

“Tell me about it!”

Mother-Child Reminiscing: A Culture Adaptive Socialization Strategy

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Abstract

This dissertation presents three studies that examined the effects of diverse cultural backgrounds on maternal socialization strategies and how these were related to the development of their pre-school aged children. Specifically, the investigations focused on mother-child discourses about past events when children were three and four years of age. The present work systematically applied the *ecocultural approach* by investigating relatively homogenous samples, which were selected based on population parameters and sociodemographic characteristics. These sociocultural contexts represented three different cultural models: (1) the model of psychological autonomy (urban middle-class families from Western societies), (2) the model of relational adaptation (rural farming families from non-Western societies), and (3) the model of autonomy-relatedness (urban middle-class families from non-Western societies).

We could demonstrate that the three cultural models manifest in mother-child reminiscing: both, *how* mothers and children reminisced -the structure- and *what* they talked about -the content. Mothers of the *psychological autonomous contexts* structured conversations with many elaborations and evaluations in order to actively involve the child to participate. On the content level, conversations were child-centered, with many child references and talk about personal judgments and opinions. Consequently, children were more expressive and self-centered in these contexts. Thus, conversations mirror the socialization strategy and social roles associated with the cultural model of psychological autonomy: The mother treats the child as a quasi-equal interlocutor and reinforces the child to express her- or himself. Mothers of *relational adapted contexts* structured conversations rather rigidly by using many repetitions, and few elaborations and evaluations. On the content level, they focused more on social contexts than on the child compared to the autonomous contexts. Accordingly, children contributed less information to conversations and showed a greater

focus on social contexts. Thus, conversations mirror the socialization strategy and social roles associated with the cultural model of relational adaptation: The mother is the expert and the child the adaptive apprentice. There was greater heterogeneity for conversational structure and content of mothers and children from *autonomous-related contexts*. However, overall they mirrored the hybrid orientation in their cultural emphases. The different reminiscing styles and thematic foci were thus meaningful within the different sociocultural environments and fostered children's cultural development of becoming a competent societal member. Furthermore, we could also demonstrate variations within the elaborative style of mothers all valuing autonomy. Thus, when looking at more specific categories, differences also existed among cultural contexts with the same cultural model.

Children's internalization of the respective cultural orientation was also mirrored in another, adult independent task we conducted: children's self-drawings. Children of autonomous contexts drew themselves bigger -pronounced and space-demanding- whereas children of the relational contexts drew themselves smaller -mirroring greater self-effacement. Drawings of children from the autonomous-related contexts were intermediate in size.

Correlation patterns among maternal and child variables varied across the different cultural contexts. Thus, the studies support the notion that psychological processes have to be considered and interpreted in relation to the sociocultural context in which they unfold. This refers to level-oriented (mean differences) as well as functional (correlation based) analyses: Becoming a competent member of a specific cultural context requires very different skills within universal domains, such as mother-child discourse. Additionally, in this process the effect of socialization strategies on the adults' part may vary across different sociocultural contexts. Results are also discussed in light of practical implications for culture sensitive intervention programs.

1 Introduction

Children's development is embedded in and intrinsically tied to their cultural environment and its affordances and challenges (Keller, 2007). Depending on the respective sociocultural context, children are exposed to different experiences from birth on. Caregiver's socialization practices can be conceived as adaptive processes preparing children to become successful members of their cultural context. Across different cultural contexts children share developmental tasks that have evolved during the history of mankind, mainly due to new emerging challenges. The development of language in human history can be regarded as such an evolved adaptation that is now a developmental task for every child; however, when and how these tasks are solved varies as a function of cultural context. Thus, child development cannot be described as one normative trajectory. Instead, diverse culture-specific pathways must be considered (Greenfield, Keller, Fuligni, & Maynard, 2003; Keller, 2003; 2007). The potential for these diverse and adaptive developmental pathways to various contextual demands results from the high neural plasticity in early childhood due to human's immature brain stage at birth (cf. Hayne, 2004) and the brain imprint period during the first years (Storfer, 1999).

This dissertation presents three studies that examined the effects of diverse cultural backgrounds on maternal socialization strategies and how these were related to the development of their pre-school aged children. Specifically, the investigations look at language socialization in mother-child discourses within the context of reminiscing (i.e., conversations about past events). In the following section, I begin with a general discussion of the underlying concept of culture and cultural models, which are central to the present work. Herein, specific sociocultural contexts and related cultural models will be defined. The next chapter will provide an overview on how parenting in these cultural contexts differs and how children develop along different developmental agendas across infancy and toddlerhood. Then, language will be introduced as an important cultural tool in socialization processes.

Finally, the context of reminiscing, and its contributions to the development of an autobiographical memory and a culture specific self-system will be discussed.

1.1 Culture and Cultural Models

Culture has been defined in various ways reflecting the complexity of this concept (e.g., Berry, Poortinga, Segall, & Dasen, 2002; Kroeber & Kluckhohn, 1952). There is consensus across different approaches that culture manifests in beliefs, values, knowledge, and skills, as well as in customs, symbolic systems (e.g., spoken and written language), physical arrangements (e.g., buildings) and objects (e.g., tools) which groups of people share (e.g., Greenfield, 1997; Keller, 2007; Rogoff, 2003). Culture thus incorporates abstract as well as concrete elements, which are inside and outside individuals. Ideologies, norms, and values are abstract elements operating explicitly as well as implicitly in every-day live, and represent the *symbolic side* of culture; while the concrete or *material side* of culture encompasses activities/behaviors (e.g., parental behavior) but also physical living arrangements (e.g., Keller, 2007).

This dissertation takes an *ecocultural approach* to investigate the development of human psychology, especially with respect to socialization processes during childhood. Culture with its symbolic and material parts is understood as an adaptive process to ecological demands (e.g., Berry & Georgas, 2009; Bronfenbrenner, 2005; Keller, 2007; LeVine, 2002; Whiting, 1963). These demands result from a range of parameters, which are hierarchically interrelated: The physical environmental structure (e.g., geography) shapes the development of specific population parameters (e.g., population density, fertility, mortality), which in turn lead to specific socioeconomic structures (e.g., settlement pattern, family structure) of a specific context (e.g., Hewlett & Lamb, 2002; Keller, 2007; Whiting et al., 1988).

Investigating cultural similarities and differences can thus not be reduced to comparisons between countries (e.g., Germany vs. Turkey) or geographical regions (e.g.,

Asians vs. Americans). In fact, based on this approach many different cultural contexts can be defined within countries (continents); likewise similar cultural contexts can also be defined across countries (continents). In order to emphasize that culture is shaped by the specific eco- and sociocultural demands of a particular *context*, I will refer to “sociocultural contexts” or “cultural contexts” further on.

