

Age of earliest memory and total number of memories recalled, including positive, negative, and neutral memories, and if memories were episodic or script.

TABLE 2
Correlations

Memory measures	Parent-child relationship measures				
	Pos. -Mom	Pos. -Dad	Neg. -Mom	Neg. -Dad	Involvement
<i>Males</i>					
Total memories	.304 *	.352*	-.171	.039	.466***
Positive memories	.253 +	.426**	-.184	.051	.462***
Negative memories	.094	-.086	.104	-.145	.094
Neutral memories	-.032	.061	.199	.148	-.069
Episodic memories	.392**	.264 +	.056	-.052	.324*
Script memories	-.083	.105	-.233	.064	.166
Earliest memories	-.093	.053	.005	-.65	-.139
<i>Females</i>					
Total memories	.134	.022	-.041	.084	.063
Positive memories	.070	.050	-.144	-.014	.078
Negative memories	-.061	-.134	.136	.130	-.213
Neutral memories	.324*	.102	.019	.239	.228
Episodic memories	.096	-.188	-.228	.019	-.111
Script memories	.001	.197	.114	.098	.095
Earliest memories	-.042	.030	.110	-.052	.371*

Correlations between memory measures and the quality of parent-child relationships as well as the amount of parental involvement.

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

that were episodic, i.e., about specific events that occurred at specific times and places. These three relationship variables, namely positive mother-child relationship, positive father-child relationship, and parental involvement, were highly inter-correlated (see Table 3). Surprisingly, there were no similar correlations between memory and parent-child relationship variables for females, with one exception: Females who had more involved parents had an earlier age of first memory than did those with less involved parents. However, parental involvement as well as the affective quality of parent-child relationships were unrelated to how many memories of any type were recalled.

Finally, stepwise regressions were run on each of the memory measures, separately for each gender. The variables that were entered as predictors were the measures of positive mother-child, positive father-child, negative mother-child, and negative father-child relationship as well as parental involvement. For the regression on the total number of memories recalled by males, the only significant factor was parental involvement, $F(1, 47) = 13.56$, $p < .001$, $R^2 = .224$, Standardised $\beta = .473$. For the regression on the number of positive memories recalled by males, the only significant factor was parental involvement, $F(1, 47) = 13.94$, $p < .001$, $R^2 = .241$, Standardised $\beta = .490$. In no other regression

TABLE 3
Intercorrelations

Relationship measures	Parent-child relationship measures				
	Pos. -Mom	Pos. -Dad	Neg. -Mom	Neg. -Dad	Involvement
Positive - Mom	-	.669***	-.178	.174	.493***
Positive - Dad	.608***	-	-.185	.038	.481***
Negative - Mom	-.277*	-.205 +	-	.416**	-.067
Negative - Dad	.066	-.133	.276*	-	.030
Involvement	.525***	.416***	-.075	-.096	-

Intercorrelations between the measures of parent-child relationship quality.

+ $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

analysis was a parent-child relationship variable a significant predictor for a memory measure.

Summary

Women recalled more early memories than did men, especially positive ones, although there was no gender difference in the age of earliest memory. The quality of the parent-child relationship was related to how many and what type of memories men had, although not their age of earliest memory. In contrast, these relationship variables were only related to the age of earliest memory for women.

DISCUSSION

As expected, female participants recalled more memories from their early years, particularly memories of positive experiences (which were the majority of memories). This is consistent with prior research suggesting that women have more accessible early memories than do men (Davis, 1999; Mullen, 1994; Rubin, 2000). On the other hand, there were no gender differences in the age of the earliest memory that participants could retrieve. This may be because we limited the topic of their earliest memory to events that involved their parents. It is possible that if participants had been asked for their earliest memory, regardless of what it was about, gender differences might have emerged.

The main focus of this research was the relationship between how many memories individuals could retrieve from their early childhood and the quality of their parent-child relations. We hypothesised that positive parent-child relations, including positive affective quality and parental involvement, would be associated with individuals recalling more memories of their early childhood. As well, we hypothesised that those memories would be more likely to be about specific events that took place at a particular place and time. Both of these hypotheses were confirmed, but only for males. For females, the only significant relationship was between parental involvement and earlier first memories.

Why might the relationship between the number of early memories one can retrieve and one's parent-child relationship be so different for males and females? One possibility is that the young girls are immersed in a more extensive context of

talk, including memory-talk, than are boys. In the meta-analysis by Leaper, Anderson, and Sanders (1998), mothers were found to talk more frequently with their daughters than with their sons about everyday events. Both mothers and fathers engage in more reminiscing about shared events with daughters than with sons, and such memory-talk is more elaborative with daughters (Fivush, 1998; Fivush et al., 2006). As well, parents more frequently reference emotion with their daughters, which may increase the meaning of the events (Adams, Kuebli, Boyle, & Fivush, 1995; Dunn, Bretherton, & Munn, 1987; Fivush, 1998; Kuebli, Butler, & Fivush, 1995; Kuebli & Fivush, 1992). Taken together, this research supports the notion that early linguistic socialisation is qualitatively different for boys and girls. As Reese and Fivush (1993) state, "reminiscing [memory-talk] may be a sex-typed activity" (p. 596).

