

## **The Making of Autobiographical Memory: Intersections of Culture, Narratives and Identity**

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Acknowledgments: Tilman Habermas was supported by the Alexander von Humboldt Foundation, Germany, grant 3.1-TCVERL-DEU/1129524 when working on this paper.

Published as Fivush, R., Habermas, T., Waters, T., & Zaman, W. (2011). The making of autobiographical memory: Intersections of culture, narrative and identity. *International Journal of Psychology*, 46, 321-345. Doi: 10.1080/00207594.2011.596541 © Taylor & Francis  
<http://www.tandfonline.com/doi/abs/10.1080/00207594.2011.596541#.UygMn86hFyI>

### Abstract

Autobiographical memory is a uniquely human form of memory that integrates individual experiences of self with cultural frames for understanding identities and lives. In this review, we present a theoretical and empirical overview of the sociocultural development of autobiographical memory (Nelson & Fivush, 2004), detailing the emergence of autobiographical memory during the preschool years and the formation of a life narrative during adolescence. More specifically, we present evidence that individual differences in parental reminiscing style are related to children's developing autobiographical narratives. Parents who structure more elaborated coherent personal narratives with their young children have children who, by the end of the preschool years, provide more detailed and coherent personal narratives, and show a more differentiated and coherent sense of self. Narrative structuring of autobiographical remembering follows a protracted developmental course through adolescence, as individuals develop social cognitive skills for temporal understanding and causal reasoning that allows autobiographical memories to be integrated into an overarching life narrative that defines emerging identity. In addition, adolescents begin to use culturally available canonical biographical forms, life scripts and master narratives to construct a life story and inform their own autobiographical narrative identity. This process continues to be socially constructed in local interactions; we present exploratory evidence that parents help adolescents structure life narratives during co-constructed reminiscing and that adolescents use parents and families as a source for their own autobiographical content and structure. Ultimately, we argue that autobiography is a critical developmental skill; narrating our personal past connects us to our selves, our families, our communities and our cultures.



Autobiographical memory is a uniquely human form of memory that goes beyond recalling the who, what, where and when of an event, to include memory of how this event occurred as it did, what it means and why it is important (Bruner, 1990; Fivush, 2010; Fivush & Haden, 1997; Labov & Waletzky, 1967; Ricoeur, 1991). More than simple episodic recall, autobiographical memory is rich with thoughts, emotions, and evaluations about what happened, and provides explanatory frameworks replete with human intentions and motivations. Autobiographical memories comprise the story of our lives, rich in interactions and relationships, and in a very deep sense, provide a sense of self through a narrative identity (Habermas & Bluck, 2000; McAdams, 1992). From this perspective, autobiographical memory is socially and culturally mediated in at least two ways. First, autobiographical memory emerges within social interactions that focus on the telling and retelling of significant life events (Nelson & Fivush, 2004), and second, autobiographical memory is modulated by the sociocultural models available for organizing and understanding a human life, including narrative genres and life scripts (Berntsen & Rubin, 2004; Habermas, 2007; Thorne & McLean, 2003).

In this article, we review the current state of research on the development of autobiographical memory. To place this research in theoretical context, we first review the sociocultural model of autobiographical memory (Nelson & Fivush, 2004), and describe the role of social interaction broadly, and language and narrative more specifically, in the development of autobiographical memories. As we argue throughout this review, narratives are the process by which we share and create autobiographical memories, and through shared narration we create individual identities. Bruner (1987) proposed that autobiographical narratives enable individuals to structure their experiences in a format that facilitates subjective reflection, and thus, the process of making sense of life, which is critical to identity development (Kroger, 1996; Kunnen & Bosma, 2000). Kegan (1994) argues that each person experiences his or her world from a unique perspective, and in order to make sense of their subjective worlds, individuals must actively organize their experiences using guiding principles that allow them to construct meaning from their experiences.

We extend these arguments to posit that autobiographical narratives are created within social interactions and that individual autobiographical narratives are formed and informed by social and cultural frames. More specifically, we argue that cultures provide organizational and evaluative frameworks for narrating lives, including canonical cultural biographies, life scripts and master narratives. These cultural tools inform the ways individuals narrate their own personal experiences within local social interactions. These interactions begin very early in development between parents and children and within families, and facilitate the development of autobiographical narratives that help define memory, self and identity. These relations are, at all points, dialectical, such that individual autobiographical narratives reflect back to cultural forms in an evolving spiral; cultures inform individual narrative identities and individual narrative identities inform cultural forms. In a very real sense, autobiographical narratives are the point at which the individual and culture intersect.

The first section describes the sociocultural model of autobiographical memory in more detail, and delineates the roles of language and narratives in the process of autobiographical memory development. We then turn to two major developmental periods when we see great changes in autobiographical memory: First, the preschool years, when parentally guided narrative co-constructions of the past set the stage for children's developing autobiographical memories and relations to emerging self concepts. Second, we turn to adolescence, when

multiple developments in individual social and cognitive skills, the developmental imperative for developing an adult identity, and the knowledge and understanding of cultural forms of biography and autobiography converge and facilitate the development of a life narrative that helps define individual identity. Where possible, given the limited research, we weave in theory and data about cultural differences. Ultimately, our goal is to explicate autobiographical memory as the heart of human understanding of self and other, as the way in which individuals create a sense of self as continuous and coherent through time, with a past that explains the present and projects into the future and places the individual within a family, a community and a culture.

### **The Sociocultural Model of Autobiographical Memory**

All human action is situated within specific social and cultural frameworks that define the form and meaning of that action. More specifically, cultures define the skills and activities that are deemed important in order to become a competent member of that culture. Cultures promote mediated interactions in which children are drawn into participation in these activities in order to learn these critical skills (Rogoff, 1990; Vygotsky, 1978). For example, in modern industrialized cultures, literacy is a critical skill. Beginning at birth, infants in these cultures are exposed to the signs and symbols of literacy; homes are strewn with magnetic letters and numbers, alphabet picture books, and letters and numbers printed on everything from building blocks to clothing. Well before infants are capable of understanding the significance of these symbols, they are already participating in social interactions that highlight their importance.

Autobiographical memory is also a socioculturally mediated skill (see Nelson & Fivush, 2004, for a full explication of this theory). Again, in modern industrialized societies, the ability to have and tell a story about one's life is critical. As argued by Nelson (2001; 2003) and McAdams (1992), this skill may have become increasingly important as humans moved from traditional cultures, where individuals are defined in terms of their social relationships (e.g., parents, spouse, children) and societal and vocational role (e.g., blacksmith, shoemaker), to more industrialized cultures, where individuals moved in and out of multiple geographical locations, social relationships and vocational roles across their lifetime. Whereas in traditional cultures, individual lives gain coherence and consistency through stability of place, roles and relationships, in modern industrialized cultures, individual lives gain coherence and consistency through an individual narrative that weaves these disparate parts together. Thus in modern cultures, autobiographical narratives serve to create a sense of individual consistency and coherence across time (Conway, Singer, & Tagini, 2004).

From the moment the individual is born, modern cultures reinforce the importance of having and telling one's story. From birth, parents are already communicating the importance of this skill by telling their infants stories about the parents and grandparents, integrating the infant into this ongoing family narrative (Fiese, Hooker, Kotary, Schwagler, & Rimmer, 1995). As early as 16 months of age, well before infants can fully participate in these conversations, parents are already beginning to scaffold their child's ability to narrate their past by asking and elaborating on questions about what happened (Reese, 2002). For example, the mother will ask, "Did we have fun at the park today? What did we do? Did we go on the swings?" and wait for some confirmation by the child before continuing, "Yes, and didn't we swing high? Wasn't that fun?" In these early, barely co-constructed narratives of the personal past, parents are already highlighting for children that telling and sharing the past is an important social activity. They also convey that there are certain ways to tell these kinds of stories, focusing not just on

what happened but why it was interesting, important, and emotional. Even in the preschool years, children are called on to share their experiences with others, to tell Daddy what one had for lunch, or Grandmother what one did at the zoo. They are already expected to engage in showing and sharing, telling stories about objects brought to share, or telling stories of what one did over the weekend. Everyday conversation, even with preschoolers, is studded with references to the past; the personal past is a topic of spontaneous every day conversation as frequently as a dozen times an hour (Bohanek, Fivush, Zaman, Lepore, Merchant, & Duke, 2009; Miller, 1994). It is clear that personal narratives are frequent and valued parts of everyday conversation beginning very early in development.