The present work furthermore departs from cultural models as a starting point for a theoretical framework to identify cultural differences and similarities. Two basic human needs are assumed to drive human cognition and behavior: *psychological autonomy* and *relational adaptation* (e.g., Kağıtçıbaşı, 2007; Keller, 2007; 2011). Both needs must be fulfilled to some degree; however, the emphasis on each dimension depends on the adaptive function to the respective sociocultural context.

Psychological autonomy is most adaptive to Western postindustrialized societies with mild climate conditions (physical environment), high population density (urban areas - population parameters), free-market economy, high formal education, and nuclear family structures with few children (sociodemographic structure). Traits such as independence, competitiveness, uniqueness, self-reliance, and assertiveness are valued and necessary for becoming a successful societal member.

Relational adaptation is most adaptive to non-Western contexts characterized by harsher climate conditions, low population density (rural areas), subsistence based economy, low or no formal education, and extended family structures with many children. Interpersonal relations are very important and organized in vertical hierarchies. Traits such as interdependence, conformity, self-effacement, and collective responsibility are both valued and necessary for becoming a successful and competent individual.

These sociocultural contexts and related cultural models can be regarded as two prototypical contexts for children's development.¹ However, both human needs are independent from each other and emphasis on the one dimension may or may not affect emphasis on the other (Kağıtçıbaşı, 2007; Keller, 2007). Various sociocultural contexts demand both, psychological autonomy and relational adaptation likewise. Most typically, autonomy-relatedness is adaptive to urban non-Western contexts, with high population density (urban areas), high formal education, and extended family structures. Historically, industrialization and urbanization is still young in these contexts. Thus, they are traditionally relational adapted contexts, however, sociodemographic changes trigger an increase of valuing psychological autonomy as well. These sociocultural contexts cannot be subsumed as a prototype but form an array of *autonomous-related* hybrid models (Keller, 2007).

Importantly, the emphases on psychological autonomy and relational adaptation are not static but dynamic processes and susceptible to societal changes; consequently, they are subject to historical and generational changes and sensitive to cross-cultural encounters like the experience of migration (e.g., Keller, Borke, Yovsi, Lohaus, & Jensen, 2005; Keller & Lamm, 2005). Culture emerges and changes corresponding to changing sociodemographic structures.

1.2 The Conceptual Model of Parenting

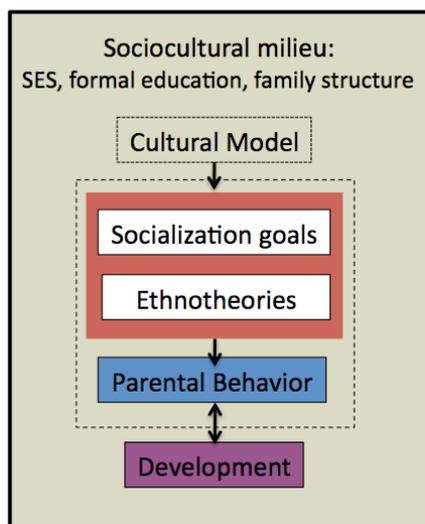
Based on her “conceptual model of parenting”, Keller (2007) has established a longitudinal research program on parenting strategies and children's development during the preschool years across various sociocultural contexts. The research for this dissertation has been conducted within this program. The parenting model (see Figure 1) provides a

¹ Since different forms of autonomy and relatedness have to be differentiated (e.g., psychological and action autonomy; see Keller & Otto, 2010), the specific terms of *psychological autonomy* and *relational adaptation* are precise to describe what we refer to. For easier legibility, however, it will be referred to *autonomous contexts* and *relational contexts* further on.

theoretical framework for explaining differences in parental behavior and accordingly, child development: The cultural model underlying a specific context (i.e., the predominant emphases on psychological autonomy and relational adaptation) influences the symbolic and the material side of parenting. This means, that the cultural model influences the overall *socialization goals* parents have for their children. The socialization goals become manifested in *parental ethnotheories*; i.e., caregivers' theories about good and bad parenting. Parenting ethnotheories in turn energize the actual *behavior* parents adopt with their children. The parental behavior then socializes and influences *children's development* (Keller, 2007).

Figure 1

Parenting Model by Keller



There is strong empirical support for the parenting model's prediction that the emphases on psychological autonomy and relational adaptation (i.e., cultural models) are reflected in the parental *belief systems* (i.e., socialization goals and ethnotheories) and accordingly in their *behavioral strategies*:

Parents of Western urban middle-class contexts show less communal obligation to their family of origin compared to relational contexts, and value autonomy-oriented socialization goals over relational goals, such as becoming independent and assertive (e.g., Keller et al., 2006). When interviewed about their ethnotheories, they emphasize a distal

parenting style by referring to face-to-face contact, object stimulation, and verbal interaction (Keller et al., 2007; Keller et al., 2006; Kärtner et al., 2007). Mothers likewise show a distal parenting style when interacting with their young infants by initiating face-to-face situations often accompanied by object stimulation (Keller, Borke, Chaudhary, Lamm, & Kleis, 2010; Keller et al., 2009). Mothers of these contexts are highly responsive to the infant's first communicative signals (i.e., vocalization) via a distal mode (i.e., visual and auditory; Kärtner, Keller, & Chaudhary, 2010; Kärtner et al., 2008; Kärtner, Keller, & Yovsi, 2010). Investigations about the maternal discourse style demonstrate the use of autonomy expressing elements such as "I" statements and self-referencing as well as the discussion of the infant's mental states. Autonomy expressive elements are pervasive during interviews with mothers as well as during mother-infant interactions (Keller et al., 2007; Kärtner et al., 2007). During toddlerhood, mothers engage in "autonomous play interactions," which are characterized by many child initiatives that are followed-up by the mother (Keller et al., 2010). Thus, from early on mothers create interactional situations, in which the child experiences agency and distinctiveness in order to foster the child's psychological autonomy. The child is treated as a quasi-equal partner (Keller, 2007).

In contrast, parents in farming communities with low formal education show high communal obligation to their family of origin and value relational socialization goals over autonomous, such as to obey elderly and to help other people (e.g., Keller et al., 2006). When interviewed about their ethnotheories, mothers emphasize a proximal parenting style with much body contact (e.g., Keller et al., 2006). Likewise, mothers adopt a proximal parenting style in interactions with their young infants, which are distinguished by frequent occurrence of body contact and physical stimulation (Keller, 2007; Keller et al., 2009). The interaction embodies a rhythmic-synchronous unity of mother and infant fostering the feeling of belonging (Demuth, Keller, & Yovsi, 2011). When contingently responding to the infant's signals (i.e., vocalizations) over the first three months, mothers continuously use a proximal

mode (i.e., using vestibular senses; Kärtner et al., 2010). Maternal discourse style with their infants is characterized by references to social contexts and authority (Kärtner et al., 2007). During toddlerhood, mothers engage in “didactic play interactions” with their children, featured by many maternal initiatives and child follow-ups (Keller et al., 2010). These studies demonstrate that from early on, parenting strategies are characterized by physical proximity and a hierarchical novice-expert relationship (Demuth et al., 2011; Keller, 2007; Keller et al., 2004; Nsamenang, Harkness, & Super, 1992).