If girls are typically immersed in an environment that is rich in talk, including memory-talk, it may be that the particular characteristics of the parent-child relationship matter less for girls than for boys. In contrast, interactions with boys are more likely to be based on physical interaction rather than verbal exchange (Collins & Russell, 1991; Leaper et al., 1998; Russell & Saebel, 1997). For boys, then, the nature of the parent-child relationship may be more influential when it comes to memory about their early life, and parental involvement in particular may be important. When parents are warm and highly involved in their sons' lives, they may be more likely to ask their sons about what happened during their day at those times when parents were not there. In fact, one of the questions in Capaldi and Patterson's (1989) Parental Monitoring Scale specifically asks about how much respondents talked with their parents about the events that occurred when they were not together. Thus, parents who have an affectively positive relationship and high involvement with their sons may engage in more memory-talk than do parents who have less warm involvement in their sons' lives. That is, they may have been more likely to engage in the sort of memory-talk that girls are frequently exposed to. And in turn, this enhanced amount of memory-talk may help their sons recall the details of the events that are talked about (Boland et al., 2003; Leichtman et al., 2000; McGuigan & Salmon, 2004; Peterson et al., 2007). Thus, it may be that boys who engaged in more memory-talk with their parents when they

were preschool-aged have more accessible memories of that period of their lives.

Another possible contribution to our gender-differentiated findings is related to the life story model of identity developed by McAdams (1985, 1993, 1996). McAdams' model posits that when individuals reach the age of emergent adulthood (specifically their late teens and early 20s), they reinterpret and reconstruct their personal pasts in order to create life stories that make sense to them and make their lives personally meaningful. These life stories are constructed within a cultural context, i.e., they reflect the cultural values to which the individual is exposed, including social roles ascribed to gender. In fact, according to McAdams, gender is an important theme that becomes woven into an individual's evolving life story. Thus, at this developmental stage of emerging adulthood, individuals integrate their life into a culturally meaningful story that incorporates who they were in the past, who they feel they are in the present, and who they aspire to be in the future (Habermas & Bluck, 2000).

In an investigation of how many memories of early life (before age 6) that individuals of different ages could recall in a timed retrieval period, Peterson, Noel, Kippenhuck, Harmundal, and Vincent (2008) found that boys and girls in grades 5 and 8/9 retrieved the same number of memories about their early life. However, the same was not true for young adults. Male university students recalled significantly fewer early memories than did female university students. These findings were interpreted as consistent with McAdam's proposal of gender differentiation in the life-stories of young adults. A gender stereotype is that women have better memory for personal experience than do men, particularly when those experiences are relevant to gender-stereotyped topics such as family and relationships (Pillemer, Wink, DiDonata, & Sanborn, 2003). Recall that in the present study research participants were specifically asked to recall memories of their family. Such memories can potentially be seen as gender-relevant, and therefore subject to the re-interpretation and reconstruction that McAdams suggests takes place in young adulthood. If people's memories of their past are reconstructed, then having strongly involved parents with whom one had positive affective relationships may counteract the tendency of males to selectively forget early family experiences as inappropriate to their emergent, gender-appropriate life story. On the

other hand, no such counter-acting is necessary for women, who are expected to be able to retrieve memories of relationships and family interaction.

The correlations between parent-child relationship and the participants' age of earliest memory are different from those between parent-child relationship and the number of memories that participants retrieve. Parental involvement is positively related to the age of earliest memory for females, although not for males. Thus, parents who spend more time talking with their daughters about the events of their lives may help those daughters access earlier events from when they were younger. But for sons, such involvement seems to have an across-the-board effect in making their memories more accessible.

To summarise, the aim of this research was to see if social variables, specifically parent-child relationships, have a significant impact on people's memories of their early life. One line of extant research has established that the memories of young children seem to be affected by the nature of parent-child talk; when parents engage in more frequent and more elaborative memory-talk, children recall more. The other line of extant research has shown that social variables such as culture and socialised gendered behaviour affect the age of people's earliest memory as well as the total number of memories that they can retrieve from their earliest years. In the present study we directly explored the connection between parent-child relationships as seen by adults and their early memory. We found that, for males, their current perspective on their relationships with their parents was indeed related to how many memories from their preschool years they could retrieve in a timed retrieval period, although there was not such a relationship for women. Men who had warmer and more involved parents recalled more memories from their early lives. The only relationship between early memory and parent-child relationship for women was for how young they had been at the time of their earliest memory. Women with more involved parents had a younger age of earliest memory. Taken together, these findings suggest that one's social relationships with one's parents can affect the accessibility of memories of one's earliest years, even though these memories are for events far in the past.

There are a number of limitations to this study. Most importantly, we are assuming that parent-child relationships have remained consistent over almost two decades, such that questionnaires

about current parent-child relationships filled out by 20-year-olds reflect the nature of the parent-child relationship many years earlier. It would be nice to have more direct measures of the amount of parent-child talk, but such a prospective study would be difficult to conduct. As well, the respondents limited themselves to talking about memories involving their families; the results might not have been the same if there had been no constraints put on their memories. Nevertheless, a social variable, specifically parent-child relationship quality, seems to be related to one's ability to retrieve one's past, particularly for men.

In terms of future research these findings need to be replicated, especially with individuals from different cultural backgrounds. These data were collected from young Italian adults and the patterns of relationships among variables that we found could well be particular to the culture of our respondents. Indeed, cultural differences in childhood amnesia, including both content and number of early memories, are commonly found (see review in Wang, 2003). Different findings using samples from different cultures do not undercut our conclusion that the quality of parent-child relationships influences an individual's ability to retrieve memories from their early years; rather, they would support the increasing body of work emphasising the important mediating role of culture.

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