As is apparent from this brief overview, language and narrative are critical in the development of autobiographical memory. From very early in development, children are being drawn into conversations about the past and are invited to participate in co-constructing narratives of daily events. Narratives provide a canonical cultural form for constructing coherent accounts of what occurred (Bruner, 1990; Fivush, 2007; 2010; Ricouer, 1991). More specifically, narratives provide a chronological sequence of events that allow the teller and listener to place events on a timeline, both internal to the event (the sequence of specific actions) and placing this event in a larger temporal framework (when this event happened relative to other events, and how this event fits into a larger narrative of life events, an issue we return to later in this review). Narratives also move beyond reporting sequences of what happened to include information about how and why. Narratives are infused with what individuals were thinking, what they were feeling, why this unfolded the way it did, and what it ultimately means. Personal narratives serve a function. Some narratives may simply be entertaining stories, but many narratives serve the function of defining self, defining relationships with others, and regulating emotional experiences through drawing moral and life lessons (Bluck & Alea, 2002; Habermas & Bluck, 2000; Pillemer, 1998). Narratives provide the framework for understanding and evaluating human experience.

Thus, narratives bring a sense of personal meaning to experienced events and much of this is carried through narrative coherence. Although coherence can be a slippery term and has been defined in many ways in the autobiographical memory and narrative literature (see Reese et al., in press, for an overview), we adopt here a definition of narrative coherence developed by Habermas and Bluck (2000), that includes temporal order, thematic comparisons and summaries, and links between events and their causes or motives and consequences. In the case of life narratives, congruence with the cultural concept of biography, a concept that we discuss in more detail below, also contributes to global coherence. Lack of this kind of coherence manifests as dis coherence, defined as lack of organization or causal connections among disparate events in one's life (Linde, 1993), not necessarily as incoherence, defined as fragmented and contradictory narratives of individual events. A mature autobiography normatively requires more than an assembly of unrelated memories. When reading autobiographies or listening to life narratives we expect a more or less coherent account of how individuals understand their own development and of how they have tried to lead a meaningful life. Thus ultimately autobiographical memory is about weaving together multiple specific episodes into an overarching life narrative that explains an individual life course.

As is apparent from this discussion, autobiographical narratives are critical for identity. Who we are is very much defined by the way in which we remember and reconstruct our past experiences; creating narratives of our past simultaneously creates a narrative of our self

(Habermas & Bluck, 2000; McAdams 2001; McLean, Pasupathi, & Pals, 2007). In the remainder of this review, we turn to the empirical support of these ideas. We first review the data on the early emergence of autobiographical memory during the preschool years, focusing on how parents structure, or scaffold, their children's emerging personal narratives to help them learn both how to narrate their own lives and how this is related to developing identity or self-concept. We then turn to adolescence, when autobiographical memory transitions from memories of single events into a more coherent and cohesive life narrative. We note that the majority of research has been conducted with broadly middle class White Western populations. We explicate theoretically how cultural models of selves and lives infuse individual autobiographical narratives, and where available, we present data from different cultures.

### **Early Emergence of Autobiographical Memory**

Children begin referencing their personal past virtually as soon as they start talking (Eisenberg, 1985; Hudson, 1990), but these references are fleeting and are most often just a word or two. Parents, however, quickly draw their children into conversations about past events, expanding and elaborating on the children's contributions. For example, the child may say "berries" and the mother responds, "Yes we had berries for breakfast this morning. Weren't they good?" Between three and five years of age, children become increasingly able to engage in conversations about their past. Yet, they still rely on adults to help them structure their experiences into coherent, elaborated narratives (Fivush, 2007), and parents who do this contribute both to their children's developing narrative skills, and to their emerging sense of self.

### **Maternal Reminiscing Style**

Mothers in both Western and Eastern cultures differ in how they structure, or scaffold, conversations about past events with their young children, and these differences have been shown to differentially impact their children's narrative development (see Fivush, Haden, & Reese, 2006, for a review). Fivush and colleagues (Fivush & Fromhoff, 1988; Hudson, 1990; Nelson & Fivush, 2004) have distinguished between mothers who have a high elaborative compared to a low elaborative, or repetitive, style during reminiscing with children. High elaborative mothers talk frequently about the past, and in longer, more detailed ways which extend and elaborate upon the events of the narrative. In contrast, low elaborative mothers spend less time talking about the past with their children, and even when they do, they ask few and redundant questions that do not contribute to the development of the story. To illustrate these differences, we present some excerpts; the first is a conversation between a high elaborative Euro-American mother and her 4-year-old child, when asked to reminisce about a time the child felt sad:

Mother: This one says being sad. We have to talk about a time when you were sad.

Child: We didn't go to Fernbank.

Mother: That's right, yesterday when we didn't go to Fernbank. That made you sad? Yeah. I was kinda sad too 'cause I really thought it'd be fun to go. But it didn't work out did it? Do you remember why?

Child: No.

Mother: No? I think they're two things. Who was keeping you?

Child: John.

Mother: John kinda overslept on his nap, right?

Child: Yeah.

Mother: And by the time he got up it was late, so we didn't have time to really get lunch before

Child: And I had an accident.

Mother: You had an accident. You're right. And we didn't wanna go to Fernbank if you were having an accident. And do you know what else there was?

Child: What?

Mother: What'd Daddy really want to do yesterday?

Child: I don't know

Mother: What did Daddy do all afternoon?

Child: Daddy wanted to watch football.

Mother: Daddy really wanted to watch the football game didn't Daddy?

As evident, this mother elicits and expands on her child's contribution with each conversational turn, weaving an evaluative and explanatory narrative about the event, including multiple family members thoughts and emotions into a coherent story. On the other hand, the low elaborative mother below (who happens to be Afro-American, although it must be noted that maternal elaborative style does not differ systematically by race within Western cultures) asks mostly yes-no questions, and does not allow the child to contribute his version of the story.

Mother: What makes you sad? Does anything make you sad?

Child: No.

Mother: You know what sad means?

Child: No.

Mother: It means when, let's say you wanna go outside and we don't wanna go outside to watch you so you have to stay in the house. Do you be feeling sad then?

Child: Uh huh.

Mother: You think so?

Child: Uh huh.

Mother: Is that why you cry?

Child: Uh huh.

Mother: 'Cause you wanna get your way?

Child: Uh huh.

Mother: Yeah? So whenever you're sad do normally you cry?

Child: Uh huh.

Mother: Do you know why you're cryin'?

Child: Because you said no one can watch me outside and I said, "You can watch me." And you said, "I don't wanna go outside."

Mother: And that made you sad?

Child: Uh huh.

This mother focuses on getting her child to respond to particular questions by simply repeating them over and over. There is no sense of a beginning, middle and end to the narrative. Maternal elaborative styles remain consistent over time as children get older (Reese, Haden, & Fivush, 1993), and is also consistent over co-constructed narratives of very different

types of events, such as highly emotional experiences and play experiences (Zaman & Fivush, 2011a). Maternal elaborative style is also consistent across siblings (Haden, 1998), suggesting that the mother has a consistent reminiscing style. However, elaborative co-construction does not extend over different conversational contexts, such as free play or caregiving activities, nor does it correlate with mothers' level of talkativeness (Haden & Fivush, 1996; Hoff-Ginsburg, 1991). This suggests that reminiscing is a unique context in which mothers provide the scaffolding necessary to help build their children's narrative skills.

Mothers who are more elaborative during reminiscing with their children have children who provide more detailed, coherent narratives about their experiences, both concurrently and over time (Fivush & Fromhoff, 1988). For example, when Euro- and Afro-American mothers are more elaborative with their 40-month old children, these children provide longer, more elaborate, and more evaluative memories about their past (Reese & Fivush, 1993). Longitudinally, parents who are more elaborative with their children at age 2.5 years have children who, a year and two years later, are also more elaborate in their independent conversations with a researcher (Fivush, 1991; Reese et al., 1993).

Importantly, it is not simply that more elaborative mothers have more elaborative children, but that mothers who elaborate on certain aspects of shared experiences, have children who come to elaborate on those same aspects of experience. Fivush and her colleagues demonstrated that Euro- and Afro-American mothers who focus specifically on temporal and causal information in their co-constructed narratives have children who include more of this specific type of information in their own narratives up to a year later (Fivush, 1991). Further, mothers who focus more on emotional and evaluative information have children who include more of this specific type of information one and 2 years later (Haden, Haine, & Fivush, 1997).

In addition to correlational longitudinal research demonstrating the efficacy of maternal narrative structure on children's developing abilities to create coherent narratives of their own personal experiences, there is also some experimental work supporting this claim. Peterson and McCabe (2004) found that Canadian mothers who elaborated on neither context nor content in reminiscing about a shared event had children who produced impoverished independent narratives months later. These mothers were then taught how to elaborate on specific narrative variables, and intriguingly, those mothers taught to encourage more context elaboration during reminiscing had children who embedded their independent narratives in more elaborated spatial-temporal contexts two years later (Peterson, Jesso, & McCabe, 1999). However, those mothers taught to encourage the telling of more elaborative content during reminiscing had children who provided more information and produced more content-rich independent narratives later on, implying that a mother's ability to co-construct coherent, elaborate stories with her child directly contributes to the child's ability to later construct coherent, elaborate narratives of her own. Thus there is converging correlational and experimental evidence that children learn to structure their personal narratives in much the same way their parents do during reminiscing, providing the same quality of evaluations and orientations in their narratives, and the same quantity of memory information as do their parents (Cleveland, Reese, & Grolnick, 2006; Haden et al., 1997).