With respect to families of urban, educated but traditionally relational adapted contexts, parents show hybrid ideas and behaviors as they often emphasize both psychological autonomy and relational adaptation (e.g., Kärtner, Borke, Maasmeier, Keller, & Kleis, 2011; Kärtner et al., 2008; Keller, 2007; Keller et al., 2007; Keller et al., 2006). As these contexts do not represent a single prototype but instead contain greater variety in their hybrid cultural models, corresponding results are also not as homogeneous as for the two other prototypical cultural models. The more heterogeneous patterns in autonomous-related contexts may be fostered by more rapid societal changes these contexts experience (Keller, 2007).

1.3 Developmental Pathways

What are behavioral and developmental consequences for children in these different sociocultural contexts during the infant and toddler years? Due to the different socialization experiences, children solve developmental tasks at different points in time as well as in different ways. During the first three months of life, mother-infant dyads of autonomous contexts engage longer in mutual gaze during face-to-face situations. Infants also look at their mothers’ faces longer than do infants growing up in relational contexts (Kärtner et al., 2010). Thus, as early as three months old, infants’ interest in the distal mode of eye contact during social interactions corresponds with the maternal socialization strategy.

Later in toddlerhood, children of autonomous contexts acquire an earlier self-awareness compared to children of relational contexts measured by mirror self-recognition with the rouge-test (Keller, Kärtner, Borke, Yovsi, & Kleis, 2005; Keller, Yovsi et al., 2004). In the experimental setting, the cheek of the child is marked with rouge without the child's noticing. Then a mirror is presented to the child. The child's reaction is rated as either recognizing him-/herself (e.g., when children point to the rouge-mark on their own cheek) or as not recognizing him-/herself (e.g., when children point to the mirror). At the same age, compliance to maternal requests for running errands (e.g., to get a cloth, a pillow or a cattle – depending on appropriate tasks in the respective context) is more frequent in children growing up in relational contexts compared to children growing up in autonomous contexts (Keller, Yovsi et al., 2004). These findings suggest that children solve those developmental tasks earlier that are in line with the surrounding cultural philosophy.

It can be concluded from these results that cultural models are reflected in parental socialization goals, ethnotheories and different facets of parenting strategies. Furthermore, the different strategies successfully advance the desired and adaptive developmental consequences in infants and toddlers. The developmental consequences discussed so far refer to the first two years of life. During preschool years that follow, children gradually master a very important developmental skill: They engage in discursive interactions. The competence to more and more actively participate in discourses will become integral to further (cultural) development. The mechanisms of this influence will be discussed next.

1.4 Language and Socialization

Sapir (1921) defines language as "... a purely human and noninstinctive method of communicating ideas, emotions, and desires by means of a system of voluntarily produced symbols" (p. 8). Other theories explain language as an essentially biologically determined system in nature (i.e., universal; Chomsky, 1999; Pinker, 2004), or emerged as an adaptive

“cultural tool” (e.g., Everett, 2005; Vygotsky, 1997). Even though debate over the fundamental nature of language continues between generativists and constructivists, it is generally agreed that language development during childhood is based on the interplay between biological determinants and environmental influences: In contrast to other species, humans seem to have a specific biological foundation that enables us to acquire language. Nevertheless, in order to realize and inspire this native potential, social interaction is indispensable (e.g., Bruner, 2001; Grimm, 1971).

Social construction theory claims the importance of social interactions between children and adults for children’s social and cognitive development in general (Vygotsky, 1997). From this perspective, children are thought to achieve relevant competencies and skills through activities guided by more experienced members of a social system (e.g., adults or older children). Within this process, language is seen as a specifically important domain for cognitive development (Vygotsky, 1997; Nelson, 1996). Before coming back to the specific role of language as a socialization tool transporting cultural meaning, the general function of language for humans will shortly be explicated.

Vygotsky introduced the term *psychological tools* to refer to strategies humans use to organize their thinking and control their behavior (e.g., Vygotsky, 1997); for example, oral and written language, number systems, diagrams, maps, etc. In contrast to literally technical tools, which are used to organize the external world, psychological tools organize internal processes. Psychological tools transfer basic mental functions, which we share with many other species into higher mental functions, such as directed attention or abstract thinking. Psychological as well as technical tools are culture specific and create a relationship between the active child and the materialistic and social environment. Most importantly, language changes children’s cognitive processes: Language serves as a tool for children to represent, organize, and express their cognitions linguistically (Nelson, 1996). Overall, cultural tools serve humans’ adaptation to their environment (Rogoff, 2003). Language is recognized as the

hominid “tools of tools” (Cole & Wertsch, 1996) since it is the basis to communicate all other psychological tools.

How does language function in the socialization process? On the one hand, language serves as a tool for adults to guide and support children during activities in order to acquire culture specific skills. On the other hand, language itself transports and shapes culture-specific knowledge -*what* to think- and culture-specific ways of thinking -*how* to think- (Vygotsky, 1997). Thus, in communication with social partners children learn culture appropriate ways how and what to talk about; and at the same time it shapes the structure and content of their thinking. In the next chapter, reminiscing will be discussed as a discursive, adult-guided activity that is significantly influential for children’s development of their autobiographical memory, and interrelated, their self-system.

1.5 Mother-Child Reminiscing and Autobiographical Memory

Sharing stories about past events, or reminiscing, is common across many different cultures (Fivush & Haden, 2003). Through reminiscing the autobiographical memory system starts to develop (Reese, 2002b). Generally, two broad memory systems are differentiated: a procedural (also referred to as unconscious, non-declarative, or implicit) and a declarative (also referred to as conscious, semantic, episodic, or explicit) system (Schacter, 1992; Tulving, 1985). Autobiographical memories belong to the declarative memory system. Within the declarative memory system, autobiographical memories can be specified as episodic memories, even though not all episodic memories become autobiographic. In contrast to the generic nature of many episodic memories (i.e., memories of routines) or memories of irrelevant episodes (only shortly retained before being forgotten), autobiographical memories are personally relevant, specific and remembered over time (Nelson, 1993).

How do these memory systems develop? Using nonverbal, reinforcement paradigms (e.g., mobile conjugate reinforcement task; Rovee-Collier & Hayne, 2000 for a review),

infants as young as two months of age, accomplish procedural memory tasks (Greco, Rovee-Collier, Hayne, & Griesler, 1986). By the end of the first year, children have representations for generic events (Nelson & Fivush, 2000).

The development of the autobiographical memory system is related to language acquisition: Children learn in adult guided conversations to recall personal significant, one-point in time memories. The crucial role language plays in this memory system is best illustrated by the phenomenon of “infantile amnesia,” which was first identified by Freud (1920). The phenomenon of infantile amnesia refers to the inability of adults to retrieve events before three- or four-years of age. At this age children start to engage more and more in discourses. This indicates that experiences need to be linguistically coded and memorized at the time they happen in order to linguistically decode and retrieve them later on. Many different explanations have been proposed to explain infantile amnesia; however, the onset of language is conceived as a crucial premise for the development of the autobiographical memory system (Hayne, 2004; Perner & Ruffman, 1995; Pillemer & White, 1989; Reese, 2002a; Simcock & Hayne, 2002).

Interestingly, there are cultural differences in the average adult’s first memories. Adults in some cultures can recall events that happened to them at younger ages than adults in other cultures (e.g., MacDonald, Uesiliana, & Hayne, 2000; Wang, 2001a). These differences have been related to different reminiscing traditions in different cultures. There are, for example, cultural differences in the frequency parents engage in reminiscing with their children (Mullen & Yi, 1995). Additionally, and central to this dissertation, parents (mainly investigated in mothers) adopt different reminiscing styles when talking about past events with their children (e.g., Wang, 2007).

Early investigations on parental reminiscing styles and children’s memory evaluated intra-cultural style differences in mothers and fathers (Engel, 1986; Fivush & Fromhoff, 1988; Reese & Fivush, 1993). These studies identified mothers’ styles as varying in being

elaborative and repetitive.² High-elaborative mothers structure their conversations with many open-ended questions, which are embellished with many details about the discussed event. They continue to ask questions about the event when their child cannot recall the information. They might even provide the entire content of an event when the child does not provide any information (Fivush & Fromhoff, 1988; Reese et al., 1993). Additionally, the high-elaborative style is characterized by regular evaluations of the child's contributions - primarily confirmations, with few negations (Reese et al., 1993).

In contrast, low-elaborative mothers tend to repeat the same question over and over again when the child is not able to respond or does not answer correctly. If the child cannot answer at all, they tend to change the topic. For this reason, the low-elaborative style has also been referred to as the "repetitive" (Fivush & Fromhoff, 1988) or "topic-switching" (McCabe & Peterson, 1991) style. Moreover, low-elaborative mothers ask fewer questions in general and provide much less elaborative information (structure) in their questions. Thus, conversations that low-elaborative mothers have with their children tend to be shorter (McCabe & Peterson, 1991).

The development of autobiographical memory is strongly related to the reminiscing style parents adopt with their children from early on. This relation has been demonstrated across the pre-school years (e.g., Reese, Haden, & Fivush, 1993) but also for autobiographical memory in adolescence (Reese, Jack, & White, 2010). Thus, beside language development, specific communication patterns influence autobiographical memory development.

Researchers have then started to investigate cross-cultural differences in maternal reminiscing styles and children's autobiographical memory (e.g., Fivush & Wang, 2005; Minami & McCabe, 1995; Wang, 2001b; 2006; 2007). Most research so far has focused on

² This differentiation is not equivalent with the elaborated and restricted language codes defined by Bernstein (e.g., 1962). Even though there might be some overlap (e.g., the degree of vocabulary-variety), his definition is referring to the level of "formality" in the use of language. The elaborative and repetitive reminiscing styles are rather describing the *structural course* of conversations independent of the level of the language's formality.

comparisons between East-Asian and Euro-American samples with few exceptions of other cultural contexts (e.g., Melzi & King, 2003; Reese, Hayne, & MacDonald, 2008).

Three main differences across cultural contexts have been revealed: the frequency of past-event talk, the structure of these conversations (the “how”), and the content (the “what”) focused on. Studies have found that Euro-American parents talk more often about past events compared to East-Asian parents (Mullen & Yi, 1995). On the structural level, mothers of Euro-American contexts adopt a high elaborative style, whereas East-Asian mothers are less elaborative and use more repetitions (e.g., Wang, 2001b; 2006; 2007). As a consequence of their mothers’ reminiscing style, children of East-Asian samples contribute less memory information during past event conversations compared to children of Euro-American samples, who provide significantly more memory elaborations (e.g., Wang, 2001b; 2006; 2007; Wang & Leichtman, 2000; Wang & Fivush, 2005). On the content level, mothers of Euro-American samples refer to their children’s personal attributes, preferences, and judgments more often than East-Asian mothers. As such, the child is the focus of the conversation; also referred to as “autonomous talk” (Mullen & Yi, 1995; Wang, Leichtman, & Davies, 2000; Wang, 2001b). Consequently, children of Euro-American samples refer more often to themselves than to others during reminiscing compared to children of East-Asian samples (Han, Leichtman, & Wang, 1998; Wang, 2001b; 2004). In contrast, East-Asian mothers use the context of reminiscing to stress moral standards and social norms. East-Asian mothers and children refer to social contexts more often than Euro-American dyads (Wang & Leichtman, 2000).

These differences have been related to different cultural models (Fivush & Haden, 2003; Wang, 2007); i.e., the model of independence and interdependence (Markus & Kitayama, 1991). Highly elaborative mothers, who focus on the personal experiences of the child, encourage the child to develop a personal opinion and to reconstruct a distinguished account. Furthermore, they want their children to express their unique perspective and

encourage them to contribute to the conversation (for example through many open-ended questions). This fosters the development of an independent self-concept. In contrast, conversations of less elaborative mothers focus on social norms and social contexts. The mother provides a rather rigid structure, in which the child has to follow the mother's lead. The child is not the center of the recalled experience. Instead, the conversation is used to teach the child about social contexts. This fosters the development of an interdependent self-concept.

By applying the ecocultural approach described in chapter 1.1, the Euro-American samples investigated in most studies can be related to the cultural model of psychological autonomy. These samples were generally composed of educated, urban middle-class families from Western contexts. However, most families investigated in East-Asian samples were also from educated, urban middle-class contexts. Thus, according to the ecocultural approach, these samples relate to the model of autonomy-relatedness (e.g., Kağıtçıbaşı, 2007; Keller, 2007). Prototypical contexts related to the cultural model of relational adaptation have not been investigated in the field of reminiscing. Thus, the present work intends to systematically apply the ecocultural approach by investigating mother-child reminiscing in relatively homogenous samples representing each of the three cultural models. Additionally, comparisons of contexts with the same cultural model were conducted to account for possible differences between sociocultural contexts with the same cultural model as well.

2 Published Studies

In the present work we systematically applied the ecocultural approach to investigate mother-child reminiscing in different sociocultural contexts. Homogeneous samples were selected from different contexts based on their sociodemographic profiles and the related cultural models:

- A. Western, highly educated contexts in urban areas with nuclear family structures
- B. Non-Western, low educated contexts in rural areas with extended family structures
- C. Non-Western, highly educated contexts in urban areas with extended family structures

To substantiate the ecocultural approach, samples with similar and different sociodemographic profiles were recruited within and across various countries of Europe, South America, Asia, and Africa. The samples within the regions were selected based on population parameters: Rural areas with low population densities and low levels of formal education served as representatives for the model of relational adaptation. Urban areas with high population densities and high levels of formal education were selected as representatives of the model of psychological autonomy as well as the model of autonomy-relatedness. Samples representing the model of psychological autonomy were from Western contexts; samples representing the model of autonomy-relatedness were from non-Western contexts. They thus differed in their respective histories of emphasizing relational adaptation.