Moreover, these relations are maintained through middle childhood and adolescence, as children become more skilled narrators. When recalling stressful experiences related to their 8- to 12-year old children's asthma, low income, mostly Afro-American mothers who



include more emotions and explanations while reminiscing with their children have children who also include more emotions and explanations (Sales & Fivush, 2005). Similarly, Bauer and colleagues found that middle-income Euro-American mothers who use more causal explanations and internal state language in co-constructed narratives with their 7- to 11-year old children about a devastating natural disaster had children who, 6 months later, used more of this kind of language in their own narratives of this event (Ackil, Waters, Dropnik, Dunisch, & Bauer, 1999; Bauer, Burch, Van Abbema, & Ackil, 2007). Hence, maternal reminiscing style appears to be critical for teaching children how to narrate the stories of their lives.

### **Relations to Self**

Parents who help their children create more coherent, elaborative narratives about their experiences may also be helping them to construct a more elaborated, coherent sense of self across development (Fivush, 2007). Importantly, when preschool children and their mothers engage in more elaborative conversations, particularly about negative emotions, these children are more likely to display an organized self-concept on dimensions such as achievement orientation and need for social closeness (Bird & Reese, 2006; Welch-Ross, Fasig, & Farrar, 1999). Reese, Yan, Jack and Hayne (2010) argue that children whose mothers engage them in richer conversations about past experiences that focus on the meaning of those experiences, may be better able to draw upon specific, personally relevant memories when constructing a self-concept and this may become particularly important when faced with experiences of high emotional content. In line with this interpretation, Wang, Doan and Song (2010) found that both American and Chinese mothers who use internal state language when reminiscing with their 3-year-old children about negative experiences had children who displayed higher levels of self trait descriptions. Maternal elaborative reminiscing style, especially about emotional experiences, is also related to children's developing self-esteem. When Euro-American and Afro-American mothers emphasize and shed light on the positive aspects of events, even when the events themselves are negative, both preschool and older children report higher levels of self-esteem (Marin, Bohanek & Fivush, 2008; Reese, Bird, & Tripp, 2007). Thus, when mothers provide the scaffolding necessary for children to construct their autobiographical narratives, they may simultaneously be influencing their children's self understanding.

Although many of these findings have been repeatedly replicated in diverse mother-child dyads, some differences do emerge in comparisons between more independent, e.g., Western, cultures and more interdependent, e.g., Eastern, cultures, indicating that culture is an important filter through which parents teach their children how to construct an autobiographical narrative. For example, in comparison to Asian mothers overall, American mothers tend to be more elaborative, asking more open-ended questions, elaborating more on the child's independent contributions, and focusing on the child's opinions. More culturally specific, Chinese mothers, are more likely to be rated as low-elaborative, asking more yes-no questions, focusing on factual aspects of the experience, and rarely taking into account the child's perspective on the event than Euro-American mothers (Wang, Leichtman, & Davies, 2000). Interestingly, four to six year old children already portray these cultural differences in their independent autobiographical narratives, with Chinese and Korean children providing more general and skeletal descriptions of their past, and American children providing more detailed descriptions of single events that contain more descriptives, personal preferences and opinions, and internal states (Han, Leichtman, & Wang, 1998). Leichtman, Wang, and Pillemer

(2003) conclude that different narrative environments may enforce specific cultural values and emphasize distinct aspects of the role of personal memories in the individual's life. In independent cultures, the primary role of reminiscing may be to construct a narrative of the self as an autonomous and agentic individual, whereas in interdependent cultures, reminiscing reinforces social and moral values, and connectedness and responsibility to others.

Importantly, the process by which parents facilitate children's developing sense of self also appears to be gendered, at least in Western samples (see Hayne & MacDonald, 2003, for different results on a sample of New Zealand mother-child dyads). During reminiscing, over half of parent-daughter narratives focus on social events, while only a third of parent-son narratives have the same focus (Buckner & Fivush, 2000). Over time, from age 40 months to age 70 months, both mothers and fathers increasingly reminisce about more social and emotional experiences with girls than with boys, and embed emotional experiences in more interpersonally situated events with daughters but in terms of more autonomous activities with sons (Fivush, Brotman, Buckner, & Goodman, 2000). Parent-daughter narratives also reference the child more than parent-son narratives and are more elaborate, particularly when discussing emotional experiences. These findings suggest that from a very young age, Euro-American girls and boys are socialized to attend to and discuss their emotions differently in the context of different types of activities. Of course, this is most likely a bi-directional process, with girls and boys contributing to their own socialization environment; girls may be more likely than boys to express interest in reminiscing more generally, and reminiscing about emotions more specifically (see Fivush, 2007, and Fivush & Buckner, 2003, for full arguments).

Indeed, by the age of 4-years-old, children are already mirroring the gender differences described above in their independent autobiographical narratives. Girls tell longer personal narratives than boys, and express more internal state language (Fivush, Haden, & Adam, 1995). By the age of 7, Euro- and Afro-American females tell more emotional and relationally oriented personal narratives than boys, whereas boys tell more autonomously oriented narratives than girls (Buckner & Fivush, 1998; Fivush et al., 2000). Clearly, boys and girls begin to incorporate different aspects of experiences into their independent narratives from a very young age, and these gender differences remain stable throughout childhood (Fivush et al., 1995), adolescence (Fivush, Bohanek, Zaman, & Grapin, in press; McLean & Breen, 2009; Thorne & McLean, 2002), and adulthood (Bauer, Stennes & Haight, 2003; Fivush & Buckner, 2003; Thorne & McLean, 2002; Niedzwieska, 2003). Consistent with gender identity theory, gender differences in autobiographical narratives may reflect the fact that women are socialized to construct their identities around the more emotional and relational aspects of their experiences, whereas men are taught to construct their identities around the more autonomous and achievement aspects of their experiences, at least in Western cultures (Gilligan, 1982).

#### **Identity and Emergence of the Life Story in Adolescence**

While the ability to narrate single stories is more or less in place by the end of childhood (Peterson & McCabe, 1994), a full life narrative involves the integration of multiple personally significant experiences into an overarching story that encompasses an entire life, and this does not seem to develop fully until adolescence (Erikson 1968; Habermas & Bluck, 2000; McAdams, 1985). The life story may manifest in at least two ways. First is the ability to integrate multiple episodes into an overarching, causally connected, coherent life narrative. When life narratives are produced, global coherence is created by the overall temporal structure and the causal-

motivational and thematic connections made between individual events, especially the type of autobiographical reasoning that links events to each other across time.

A second manifestation of the life story is probably more frequent in everyday life, and involves more partial autobiographical reasoning (Habermas, 2011). This involves linking personal experiences with other, distant biographically salient experiences and facts, and with the development of the self, thereby attributing self-defining power to these memories. Thus, whereas even in early childhood, narratives of the personal past express a sense of self by situating the self in relevant contexts and attributing actions and responsibility to the self, the advent of the life story ties the personal past so closely to identity that narrative and self are no longer separable. When recounting specific past experiences, narrators may claim that past actions are atypical for them (not-me events; cf. Pasupathi, Mansour, & Brubaker, 2007) and may be explained or excused by reference to circumstance. When narrating one's entire life, however, the narrative may no longer be dismissed as irrelevant to the narrators' identity. Rather, the life story defines who the narrator claims to be. To be accepted as a responsible person, narrators have to demonstrate an understanding of how their personality and values have developed, influenced both by life's pitfalls and happenstance and by their own actions based on enduring values. Moreover, and most interesting in terms of evolving connections between self and culture, individuals need to construct personal continuity across change both for their own well-being and for being accepted as someone who assumes responsibility for past actions. With the advent of the life story in early adolescence, the development of autobiographical remembering and narrating merges with the development of an understanding of personal identity or personhood.

The reasons why autobiographical memory and the development of a life narrative follows such a protracted trajectory from preschool through adolescence are complex, and involve developments in both cognitive and social skills, as well as the developing motivation to create an adult identity. Construction of a life narrative also relies on learning the culturally available temporal and evaluative frameworks for interpreting a life, including culturally canonical biographies, life scripts and master narratives. Before presenting evidence on the development of globally coherent life narratives and on the cultural concept of biography, we first review some of the social-cognitive developments that may be prerequisites and the motivational context that fuels the emergence of the life story in adolescence. We then discuss how memories and narratives of single events develop in adolescence in relation to the developing life narrative, focusing on the ways in which adolescents begin to use more mature understandings of time and biography to link their own memories to their emerging life narrative. The following section brings these ideas back into the ways in which social interactions influence individual development, both in terms of life narratives and the ways in which narratives of other lives influence narrative identity. Throughout, we highlight how, especially with adolescent's expanding social and cognitive abilities, cultural frames (including culturally canonical biographies, life scripts and master narratives) and individual narratives are dialectically related such that the individual's autobiographical memories, narratives and identity are at all points interpreted within cultural genres for understanding selves and lives.