In Study One, each cultural model was represented by at least two different contexts. In Study Two, the cultural model of psychological autonomy was represented by two samples, the model of autonomy-relatedness and model of relatedness by one sample, respectively. In contrast to the first two studies, which investigated inter-cultural differences, Study Three focused more on intra-cultural differences –more precisely, on sociocultural contexts, all valuing psychological autonomy (see Table 1 for samples).

Since past studies including samples with all three cultural models have primarily examined parenting and child development during the first two years of age (Keller, 2007),

we focused on children three- and four-years old to probe the effects slightly later in development. Furthermore, at this age, children of various cultures start to participate in decontextualized conversations about past events (e.g., Eisenberg, 1985; Fivush, Gray, & Fromhoff, 1987; Miller, Wiley, Fung, & Liang, 1997; Mullen & Yi, 1995; Wang et al., 2000), which are particularly critical for the child's continuing self-development (e.g., Reese, Yan, Jack, & Hayne, 2010). In line with social interaction theorists (e.g., Nelson, 1996; Vygotsky, 1997), mother-child reminiscing was investigated on the level of structure (the "how?" of conversations) and on the level of content (the "what?" of conversations). Three empirical studies on mother-child reminiscing in various sociocultural contexts were conducted and published for the present dissertation and will be presented next.

In Study One and Two we explored whether the expected cultural orientations of the different sociocultural contexts would be reflected in the maternal structure and content during conversations. Accordingly, we investigated whether the cultural orientations would also be reflected in children's memory contributions during reminiscing –with respect to structure and content. We then explored the question how maternal structure and/or content characteristics would relate to children's memory elaborations and referred content. In Study Two we examined an additional measure of children's self-representation -namely, children's drawings of themselves- as an adult independent task. First, we studied how the underlying cultural model would be mirrored in children's drawings of themselves; and secondly, if it would relate to characteristics of mother-child reminiscing. In Study Three, we investigated specificities within the elaborative reminiscing style of mothers from sociocultural contexts all valuing psychological autonomy (including contexts with the prototypical model of psychological autonomy and the model of autonomy-relatedness)³ and the relations to

³ In this study, we introduced the Tallinn sample as representing the model of psychological autonomy on the one hand because it is an urban, Western, middle-class context. However, due to their collectivistic and thus more relatedness oriented history, which was also reflected in a higher relatedness orientation in their socialization goals, we conceive this sample as being in a transitional state and rather representing an autonomous-related context.

children's memory contributions. Table 1 illustrates an overview of all three studies including the sociocultural contexts and respective cultural models involved, the child's age and the relevant research questions.

Table 1

Overview of Conducted Studies

	Sociocultural Contexts	Cultural Models	Age	Main Research Questions
Study One	<ul style="list-style-type: none"> • Berlin, Germany • Athens, Greece 	Psychological Autonomy	3 years	Are the three cultural models reflected in: a) the maternal reminiscing style? – On overall <i>mean differences</i> and on an <i>individual level</i> ? b) children’s memory contributions?
	<ul style="list-style-type: none"> • San José, Costa Rica • Delhi, India • Urban Nso, Cameroon 	Autonomy-relatedness		
	<ul style="list-style-type: none"> • Rural Gujarat, India • Rural Nso, Cameroon 	Relational Adaptation		
Study Two	<ul style="list-style-type: none"> • Berlin, Germany • Stockholm, Sweden 	Psychological Autonomy	4 years	Are the cultural models reflected in: a) the maternal reminiscing structure and content b) children’s reminiscence accounts (structure and content) and c) an independent drawing task (children’s self-drawings)
	<ul style="list-style-type: none"> • Tallinn, Estonia 	Autonomy-relatedness		
	<ul style="list-style-type: none"> • Rural Nso, Cameroon 	Relational Adaptation		
Study Three	<ul style="list-style-type: none"> • Berlin, Germany • Stockholm, Sweden 	Psychological Autonomy	4 years	Does the elaborative reminiscing style vary among contexts all valuing autonomy?
	<ul style="list-style-type: none"> • Tallinn, Estonia 	Autonomy-relatedness		How are different elaborative style elements related to children’s memory within cultural contexts?

Note. All samples with the model of *psychological autonomy* and *autonomy-relatedness* were highly educated middle-class families. All samples with the model of *relational adaptation* were farmer families with low formal education.

2.1 Study One:

Schröder, L. Keller H., Kärtner, J., Abels, M., Yovsi, R., Chaudhary, N., Jensen, H., & Papaligoura, Z. (in press). Early Reminiscing in Cultural Context: Cultural Models, Maternal Reminiscing Styles, and Children's Memories. *Journal of Cognition and Development*; accepted on the 23rd of August 2011.

Study background: The aim of this study was to test whether maternal reminiscing styles would systematically vary with respect to the underlying cultural models. This study is the first to investigate mother-child reminiscing in samples representing all three cultural models as defined by the ecocultural approach. We investigated cultural differences on the structure and content level as well as the relation between the maternal reminiscing style and children's memory contributions.

We expected that mothers of the autonomous contexts would use many elaborations and evaluations (the elaborative-evaluative style) and mothers of the relational contexts most repetitions (repetitive style). Mothers of the autonomous-related contexts were expected to combine characteristics of both the elaborative-evaluative and repetitive styles in hybrid styles. Accordingly, children of the autonomous contexts were expected to contribute most memory elaborations, children of the relational context least, and children of the autonomous-related contexts to lay in-between (for an overview of hypotheses see Table 2). On the content level, we expected mothers and children of the autonomous contexts to refer more often to personal judgments and opinions (autonomous talk). Dyads from the relational contexts were expected to make more didactic references. We expected the autonomous-related samples to refer to both, autonomous and didactic talk.

Method: A total of 164 mother-child dyads from seven different cultural contexts representing all three cultural models (the model of psychological autonomy, the model of relational adaptation, and the model of autonomy-relatedness) participated in the study (see Table 1). Mothers were asked to talk about two past events with their three-year old children.

The conversations were recorded for later transcription. Transcripts were then coded according to structure of maternal *elaborations*, *evaluations*, and *repetitions* as well as *child memory elaborations* (coding scheme adopted from Reese & Fivush, 1993). On the content level, conversations were coded for *autonomous talk* (mother and child utterances referring to personal judgments and preferences) and *didactic talk* (mother and child references about things that one “had to do”, “should do”, or “could do” relative to a specific situation, or references to social conventions and moral rules) (adapted from Wang, 2001b).

Analyses and Main Results: Differences in the maternal reminiscing style were first investigated by mean comparisons of cultural contexts. Results demonstrated that sociocultural contexts, with the same cultural model, were very similar to each other. Furthermore, mothers of the autonomous contexts used significantly more elaborations and evaluations than mothers of the relational contexts, who in turn used significantly more repetitions. Unexpectedly, the reminiscing style of mother from two contexts with the model of autonomy-relatedness (Delhi and San José) was very similar in their use of elaborations, evaluations, and repetitions to the autonomous contexts. The autonomous-related urban Nso context, was in contrast, very similar to the relational contexts. Thus, based on variable-oriented analyses the hypothesized use of hybrid styles in mothers from the autonomous-related contexts could not be confirmed.

To substantiate results on an individual level a person-oriented approach was also applied by determining each mother’s *style pattern* separately (see Table 2). We analyzed the distribution of the different reminiscing style patterns (elaborative-evaluative, repetitive, hybrid) across the different cultural contexts (autonomous, relational, autonomous-related). Overall, results revealed as expected that mothers from the autonomous contexts were statistically overrepresented in the elaborative-evaluative style pattern and underrepresented in the repetitive style pattern. In contrast, mothers with the model of relational adaptation were overrepresented in the repetitive style pattern and underrepresented in the elaborative-

evaluative pattern. As hypothesized, mothers of the autonomous-related context were overrepresented in using one of the hybrid style patterns (see Table 2). Additionally, mothers of these contexts were underrepresented in the repetitive style pattern. Applying a person-oriented approach, the maternal reminiscing styles varied meaningfully and in line with our hypotheses for the three cultural models.

In a next step the relation between the maternal reminiscing style and children's memory elaborations was investigated. First, a continuous approach was applied by conducting regression analyses for all three cultural models respectively. Separate regression analysis for each cultural context was statistically not feasible due to small sample sizes. Maternal style elements (elaborations, evaluations, and repetitions) were entered as independent variables, and children's memory elaborations were entered as dependent variables. Within both the model of psychological autonomy and the model of autonomy-relatedness maternal evaluations were the strongest predictor for children's memory elaborations. Additionally, maternal repetitions were negatively related to children's memory contributions in the autonomous-related model. Within the model of relational adaptation, maternal elaborations and evaluations predicted children's memory contributions, with elaborations being the strongest predictor.

Secondly, we applied a typological based analysis by conducting a one-way ANOVA with child memory elaborations as the dependent variable and the different maternal style patterns (independent of cultural model) as the independent factor. Unexpectedly, children of mothers adopting the evaluative style patterns (with low frequency of elaborations and repetitions) contributed significantly more to the conversations compared to children of mothers adopting any other style pattern. Furthermore, children of mothers adopting a style pattern characterized by high number of evaluations – independent of another characteristic (e.g., elaborative-evaluative, repetitive-evaluative, or evaluative) contributed more memory elaborations than children of mothers using one of the other style patterns (repetitive,

repetitive-elaborative, or elaborative). Thus, unexpectedly, the additive effect of elaborations and evaluations could not be confirmed as children of mothers with an evaluative style (low in all other elements) contributed the most, compared to all other maternal style patterns.

Content analyses revealed that didactic talk was rare across all seven sociocultural contexts. This was true for mothers' as well as children's contributions. Furthermore, autonomous talk was scarce in children's talk. Thus, we could not analyze cultural differences for these categories. Mother of the autonomous contexts referred to autonomous talk significantly more often than mothers of the relational contexts. Mothers of the Delhi and San José contexts were referring to autonomous talk as often as mothers of the psychological autonomous contexts, whereas mothers of the urban Nso context used little autonomous talk as mothers of the relational contexts.

Table 2

Configurations of Maternal Reminiscing Style Patterns and Hypotheses of Study One

	Primary style patterns		Hybrid style patterns			
	Elaborative-evaluative	Repetitive	Repetitive-elaborative	Repetitive-evaluative	Evaluative	Elaborative
<i>Elaborations</i>	High	Low	High	Low	Low	High
<i>Evaluations</i>	High	Low	Low	High	High	Low
<i>Repetitions</i>	Low	High	High	High	Low	Low
Hypotheses						
<i>Mainly used by mothers of</i>	Model of psychological autonomy	Model of relational adaptation	Model of autonomy-relatedness			
<i>Children's memory</i>	Highest	Lowest	Medium			

2.2 Study Two:

Schröder, L., Keller, H., Lenk, M.; Schwarzer, S., Rübeling, H., & De Geer, B. (2011). Culture Specific Expressions of Preschoolers' Emerging Self: Narrative and Iconic Representations. *Journal of Cognitive Education and Psychology*, 10(1), 77-95.

Study background: The aim of this study was to investigate the socialization and internalization of children's cultural self-representations. Children's internalization of cultural orientation was investigated both in an adult guided task (reminiscing) and an adult independent task (children were asked to draw a picture of themselves). In general, children's drawings are regarded as reflecting internal states. Specifically, children's drawings of themselves can be regarded as iconic representations of their self-representation. Previous studies have demonstrated that children's self-drawings vary in size as a function of cultural context and the underlying cultural model (Rübeling et al., 2011).

First, we examined whether the measures expressing autonomy and relatedness orientation would differ meaningfully among contexts. Secondly, we tested intercorrelations among measures. A greater orientation towards autonomy was expected to be expressed by higher elaboration-repetition ratios (structure) and higher child-other ratios (content) during reminiscing on the mothers' part. Autonomy orientation in the children was expected to be expressed by greater contribution of memory elaborations (structure), larger self-other ratios (content), and by bigger self-drawings. Accordingly, we expected relational orientation to be expressed by mothers using more repetitions, making more social context references, and children contributing little to the conversations, and drawing themselves smaller.

Method: A total of 149 mothers and their four-year old children participated from four different cultural contexts, representing the different cultural models (see Table 1). Mothers were asked to discuss two shared past events with their children. Furthermore, children were asked to draw picture of themselves.

Mothers' structure was coded for their use of elaborations relative to repetitions (adopted from Reese et al., 1993; Wang, 2007). On the content level maternal utterances were coded as referring to the child (child-references; e.g., "What did you do?") relative to other people (social context references; e.g., "What did your sister do?"). On the children's part, memory elaborations were investigated on the structure level. On the content level, their references to themselves (self-references; e.g., "I was swimming.") relative to references to other people (i.e., social context references; e.g., "Lena was dancing.") were investigated (adapted from Han et al., 1998). Children's self-drawings were analyzed with respect to their size, measured in cm: body space (product of body height and body width) and head height (adapted from Rübeling, 2011).

Analyses and Main Results: The *elaboration-to-repetition ratio* (structure) as well as the *child-other ratio* (content) was significantly higher in mothers of the autonomous contexts compared to mothers of the relational context. Accordingly, children of the autonomous contexts provided more memory elaborations (structure), had a higher self-other ratio (content), and drew larger self-drawings compared to children from the relational context. Mother-child conversations in the autonomous-related sample were very similar to those of the autonomous samples; however, children's drawings were medium in size. Correlations between narrative and drawing variables were only prevalent in the autonomous contexts and not in the autonomous-related and relational contexts. Correlations between structure and content variables were only revealed for the relational rural Nso context: the lower the mothers' child-other ratio, the more children contributed to the conversation.