### **Social-Cognitive Developments in Adolescence**

Multiple cognitive and socio-emotional skills converge in adolescence to allow the individual to begin to create more complex autobiographical reasoning and narratives. Requisite cognitive skills include temporal understanding, causal and hypothetical reasoning

and textual interpretation. Temporal understanding includes both being able to recreate temporal sequences of actions within events, a skill that actually develops quite early, perhaps even in infancy (Bauer, 2007), and the more complex and slowly developing ability to sequence events across longer periods of time. There is surprisingly little research on children's developing understanding of time, and the results indicate that understanding of time is surprisingly late developing. For example, in Western samples, it is not until middle childhood that children are able to accurately locate in time which events were more recent or distant if these events occurred months rather than weeks in the past (Friedman, Reese, & Dai, 2009). Being able to locate past events in terms of the cultural tool of calendar time is also a requirement of modern life stories, yet calendar time is only acquired fully by around age 12 (for a review cf. Friedman, 1993).

A second set of cognitive skills that develop in adolescence and is critical for the formation of a life narrative is causal reasoning. Adolescents develop cognitive skills that allow for more integrated, nuanced and systematic reasoning about relations among events, including hypothetical events (Inhelder & Piaget, 1959). Closer to the development of the life story, causal reasoning begins to be applied to human development in preadolescence. For example, older children begin to construct internal and external causes for the temporally extended development of drawing and verbal skills, which can be combined in preadolescence. In early adolescence, human development begins to be conceived of in terms of an integrated process that constitutes an individual life (Montangero, 1996). Also the person concept changes from describing people in terms of habits and attitudes to conceiving of individuals in terms of underlying abstract psychological traits such as being a fighter or a nerd, which allows constructing personal continuity across more superficial change. Reasoning about underlying psychological traits leads adolescents to construct a sense that underlying predispositions or tendencies are continuous over time, and any individual's behavior should be interpreted as demonstrating this type of consistency. Indeed, when Euro-American adolescents engage in behavior that they view as inconsistent with self, they create narratives of explanation focused on how this experience is "not like me" or they provide justifications for how and why external circumstances overrode their consistent self behavior (Pasupathi et al., 2007), indicating the strong tendency to attempt to create continuity across the events of one's life. In middle adolescence individuals begin to be conceived of in biographical terms, explaining individual traits with biographical experience (Selman, 1980). In a study of Euro-American preadolescents', older adolescents' and young adults' understanding of a short story, only older adolescents and young adults interpreted the protagonist's motives not only based on the present situation, but also by taking into account his specific biographical experiences (Feldman, Bruner, Kalmar, & Renderer, 1993). Along similar lines Canadian adolescents begin to construct personal identity first in terms of superficial change and basic self-sameness and then in terms of developmental transformations that explain personality change (Chandler, Lalonde, Sokol, & Hallett, 2003).

Other cognitive tools for constructing the life story regard the ability to summarize and to interpret narrative texts, which require stepping back from the text and, for example, extracting a moral from a story or to reason about author intentions (cf. Habermas & Bluck, 2000). Also epistemological development of thinking about how we come to know and how to be sure about what we know contributes to an emerging understanding that narrating one's life

implies more than mere remembering, namely a reconstructive and interpretative effort (King & Kitchener, 2004).

### **Identity Development in Adolescence**

In addition to cognitive tools, adolescence provides powerful motives to learn to construct a life story. In industrialized modern cultures, pre-adolescents begin to be called upon to provide this kind of life narrative, both as an academic exercise in reading biographies and writing their own life narratives. The diary is a cultural tool which in the past two centuries served to motivate adolescents to work on their autobiographies (Bernfeld, 1931). Also, as adolescents move in and out of multiple social contexts, they need to present themselves in terms of their biography.

These cultural affordances are complemented by the critical developmental task of adolescence to develop a healthy adult identity. Erikson (1968) described how adolescence heralds a “crisis” in the sense that the adolescent begins to question and explore previously accepted expectations, commitments and values. Partly due to the developing cognitive skills already discussed, and partly due to expanding social and cultural expectations, adolescents are faced with moving away from the family and into the community at large, leading to the dual and sometimes conflicting goals of maintaining connections and developing an autonomous self (Grotevant & Cooper, 1998; Marcia, 1980). Part of this task is to identify with, and perhaps commit to, ascribed social roles such as gender. In other respects, socially mobile modern societies require more initiative and flexibility from adolescents, who need to select personal values and identities and reconcile these with selective identifications with their parents. Erikson (1968) further argued that themes of connection and autonomy are played out through narratives that provide a basis for understanding of emerging and evolving identity. The best format for this ego-identity is not a static, categorical form of identity, but the more flexible and integrative form of the life story, as it allows the individual to create personal continuity across personal change.

Thus, for a myriad of cognitive, social and cultural reasons, adolescents face the task of developing a coherent life narrative. We now turn to a discussion of the data examining how this process unfolds across adolescence, examining first the development of global coherence in life narratives, and then how the life story informs autobiographical reasoning about specific event memories.

### **The Development of Global Coherence in Life Narratives**

When children are asked to tell their lives, they usually offer a jumble of interesting stories that in themselves may be quite emotional and may even carry biographical consequences. However children do not see the necessity and do not have the ability to order these events sequentially, nor do they relate these memories to each other. They select events on the basis of their emotional valence, enumerating, for example, good and bad memories. Their answer to the request to narrate their life may begin at any time in the life. Thus the sequence of narrated events is determined by local thematic associations between events, not by an overarching concept or schema of one’s life. Children mostly stop answering once no more interesting stories come to their mind. The consequence is that the last memory told is not the most recent one, and that there is neither a retrospective evaluation nor a prospect onto the future.

For example, Bill is eight and a half years old. When asked to tell his life, from birth to now, to include the most important things in his life and to tell the story so that the interviewer understands how he has become the person he is today, he begins like this:

“When I started learning to read and to write, that was important for me, and to calculate --- [to the interviewer] Can I also start at very, very beginning, when I was still small? [Interviewer: Sure] And when I learned to walk ---- [Bill pauses, then the interviewer asks: If you like, you tell me more in detail what happened.] Okay. And when I first went to school, I was very, very excited. --- Should I tell everything I have had in life? [Interviewer: Exactly] Okay, then I really got lots to tell. Then there was, when I was in the airplane for the first time, I was very afraid, I was excited, and then --- or when I was in the hospital, I was a little -, I was very, very afraid to have pneumonia --- Or when I learned to swim, when I wasn't yet able to swim, couldn't swim ...”.

Bill continues to enumerate experiences when he had been afraid or when he had been excited, and stops when no more experience of this kind comes to his mind.

This was the typical reply of 8-year-olds found when eliciting life narratives from 8, 12, 16, and 20 year old German participants (Habermas & de Silveira, 2008). In stark contrast, 12-year-olds provided temporally linear narratives. Many resembled a bureaucratic CV, mainly containing normative transitions such as kindergarten, school entry, school transition, and maybe some kind of ‘first time’ such as a first kiss or smoke. Many of them end with an extensive story about jealousy and treason among peers or an ever-repeating soccer story located in the present. These early adolescents thus have mastered the basic cultural and temporal template of a biography, which remains somewhat skeletal.

The typical life narrative by 16-year-olds sticks to the linear temporal order, but fleshes out the basic sequence of events of the life story with psychological considerations of motives and subjective reverberations of experiences. In contrast to the younger adolescents' life narratives, these do have the feel of real life stories, because narrators attempt to provide a psychological storyline, or a sense of how they have developed. To do so, they focus on formative experiences that have shaped their personality. Also, they may highlight experiences from which they have gained an insight into what is really important to them or in which direction they wish to redirect their life.

Life narratives of 20-year-olds differ most from those of the mid-adolescents by the fact that these young adults have finished secondary school and have had to think and decide about their professional future. While some narratives transport a sense of confusion regarding the present, others reconstruct a past that motivates present, mostly tentative choices that may lead to a future which they anticipate. There is more a sense of freedom of choice, but also sometimes bewilderment about this freedom, strongly reminiscent of Erikson's (1968) description of identity exploration in some, and of identity diffusion in others.