2.3 Study Three:

Tōugu, P., Tulviste, T., Schröder, L., Keller, H., & De Geer B. (2011). Socialization of Past Event talk: Cultural Differences in Maternal Elaborative Reminiscing. *Journal of Cognitive Development*; 26(2), 142-154.

Study background: As previous studies as well as our own have demonstrated, mothers from contexts that value psychological autonomy (autonomous and autonomous-related contexts) adopt a highly elaborative reminiscing style. However, there are different types of elaborations with different effects on children's memory. Open-ended question elaborations have been revealed as most influential for children's memory contributions (e.g., Farrant & Reese, 2000; Haden, Ornstein, Rudek, & Cameron, 2009). Previous studies have not yet investigated cultural specificities for the use of different types of elaborations. The aim of our study was to compare the use of different elaborative elements across different autonomy oriented contexts (see Table 1 for samples) and to investigate the correlations of these elements with children's memory contributions.

We hypothesized that mothers of all three autonomy oriented contexts would be relatively high in their use of elaborations. We had no specific hypotheses about the use of specific elaborative elements (see Method for investigated types of elaborations). Based on previous studies (e.g., Haden et al., 2009) we expected open-ended question elaborations made by the mother to be the best predictor for children's memory contributions within all cultural contexts.

Method: One hundred and fifteen mothers with their four-year-old children participated in the study. Mothers were asked to fill out a questionnaire assessing their socialization goals (autonomy- and relational oriented). Furthermore, they were asked about their frequency to engage in reminiscing with their child. Mothers were then asked to talk about two past events with their children. Transcripts of recorded past-event conversations were coded for different types of maternal elaborations (adopted from Farrant & Reese, 2000;

Fivush & Reese, 1993): open-ended questions (W-questions; e.g., “What were you doing?”), yes-no questions (closed-ended questions; e.g., “Were you eating?”), tag questions (e.g., “We were dancing, weren’t we?”) and statements (“Paul was swimming.”). Furthermore, two types of maternal evaluations were coded: simple confirmations (e.g., “right”, “yes”, “correct”) and repetitions of the child’s previous utterance (e.g., C: “I was eating.”, M: “You were eating, right.”). Memory elaborations made by the child were also coded.

Analyses and main results: Results revealed that mothers within all three contexts valued autonomy oriented socialization goals (e.g., to become independent) over relatedness oriented goals (e.g., obey elderly). Comparisons of autonomy-to-relatedness socialization goals among contexts revealed that the ratio of mothers from the Stockholm context was significantly higher and the ratio of mothers from the Tallinn context significantly lower than the ratio of mothers from the Berlin context. Mothers of the Berlin context reported to engage in reminiscing significantly more often than mothers of the Tallinn context, whereas the reminiscing frequency reported by mothers from the Stockholm context did not differ from any of the other two samples.

In the conversations, mothers of the Stockholm and Berlin context were similarly elaborative, whereas mothers of the Tallinn context used significantly less total elaborations. However, children’s memory contributions did not differ among contexts. Looking at the different types of elaborations, results revealed that mothers did not differ in their use of open-ended questions; however, they differed in all other types of elaborations and evaluations. Unexpectedly, only in the Tallinn context, mothers’ open-ended questions predicted children’s memory elaborations. In the Berlin context, mothers’ statements and verbal confirmations predicted children’s memory elaborations. In the Stockholm context, maternal verbal confirmations were the only significant predictor for children’s memory contributions. Thus, different aspects of the elaborative style influenced children’s contributions of memory elaborations across the different cultural contexts.

3 Discussion

In the present dissertation mother-child reminiscing when children were three and four years of age was investigated in different socio cultural contexts. Three theoretical approaches were premise to this work: a) The ecocultural approach: Cultural contexts are characterized by population- and sociodemographic parameters, which originate different emphases on *psychological autonomy* and *relational adaptation* (i.e., different cultural models; e.g., Keller, 2007); b) Adaptive developmental pathways: Socialization practices differ across sociocultural contexts and yield adaptive developmental pathways in children (Greenfield et al., 2003; e.g., Keller, 2007); c) Social interaction theory: Socialization processes take place in social interactions between children and competent members of their sociocultural context, wherein language functions as an essential tool to transport cultural meaning (Nelson, 1993; Vygotsky, 1997).

The aim of the conducted studies was to systematically apply the ecocultural approach to investigate mother-child reminiscing. Accordingly, different sociocultural contexts were chosen based on population parameters and sociodemographic characteristics. To substantiate the approach's validity, we chose samples from different geographical areas representing the same cultural model (e.g., from India and Cameroon) as well as samples from the same geographical area (e.g., within North India) but representing different ecocultural models. First, the results of the three studies are discussed followed by a general conclusion. Study limitations and topics for future research are discussed afterwards. Practical implications of findings are outlined in the next chapter. The discussion concludes with a short paragraph of "closing remarks".

3.1 Discussion of Study Results

Across the three studies we analyzed mother-child reminiscing with respect to three main aspects: the structure mothers provided within conversations, the unique information children contributed (i.e., their memory elaborations), and the content mother and child talked about. In Study Two we additionally assessed children’s self-drawings (please see Table 1 for an overview of samples investigated in each study).

How did mothers structure the conversations? In Study One and Two, differences in the conversational structure were clearly revealed for mothers of contexts representing the prototypical cultural models of *psychological autonomy* and *relational adaptation*. Following, two mother-child conversations about past events are illustrated. The first one is of a middle-class Berlin dyad and the second one of a rural Nso dyad.

Conversation Example 1: Berlin Dyad

Turn	Mother	Child
1	This was the adult’s birthday last Sunday.	Yes.
2	What was the nice// the nicest present?	Ähm, all the things were the nice, the nice present.
3	Really? And what all did you get?	Hhm, a jacket and then many T-Shirts and also games.
4	Oh, really? What kind of games?	Also a mole-game and the same mole-game and, and like that.
5	Wow, great! And, what else did you get, that hangs in our corridor now?	(Pause) A swing.
6	(Laughs) Is and is it such a baby-swing?	No.
7	No? What kind of swing is it then?	Mm, it is such a swing, on which one can hang on and such a swing where one can sit on.
8	Yes, and w// ähm, do you like swinging?	Yes.
9	Yes. And what do you do with the two rings? What did you try immediately?	Swinging with the two rings.
10	Yes. But you did something very terrific. What was it? (Pause) You threw up your legs.	Yes, and made a roll.
11	Exactly! This was great, wasn’t it?	Yes.
12	A really super, super, super-duper roll!	Yes.