This increase in the different aspects of global coherence of life narratives across adolescence has been measured in several ways. As illustrated in the excerpts above, global ratings showed a major increase of global temporal coherence between ages 8 and 12, whereas global causal-motivation increased most between ages 12 and 16, and global thematic coherence increased most between ages 16 and 20 (Habermas & de Silveira, 2008). Bohn and Berntsen (2008) used another global measure of coherence on a sample of Danish children and adolescents. The authors rated the integration of narrative structure, to show that between

ages 9 and 15 written life narratives increased in global coherence. Thus, multiple measures converge on increasing coherence in life narratives across adolescence. How might this facilitate adolescents' developing knowledge of cultural frameworks for defining lives?

### **The Cultural Concept of Biography**

In comparison to narratives of single events, entire life narratives appear to be less of a natural kind. Still, as argued throughout this paper, individual life narratives are constructed within social and cultural contexts that define what a life is and how it should be lived (e.g., Fivush, 2010; McAdams & Pals, 2006; Nelson & Fivush, 2004). As members of a social and cultural context we are all implicitly, and often explicitly, informed of the culturally valued ways of narrating our experiences, of the appropriate roles to play, reactions to have, and emotions to express. Normative expectations for what constitutes an appropriate life narrative and what does not, termed cultural concept of biography (Habermas & Bluck, 2000), are historically relatively young. The Western prototype for life narratives is the genre of literary autobiography, especially the genre of *Bildungsroman*, that is, an account of the development of one's personality. Coherence with the cultural concept of biography, which is shared with listeners, contributes to creating global coherence in life narratives.

Two aspects of the cultural concept of biography have been studied developmentally. One is the normative shaping of the beginning and ending of life narratives. With age, the sequence of life events becomes more and more embedded by beginnings starting with birth, elaborating and contextualizing birth, and by endings with a final retrospective evaluation and a prospective consideration of possibilities and hopes. The steepest increase in these narrative devices was between late childhood and early adolescence in both German and Danish samples (Bohn & Berntsen, 2008; Habermas, Ehlert-Lerche, & de Silveira, 2009).

A related aspect of the cultural concept of biography that helps to create global coherence is a set of biographically salient, mostly normative transitional events that are expected to occur at specific ages (i.e. your first love will happen during your teenage years). This set of events has been termed the life script (Berntsen & Rubin, 2004). Specifically, the cultural life script is the culturally shared expectations regarding the temporal order of normative significant life events (e.g. getting married then having children). To test for the presence, and establish the contents, of the cultural life script, Berntsen and Rubin (2004) asked Danish participants to list the seven most important events they expected to occur in the average person's life from birth to death. Participants also provided ratings of importance, age the event would occur, and valence. Results indicated a large amount of agreement in both the events nominated and their timing, suggesting that participants were aware of the cultural expectations related to personally significant life events. Older adults, however, tend to name a less normative and more realistic and therefore also more variable set of events and range of normative ages (Bohn, 2010; Habermas, 2007). The events listed tended to be social and transitional in nature and less biological (e.g. puberty), suggesting that the cultural life script does not merely reflect life, but more specifically reflects the cultural expectations of what events will be self defining (Berntsen & Rubin, 2004).

Theoretically we might expect the cultural concept of biography to vary between cultures. However, the life script appears to be fairly similar in student populations of Western countries, reflecting a homogenized Western culture. When comparing Danish (Berntsen & Rubin, 2004) with American (Rubin, Berntsen, & Hutson, 2009), German (Habermas, 2007), Turkish (Erdogan, Baran, Avlar, Tas, & Tekcan, 2008) and Malaysian life scripts (Haque &

Hasking, in press). Still, only industrialized Western cultures have been studied thus far, asking mostly college students to participate, so it is critical to expand this research to Asian cultures and to non-industrialized cultures, as well as to multiple age groups, in order to examine how culture might influence the structure and content of life scripts.

Still, the importance of these kinds of cultural tools is highlighted by the finding that developing coherence of adolescents' life narratives is related to their developing knowledge of the life script. Again in Western cultures, between the ages of 9 and 15 the free nomination of the ten most important life events that could be expected to happen to a newborn became more similar to the life script established by adults (Bohn & Berntsen, 2008). Similarly, knowledge of the normative biographical salience of 40 life events and of the age norms for another 25 events, as established by adults, increased between ages 8 and 16, with the largest increase again between ages 8 and 12 (Habermas, 2007). Most importantly, knowledge of the life script indeed predicts global coherence of life narratives, but not coherence of the narrative of a single event (Bohn & Berntsen, 2008; cf. Habermas et al., 2009). This suggests that knowledge of the cultural life script supports life story coherence above and beyond increases associated with basic developmental improvements in narrative ability.

In middle aged and older adults autobiographical memories show a specific distribution across the ages from which they stem, with a peak for the most recent times and a peak for the time of adolescence and early adulthood. This reminiscence bump, which has been found in both European and Asian cultures (Rubin, 1986), has been explained by reference to adolescence as the time when the closely related constructs of the adult identity (Fitzgerald, 1988), the life story (Bluck & Habermas, 2000; Demiray, Gülgöz, & Bluck, 2009; Glück & Bluck, 2007), and the life script (Rubin & Berntsen, 2003; Berntsen & Rubin, 2004) develop, again converging on the idea that the life narrative emerges in adolescence and continues to provide a framework for constructing a life narrative throughout the lifespan.

Importantly, life scripts move beyond descriptive to become prescriptive (see Fivush, 2010, for full arguments). Life scripts not only define the *typical* age that one graduates school, gets married, has children, etc., but provides culturally shared information about when one *should* engage in these events. Indeed, if one's own life deviates in significant ways from the prescribed cultural script, one is often compelled to provide an explanatory narrative (why I did not go to college; why I did not get married) although one is almost never called upon to provide an explanatory narrative for expected events (why I moved away from my parents' home; why I had children). Thus culturally defined life scripts provide both shared expectations of what will happen in a typical life and how it should be lived.

The development of the life story in adolescence renders possible the construction of entire life narratives, but full life narratives are rarely told in their entirety. Rather, its main effect on everyday life is that it enables adolescents to link specific memories and experiences with other parts of their lives and with their personal development, to which we turn now.

### **Autobiographical Reasoning about Single Memories**

More coherent life narratives allow for the organization and integration of memories of multiple specific events in relation to each other, the life narrative as a whole, and in relation to the self. The ability to frame events in biographical terms by linking them with distant parts of life and personal development can be conceptualized as autobiographical reasoning (Habermas & Bluck, 2000). Here we review how this kind of reasoning develops in adolescence, and how



this kind of reasoning converts memories of events into what have been termed self-defining memories (Singer, 1993; cf. Bruner, 1990).

### **Biographical Arguments and Self-Defining Memories**

As adolescents begin to create overarching life narratives, they must also begin to select and integrate what they consider to be the personally significant events of their lives. These events are termed self-defining memories in that they refer to events that individuals will nominate as particularly salient events that resulted from or led to life transitions, choices and turning points (Singer, 1993; cf. Bruner, 1990). Self-defining memories are typically unique, onetime events, which become personally significant and integral to individuals' understanding of who they are. Self-defining memories are often high points, or stories about particularly positive experiences, low points, or stories about particularly negative experiences, or turning-points, experiences that set in motion a new direction for the self. High, low and turning-point stories share the characterization that they are single episodes that have become defining of self as a coherent being through time, either through consistency of self or through explanation of change. Intriguingly, and in line with our earlier arguments, when older adults are asked to nominate self-defining memories, many of these events occurred in adolescence, accounting for the reminiscence bump discussed earlier (Rubin & Schulkind, 1997).

Clearly, for event memories to become self-defining, they must include some evaluation of the experience or the self. Besides simple evaluations such as "this was really great", more complex evaluations may take on the form of an argument, in which a thesis is backed up by an explanation, a consequence is related to a cause or motive, or a specific instance is generalized. Autobiographical reasoning uses biographical arguments that in one way or another link a specific event to other, distant parts of life or to personality and its development (Habermas, 2011). Biographical arguments comprise links between events and biographical causes, motives, or consequences (Habermas & Paha, 2001), links between events and personality (Habermas & Paha, 2001; Pals, 2006; Pasupathi et al., 2007; Pasupathi & Weeks, 2011), and generalizations (Habermas & Paha, 2001), which McLean has differentiated into relatively simple lessons learned and more abstract insights (McLean, 2005; McLean & Pratt, 2006; McLean & Thorne, 2003; Thorne, McLean, & Lawrence, 2004).

Biographical arguments are mostly absent in children's narratives and increase in frequency across the adolescent age range. Age differences in the relative frequency of biographical arguments were evident in life narratives between the ages of 8 and 20 in a German sample (Habermas & Paha, 2001; Habermas & de Silveira, 2008). Two other studies using single narratives also found an increase of the use of biographical arguments across adolescence. In one study, Canadian adolescents were asked to narrate the story of a person in trouble and to include two narrative flashbacks, i.e. the insertion of a story which lies in the past of the main story line and from which the narrator returns to the main story line, thus suggesting a retrospective evaluation of this prior experience (McKeough & Genreux, 2003). Another study compared early to mid-adolescents in a Euro-American sample, and found no age differences in narratives of high and low points, but an increase of the use of biographical arguments in turning point narratives and in reflections on how the three memories were related (Grysmann & Hudson, 2010).

Thus it seems that it is only during adolescence that individuals become increasingly able to engage in autobiographical reasoning, where single events that are meaningful to understanding the self are selected and organized into a story format structured around

specific, abstract, life goals that allow adolescents to see themselves as a continuous person through time (Gryzman & Hudson, 2010; Habermas & Bluck, 2000; Negele & Habermas, 2010). As such, adolescents' life stories that integrate various turning points have been found to be more thematically coherent and contain more self-related lessons and insights about the world than single autobiographical episodes, reflecting the adolescents' attempt to connect distinct aspects of their lives into a consistent and seamless whole (Gryzman & Hudson, 2010).

### **Relations to Identity**

The increasing ability to step back from the events of their lives means that adolescents can now reflect on what certain experiences mean for the self in relation to the world. Autobiographical reasoning may both facilitate identity development by directing the path of exploration, as well as reflect the current state of identity development through the level of sophistication of meaning-making used to understand experiences. Indeed, Euro-American adolescents who engage in more sophisticated meaning-making when narrating life events are more advanced in their identity development in that they are less likely to be diffused or foreclosed but more likely to report a mature identity (McLean & Pratt, 2006; cf. Pratt, Norris, Arnold, & Filyer, 1999). In particular, adolescents who tell more self-defining memories (vivid, highly-memorable and personally meaningful memories) for the purpose of explaining some aspect of the self also incorporate more insights into their narratives, perhaps because self-explanation narratives may allow the adolescent to develop, strengthen, and confirm insights about the self (McLean, 2005).

Beyond specific memories, life narratives are also, obviously, critical for identity. The life story provides the most flexible format for representing and communicating identity because it allows for both continuity over time, and also for change through narrative explanations and transformation. Ricoeur (1992) therefore spoke of narrative identity. This form of identity remains to be studied empirically in its relation to other forms of personality (Meeus, 2011), e.g. goals, values and personality traits (McAdams & Olson, 2010). In a first attempt to measure the stability of identity as manifested by life narratives, it was found that life narratives became more stable across adolescence (Negele & Habermas, 2010). However, as yet, we know little about relations between adolescents' developing life narratives and identity, and this remains an important avenue for future research.

### **Recurring Events**

Situated somewhere between single episodes and life narratives are recurring events (see also Conway & Pleydell-Pearce, 2000). Recurring events are defined as events that are experienced on a more or less regular basis and follow the same basic structure each time they occur; examples include playing football every weekend, or vacationing on the beach every summer. These kinds of experiences are self-defining in that they represent the kind of person one is and become represented as personal scripts, what one usually does. These personal scripts may be of events that occur across a lifetime (e.g., going to church every Sunday) or may occur during a period of time (e.g., when I was a teenager, I visited my grandmother every Tuesday night). Although little research has explicitly looked at memory for recurring events, some research suggests that recurring events are an important part of our autobiographical memory. For example, Barsalou (1988) found that single events made up about 20% of the events recalled by undergraduate students' asked to freely recall all they could from their summer vacations; recurring events made up more than 30% of the events recalled by those same undergraduate students.

Waters, Bauer, and Fivush (submitted manuscript) argued for an examination of recurring events in relation to self definition, pointing out that recurring events are likely to summarize more of our experiences and perhaps reflect more of our identity. They found that though autobiographical narratives of single events contained more content related to identity compared to recurring event narratives, participants' ratings of how central single and recurring events were to their identity did not differ. In addition, single events were more thematically coherent (essentially provided a clear resolution to the narrative) than recurring events. However, single and recurring events did not differ on chronological (temporal order of events described) or contextual (description of time and place of the event) coherence. Overall, these results suggest that recurring events are an equally important part of identity development and, for the most part, equally coherent. How these kinds of events are integrated with single episodes and life narratives, and if and how recurring events can be self-defining, is an important avenue for future research.

### **Master Narratives**

As discussed throughout this review, cultural frameworks influence personal memories and narratives. Culturally canonical biographies and life scripts provide frameworks for organizing individual life narratives. Cultural frames also influence interpretation of single events, through what has been labeled master narratives. Master narratives are schematic representations that contain abstracted information about the cultural standards that individuals should follow and use to position themselves while constructing/sharing an autobiographical narrative (Boje, 1991; Thorne & McLean, 2003).

Research on master narratives has examined them less in terms of autobiographical memory and life story coherence and more in terms of gender identity and positioning (Bamberg, 1997). Thorne and McLean (2003) identified three specific master narratives adopted while disclosing autobiographical narratives about traumatic events, the John Wayne (JW), Florence Nightingale (FN), and Vulnerability master narratives. The JW master narrative refers to the narrator taking a position of courage and stoic resolve during intensely negative experiences and expressing little to no negative emotion. Narratives following the FN master narrative express negative emotions as a result of the traumatic event but these emotions are immediately linked to or followed by concern for others. Finally, the vulnerability master narrative allows for the expression of intensely negative emotions and feelings of helplessness as a result of the negative event.

Thorne and McLean (2003) investigated the extent to which these master narratives differed in their frequency by gender in a sample of trauma narratives collected from Euro-American adolescents. Results indicated that only the FN master narrative differed in frequency by gender, with more female participants following this structure. Participants also gave information about telling their traumatic event to others. Analysis of the participants' reactions across master narrative type showed that autobiographical narratives that followed the structure of a JW and FN master narrative were accepted by more listeners than Vulnerability structured narratives. This suggests certain listener preferences for which master narratives should be used to structure autobiographical recall, that may relate to cultural norms. Weststrate and McLean (2010) point out that new master narratives are being constructed as cultures change and develop over time. It may be that as cultural values shift certain master narratives are favored over others for constructing autobiographical narratives, but an

awareness of the other, less favored, master narratives remains. Acceptance of master narratives may differ by age or cohort as well.

Master narratives may provide evaluative frameworks for life narratives as well. McAdams, Reynolds, Lewis, Patton, and Bowman (2001) discuss two master narratives that are prevalent in industrialized cultures, the redemption narrative and the contamination narrative. The redemption narrative is one of overcoming and learning from negative life events, leading to a more positive and generative life narrative. Good examples include recovering addicts and trauma survivors whose life narratives center on how negative experiences led to positive personal growth. Contamination narratives, in contrast, focus on an event or series of events that led to a downward spiral in life. Examples include life narratives that focus on loss and betrayal. McAdams et al., (2001) present evidence that, in both emerging and middle age Euro-American adults, individuals who tell more redemptive episodes in their life story score higher on measures of psychological well-being and generativity.

To date however, there is limited research on the development of master narratives and their relation to narrative coherence. Future investigation should examine the effects of master narrative knowledge on both event narrative and overall life story coherence. As well, a more comprehensive list of the prominent master narratives related to autobiographical memories for experiences would provide a clearer account of the role of master narratives in constructing coherent autobiographical narratives. The master narratives described above parallel in many ways the archetypes discussed by Jung (1969). Jungian archetypes such as “The Hero”, “The Great Mother”, “The Trickster”, and “The Mentor” would greatly add to the list of master narratives at play in autobiographical memory. It is also critical to extend research on master narratives to examine the types of master narratives that are prevalent in a wider variety of cultures. A better understanding of the quantity and role of master narratives could help clarify and explain the influences of socio-cultural conventions on the ways in which autobiographical narratives are organized and evaluated.

Thus, as adolescents approach the developmental task of creating an adult identity, at least partly through a life narrative, they are already skilled at narrating personally experienced events and have encountered (and are beginning to internalize) an array of culturally available tools, including life scripts and master narratives. The research indicates a systematic developmental trajectory of increasing coherence, increasing autobiographical reasoning, and increasing relations between narratives and identity across adolescence. But what accounts for this developmental process? Certainly individual developments in cognitive and social emotional skills contribute, but as we have argued throughout, individual narratives are constructed within social interactions. Is the life story acquired in co-constructions between child and parent? It is not clear whether the Vygostkyan formula of interpersonal co-construction and successive internalization of abilities still holds in adolescence. Also, the life story is a much more intimate activity than talking about what happened in nursery, and adolescents increasingly guard their privacy. In fact, the global temporal coherence of life narratives was predicted by the frequency with which the adolescent narrators indulged in solitary biographical activities such as reading biographies or writing a diary (Habermas et al., 2009). As yet, there is little research examining social construction of individual autobiography in adolescence, but what little exists suggests a developmentally continuous process.

#### **Cultural Transmission of Biographical Abilities and Values**

Autobiographical memory is a complex system that develops gradually as children and adolescents engage in reminiscing interactions within social and cultural institutions ranging from the family to schools to cultural artifacts such as biographical novels and blogs. As reviewed, these individual narratives are informed by cultural life scripts, by master narratives and culturally canonical narrative forms, as well as by the local social interactions in which reminiscing is a valued activity. Here we review evidence, first, that individual life narratives may be influenced through parentally-scaffolded interactions, and second, that individual autobiographical narratives are influenced by the stories of others, especially of family members.

### **Mother-Child Pairs Co-Constructing the Life Story**

Habermas, Negele, and Brenneisen-Mayer (2010) conducted a cross-sectional study of German families with 8- to 20-year old children to explore whether mothers helped their child to construct a globally coherent life narrative when asked to co-narrate the child's life. If mothers supported the child adequately, it would suggest that they are scaffolding their children's developing ability in the zone of proximal development, i.e. the ability the child was able to already use in collaboration, but not yet autonomously. Given that temporal coherence is acquired first at age 12, and causal and thematic coherence at ages 16 and 20, scaffolding of these abilities should occur in the just below age group. That is, maternal scaffolding at the earlier age should predict adolescents' developing abilities at a later age. Roughly as expected, mothers provided most temporal details with 8-year-old children, and most comments on temporal sequencing with 12-year-old children. The following is the beginning of the co-construction of 8-year-old John's life. In turn 2 the mother provides a temporal detail ("That was the first two years"), and in turn 6 the mother redirects the narrative back to the first two years of life ("Perhaps we should tell a little bit ..."). She repeats this temporal sequencing later on in the narrative, setting events John mentions in the right order (## mark simultaneous utterances):

- 1) JOHN Um (-) I was born in the Holy Cross Hospital in Weinheim (--)[hmhm] (--)[hm, what happened then (--)[Mum?
- 2) MOTHER ((laughs)) Yeah then you were born [JOHN #Yeah#] #Then# we went home [JOHN Yeah #and then#] #That was# the first two years, you don't know[JOHN #Yeah#] #Then# we were we were still living at Gran's the first three months [JOHN Yeah] And as our flat wasn't ready yet you can't remember that [JOHN Yeah]. Then we moved with you to the flat in B [JOHN Hmhm] Dad you and me (--)[JOHN Hmhm] And then we lived there for a while [JOHN Yeah] (incomprehensible)
- 3) JOHN And then you split up
- 4) MOTHER Right (-)
- 5) JOHN And then (---) Mum? What happened then?
- 6) MOTHER Perhaps we should tell a little bit about what it was like while you we were living together that you can't really remember
- 7) JOHN Yeah what was it like then?
- 8) MOTHER I got my training I got it quite early, we were pretty young ...

This excerpt not only shows how mothers scaffold the child's temporal ordering of the life narrative, but also how she provides information about the child's early parts of life which later become integrated in the child's own life story. Comments on the child's personality that might contribute to causal and thematic coherence were most frequent at age 12. This is an

example of the life story co-construction of 16-year-old Peter with his mother. The mother introduces the concept of Peter being uncomplicated, using this to integrate quite diverse parts of his life:

- 28) MOTHER Nursery was all uncomplicated, that was no problem at all, also the separation from home, he, you immediately [PETER integrated] integrated yourself as I said, you had friends, especially Dennis [PETER the other Dennis] And another Dennis, right I would say this being uncomplicated runs like a thread through your life up to today would you see it the same way?
- 29) PETER Yeah, I can actually only confirm this. Well when – to judge one’s own character is not so easy, but if you put it like that now, I think I can only confirm. Most things I don’t take as a problem.
- 30) MOTHER He’s got a talent you just sit down at the drums and play, and it always sounds fantastic!
- 31) PETER Well this – I’ve definitely got a musical talent, but has, have, and never had the – ehm to develop it.
- 32) MOTHER Do you remember that as a small boy, you were maybe 2 or 3, you built yourself a drum #kit# [PETER #Yeah# – I’ve seen the pics] with cardboard boxes and pots?”

Although the findings do not confirm that adolescents learn to construct coherent life narratives in conversations with their parents, which would require longitudinal data, they do show that parents tend to focus on that ability which the child is about to acquire. In this study, mothers and children were also asked to narrate the child’s life independently. Interestingly, mothers’ narratives of their children’s lives were equally coherent and complex regardless of the age of the child, suggesting that the developmental differences across age reflect differences in ability rather than differences in the coherence or complexity of the life itself. This as yet preliminary data suggest that parentally scaffolded reminiscing continues to be an important vehicle of developmental transition across adolescence.

### **Autobiographical Memory and Family Stories**

Individual personal narratives are also informed by the stories we know about others, and this may be especially true for family stories. Children and adolescents are immersed in families, and families engage in reminiscing on a surprisingly frequent basis; by some estimates the past emerges as a topic of conversation about a dozen times an hour (Bohanek et al., 2009; Miller, 1994), and include multiple stories about family. For example, parents cherish specific stories about their children that involve events having occurred well before the children were able to recall these events themselves, such as birth stories. Many of these stories are about how the child’s character or personality was already apparent early in life, and these stories may become incorporated in the child’s own life story (Habermas et al., 2009). These often-told memories about a child also seem to differ between cultures. Indian adults, for example, remember more stories that were frequently told about them by their parents that concerned interrelatedness and appropriate demeanor, German adults, in contrast recall more autonomy-related memories (Demuth, Chaudhary, & Keller, 2011).

These stories are not just about the events of the child’s life; they are just as frequently about the experiences of other family members, and the stories are about both recent events and past exploits. In a study of everyday dinner conversations, Bohanek et al. (2009) examined the number and types of narratives that emerged spontaneously around the dinner table

among a group of Euro-American and Afro-American families. Not surprisingly, stories that family members told about their day were most frequent, but just over half of the families told family history stories, accounting for 12% of all narratives told. Given that this was an everyday dinner time, with no elicitation or mention of interest in these kinds of stories, this seems to indicate that family stories are common in everyday interaction. These kinds of family stories, or intergenerational narratives, may become especially important during adolescence because, as alluded to earlier, adolescents are faced with the task of both individuating from parents, exploring values and beliefs different from those they have grown up with, while simultaneously remaining connected to the parental identity (Grotevant & Cooper, 1998; McLean & Pasupathi, 2010). The duality of separating from and preserving ties with the family thus becomes a critical aspect of the identity crisis, and one that is necessary for optimal identity exploration (Blos, 1979). Hence, intergenerational narratives may become particularly important during adolescence for three reasons: 1) they provide a model for adolescents to emulate when constructing their own identity; 2) they help maintain the connection to parents while in the process of exploring alternative values; and 3) they help adolescents to explore similarities between self and parent by promoting both connectedness and individuation.

Intergenerational narratives are believed to provide a window into the generational changes that occur within families, allowing children to compare their parents' and grandparents' days of growing up with their own (Fiese & Bickham, 2004). Therefore, these stories may reflect and preserve family identity from generation to generation, allowing the adolescent to feel a sense of connectedness to previous generations, and to develop an identity that is embedded both within a personal and a familial history (Fiese et al., 1995; Fivush et al., 2008). Importantly, because adolescents are developmentally able to grasp analogies between self and others, by narrating intergenerational stories of their parents, they are able to compare themselves to the integrated parental identity of childhood and thus choose to distance themselves from or assimilate specific aspects of the parental identity into their own developing identity.

Fivush and colleagues have also argued that stories of the past that were not personally experienced may nevertheless provide a framework from which one can understand their personal experiences, particularly when those stories involve members of the immediate family, such as parents, with whom children identify (Fivush, Bohanek, Robertson, & Duke, 2004). Children and adolescents have been found to organize their experiences into narrative form using the model provided by their parents. For example, mothers from multiple cultural backgrounds who narrate more dramatic and negative personal experiences to their children have children who emphasize negative content and dramatic expressions when narrating their own personal experiences (see Miller, Cho, & Bracey, 2005 for a review).

Similarly, research on intergenerational narratives has found that fathers narrate stories of their childhood experiences with stronger themes of autonomy and achievement, while mothers narrate stories with stronger social and affiliation themes, and both mothers and fathers tell more social narratives to daughters than sons, but tell more autonomous narratives to sons than daughters (Buckner & Fivush, 2000; Fiese & Bickham, 2004; Fiese & Skillman, 2000). Furthermore, when adolescents are asked to narrate stories from their parents' childhood experiences, they mirror these gender differences in both Euro-American and Afro-American families (Zaman & Fivush, 2011b). Adolescent boys and girls both tell more social, elaborative and emotional stories about their mothers' childhood than about their fathers'

childhood, but stories about fathers' childhood tend to be more focused on achievement themes. However, there were few gender differences between boys and girls in their intergenerational narratives. Yet, when these same adolescents narrated stories of their own experiences, girls' personal narratives were longer, more elaborative and more emotional than boys' narratives. Importantly, girls' personal narratives were just as elaborative, coherent and emotional as their intergenerational narratives about their mothers (Merrill, Walsh, Zaman, & Fivush, 2011; Zaman & Fivush, 2011b). Hence, adolescents emulate their parents' style of narration when recounting their parents' experiences. Moreover, they may integrate this gendered style into their own personal narratives, attesting to the importance of intergenerational narratives in helping adolescents to construct an autonomous identity. The ways in which parents present their identity to their children in their personal narratives may influence how adolescents come to construct their own emerging narrative identity, and gender appears to be key to this process.

In support of these arguments, when narrating stories of their mothers' and fathers' childhood, adolescent girls who make higher levels of intergenerational connections, by connecting their parents' experiences to their own experiences and understanding of the world, report greater identity development and self-esteem (Fivush, Zaman, Waters & Merrill, 2010). More sophisticated intergenerational connections implies greater reflection on parents' experiences. This reflection may then lead to using parents' experiences to understand one's own, to navigate obstacles, thus providing a model for exploring alternative values for the self. Hence, intergenerational narratives may be especially useful in helping adolescent girls to structure and understand their own experiences; being able to make more sense of the events of their lives then leads to greater identity achievement, and better overall well-being. Further, adolescent girls who are able to step back and reflect on their parents' experiences in relation to their own may allow themselves to more fully explore aspects of the parental identity they should individuate from and aspects they should maintain, thus striking the ideal balance between individuation and connection (Fivush et al, 2010).

The same though has not been found for adolescent males. When boys make more sophisticated intergenerational connections to the self in stories of their fathers' childhood, they report lower identity development (Fivush et al., 2010). These results are consistent with those of Grotevant and Cooper (1987), who found that boys show higher overall identity exploration when they express greater individuation in interaction with their fathers. Hence, intergenerational narratives may function differently for adolescent males, because boys may require greater autonomy from the family, particularly fathers, in order to fully explore alternative values (Gilligan, 1982), and creating connections between the self and father may undermine the process of individuating, and thus, identity exploration, through foreclosure.

Hence, the duality of maintaining and extinguishing ties to the parental identity appears to be important for adolescent identity development, but may function differently for males and females. Intergenerational narratives may therefore be critical to identity development during adolescence, particularly for girls, who may need to remain more connected to the family during exploration than boys, at least in Western cultures. Intergenerational narratives may provide for adolescents the tools to learn how to create meaning from their experiences and how to explore alternative values, as well as to commit to a worldview that reflects their individual identity through independence from and connection to the parental identity.

### **Conclusions and Directions for Future Research**



The stories of our lives comprise a sense of self in the world, a past that is temporally and often causally related to the present and that allows us to project ourselves into the future. Intriguingly, infants are brought into these stories as soon as they are born, and begin telling these stories almost as soon as they begin talking. By the end of the preschool years, children in both Eastern and Western cultures are able to tell coherent narratives about their personal past, although there are cultural, gender and individual differences in these abilities (see Fivush & Nelson, 2004, for a discussion). For example, Western children, and females, tend to tell more elaborated, coherent and emotionally expressive narratives of their past than Eastern children, and males. These differences are linked to differences in the social and cultural contexts in which children are developing. Both Western mothers and mothers with daughters tend to be more elaborative and emotionally expressive when co-constructing narratives with their young children than Eastern mothers or mothers reminiscing with their sons. These early emerging patterns indicate multiple ways in which autobiographical memory is mediated by larger cultural frames instantiated in local social interactions. Implicit cultural models about gender and explicit cultural models of lives (including culturally canonical biographies, life scripts and master narratives) modulate parental interaction with their children in ways that express and transmit these models across generations.

With development, children begin to internalize these models and use them to formulate their own independent narrative memories of their life experiences. Adolescents' intense interest in diaries, biographies, and blogs attests to their fascination with these cultural forms for narrating lives. By this point in development, even when narrating to themselves in a private diary, or reminiscing in their own mind, the internalized cultural forms provide frameworks for self-understanding of life experiences. Thus, whereas autobiographical narratives remain throughout the lifespan a social phenomenon, in that we share the events of our lives on a daily basis with others (e.g., Frederickson & Joiner, 2002; Rime, 2007), these narratives forms also become an internalized tool for individual thought (Vygotsky, 1978). As Halbwachs (1950/1980) described, even as we experience an event, we are already beginning to think about how to tell this event to another person at a later time.

Thus at all points in development, how individual or local social narrative interactions are structured is mediated by the available cultural tools for understanding and narrating lives, including culturally canonical biographies, life scripts and master narratives. Although the theoretical framework is compelling and the existing empirical data is supportive, more research is needed. In particular, for the preschool years, it is now well established that maternal reminiscing style influences children's developing independent narrations of their own personal past (see Fivush et al, 2006, for a review). But we still know very little about why some mothers are more elaborative and coherent than others, and even less about how parental cultural models of narratives and identities may infuse their local everyday reminiscing interactions with their preschoolers (but see Kulkofsky 2011; Miller, Wiley, Fung & Liang, 1997, and Wang & Ross, 2007, for some interesting directions).

In addition, we need more longitudinal research that follows developmental trajectories from preschool through adolescence, in order to determine how early maternal reminiscing style may continue to influence children's developing autobiographical narratives and self-concepts. For example, Demuth, Keller, Gudi and Otto (in press) collected 24 life narratives from young adults whose dinner table conversations had been recorded when they had been 4- to 5-years old and demonstrated certain continuities between familial interactional style and

content of life narratives in terms of autonomy and relatedness. Reese and her colleagues have shown in a longitudinal New Zealand sample that maternal elaborative style early in development predicts an earlier age of adolescents' first memory (Jack, McDonald & Reese, 2009), as well as the level of insight and reflection that adolescents currently displayed in narrating their life events (Reese, Jack & White, 2010)

In general, more research on adolescence is needed. We know that this is a critical period for the development of a healthy adult identity, and that narratives are crucial in this process. We also know that adolescents are developing the independent social and cognitive skills to understand and internalize cultural models. We see increasing knowledge and use of culturally canonical biographies, life scripts and master narratives across the adolescent years, and research suggests that this increasing use of canonical forms promotes narrative coherence and is related to higher levels of identity exploration and achievement. There is a burgeoning literature on these issues (e.g., McLean & Pasupathi, 2010), but a great deal more research is needed, especially examining developing relations among cultural and individual narrative forms, and how this is instantiated in everyday social interactions with parents and with peers.

Related to this question is the fascinating question of the role of social media in producing and providing new cultural narrative tools. Blogs, Facebook, Twitter and texting are all ways in which adolescents present their experiences to others every day, yet we know very little about what these narrative forms look like or how adolescents are using them to create narrative identities. New social media raise the equally important question of direction of effect. We have argued that these relations are dialectical, that cultural and individual forms mutually influence each other. But exactly how does this happen on line, and over developmental time? Furthermore, individuals are active agents in creating their own developmental environments; what children of different ages, genders, temperaments and so on bring to social interactions will influence the form of that specific interaction and what each participant then comes away with. Development is a process that occurs over brief interactions, over relatively stable developmental periods, across critical transitions, and over a lifetime.

And, finally, research must begin to include more diverse samples. There is limited research on cultural differences in autobiographical memory, and much of this paints culture with a very broad stroke such as comparing independent and interdependent cultures, often defined as Western compared to Eastern (but see Wang & Ross, 2007 for more nuanced arguments). Both theoretical and empirical work must begin to consider more seriously how personal memory is situated within diverse cultural and sub-cultural contexts (e.g., Miller, 1994; Miller et al., 1997; Miller et al., 2005). Within-culture diversity must be more seriously examined, especially focusing on individual developmental trajectories. Research from a clinical perspective has highlighted how narratives of difficult and traumatic experiences play a critical role in memory, identity and recovery (Pennebaker & Chung, 2007; White, 2004). A great deal more research needs to examine these questions both theoretically and empirically to begin to make sense of how cultures and individuals mutually influence each other.

This question is at the heart of our argument about autobiographical memory. If this type of memory is, indeed, uniquely human (see Fivush, 2010, for more extended arguments regarding this issues), then it raises the question of why humans have autobiographical memory at all. Simple memories of chronological sequences of events would allow us to predict and prosper in the physical world; autobiographical memories go beyond action chronologies to

include evaluations, autobiographical reasoning, explanations, motivations and intentions. Autobiographical memories are about selves interacting with others in the world. Individual narratives come to life in social interactions imbued with cultural meaning. When we share our experiences with others through narrating, we share ourselves, but these selves are already integrated in social and cultural frames for narrative identities. Narrating our personal past connects us to our selves, our families, our communities and our cultures.

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