Conversation Example 2: Rural Nso Dyad

Turn	Mother	Child
1	Do you still remember that day we went for Chong?	Mmh+
2	You still remember?	Mmh+
3	You still remember the person who gave you corn drink?	Mmh+
4	Who gave it?	It, it is one mama who gave.
5	Whose mother? Whose mother was that?	The one who gave me corn drink.
6	Was it not the mother of Theo who gave it?	Mmh+
7	The mother of Theo gave you corn drink?	Mmh+
8	Mmmh, the mother of, mother of Leo did not say that you should be going outside?	Mmh+
9	The mother of Leo said that you should be going outside not so?	Mmh+
10	Mmh?	Mmh+
11	What did baby do?	Be Bay did but something.
12	Was baby there?	Mmh+
13	We went there like that and you saw who there?	I saw, saw somebody.

Note. “Mmh+” stands for approving feedback.

Even though the lengths of these conversations are comparable, with mother and child each taking twelve turns in the Berlin example and thirteen turns in the rural Nso example, it becomes obvious that mothers structured them very differently.

As the above conversation exemplifies and as results revealed, mothers of the *autonomous contexts* used significantly more elaborations and evaluations (i.e., confirmations and negations) than mothers from relational contexts. In the example, the mother gradually embellishes the conversation with more and more information mostly provided in questions and almost always confirms the child’s contribution. By using elaborations and positive evaluations, mothers encourage children to participate in and contribute to the conversation. Even though not as regularly used, negative evaluations (i.e., negations) on the mother’s part encourage the child to discuss about varying perspectives. Thus, this way to structure

conversations mirrors the socialization strategy and social roles associated with the cultural model of psychological autonomy: The mother treats the child as a quasi-equal interlocutor and reinforces the child to express her- or himself.

Mothers from *relational contexts* were in contrast more repetitive. As demonstrated in the rural Nso example, the mother often successively repeats the same question and does not provide many new details about the event. By using repetitions, mothers structure the conversation rather rigidly and insist that children follow their lead. Children's contributions are seldom reinforced as mothers rarely give feedback (through evaluations) to children's answers but go on with the next question or statement. Thus, this way to structure conversations mirrors the socialization strategy and social roles associated with the cultural model of relational adaptation: The mother is the expert and expects the child to be an adaptive apprentice.

For mothers of the *autonomous-related contexts* we hypothesized that they would combine the structural elements in different ways by being similar to the autonomous contexts in some aspects (using many elaborations, many evaluations, or few repetitions) and similar to the relational contexts in others (using many repetitions, few elaborations, or few evaluations). When looking at the variable-oriented results by comparing mean differences across cultural contexts, this latter hypothesis could not be confirmed. However, when applying a person-oriented approach in Study One (e.g., Bergman & El-Khoury, 2001) by determining each mother's *style pattern* (see Table 2) results were conform to our hypotheses, showing that mothers of the autonomous-related contexts were predominantly adopting hybrid style patterns during reminiscing. Thus, this way to structure conversations mirrors the socialization strategy and social roles associated with the cultural model of autonomy-relatedness: The mother does support children's autonomy in some respects (through elaborations or evaluation), however, not as strongly as mothers in the prototypical autonomous context; or they additionally structure the conversation rigidly by using many

repetitions fostering children’s relational adaptation. To illustrate a hybrid style pattern, the following example demonstrates a conversation from a Delhi dyad, which was classified as the “evaluative” style pattern –with the mother using many evaluations (here especially by repeating the child’s answer; a maternal style element functioning as a positive evaluation, see Reese & Fivush, 1993) but few elaborations and repetitions.

Conversation Example 3: Delhi Dyad

Turn	Mother	Child
1	Annu, who came on your bday?	Anka didi.
2	Anka didi. And?	And Ruchi aunty.
3	Ruchi aunty. And what you did on your birthday?	Ate cake.
4	Which cake did you cut?	Osword one.
5	Osword one.	I eat noddy cake.
6	Oh, you ate noddy cake. And what you did?	On birthday sung song. Cut the cake, blowed.
7	Blew the candle. What you did?	And I (<i>unintelligible</i>)
8	What Aanu wore? Tell fast, what you wore. Annu was a pretty girl.	Yes, I was girl.
9	You were girl. What you did on your birthday? Did you play?	Ate cake. Yes, I played.
10	With whom?	Toys
11	With toys. Did you get gifts?	Yes, I got.
12	What you got?	I didn’t get gifts.
13	You didn’t get gift. You got so many.	Ruchi aunty got me gift.
14	Ruchi aunty got gift. You got frock.	I got frock.
15	What Anu aunty got for you?	Got gift.

In line with previous cross-cultural studies on parenting behavior (e.g., Keller, 2007), results also revealed greater variation among contexts with the autonomous-related cultural model. Mothers of the Delhi and San José contexts used mainly hybrid style patterns (see page 42 in Study One). In contrast, mothers of the urban Nso context adopted the repetitive reminiscing style like mothers from the relational contexts, even though the sociocultural

contexts families lived in represented the autonomous-related cultural model. This was revealed by both the variable- as well as person- oriented analyses (in Study One). On average they did not differ with respect to any structural element from the relational contexts. In contrast, to the autonomous-related samples from Delhi and San José, mothers of the urban Nso context were not under- or over- represented in any style pattern. When looking at the descriptive statistics, the proportion of urban Nso mothers adopting the repetitive style pattern was quite high with one third ($n = 4$). We assume that this is due to internal rural-to-urban migration history (“Binnenmigration”) of some of the urban Nso families. Some of the urban families were first-generation migrants to urban context and parents had spent their childhood in rural contexts. Thus, they might have spent their own childhood in relational oriented socialization contexts. However, the results and their interpretation should be handled with care due to the small sample size of $N = 12$.

In general, more variety among autonomous-related contexts might be due to greater societal changes these contexts are undergoing compared to contexts with the prototypical cultural models. Consequently, continuous and more rapid adaptation processes with respect to their cultural model might take place. For future studies, it would be very interesting to see further changes in the -today- autonomous-related contexts across time and how these changes might be mirrored in maternal reminiscing styles. As previous research suggests, autonomous orientation does increase over generations within psychological autonomous and autonomous-related contexts (Lamm, Keller, Yovsi, & Chaudhary, 2008). However, changes might depend on the rapidity of societal change and thus might vary among different autonomous-related contexts (Lamm et al., 2008).

By using a person-oriented approach in Study One, we could gain additional insights that would have not been accessible with the variable-oriented analyses. As a limitation of this approach, it is important to keep in mind, however, that we established dichotomous categorizations in order to determine each mother’s style pattern (being “high” or “low” on

the three dimensions). By doing so we ignored the continuous nature of the style elements. Further, values close to the cut-off point (the overall mean scores) might be categorized as high and low even though the actual frequencies are very similar. This is a limitation to our procedure of applying a person-oriented approach.

Another finding (Study Three) were variations in maternal elaborative structure among sociocultural contexts all valuing psychological autonomy. When looking at the subcategories of elaborations variability across cultural contexts were revealed within the elaborative style (see also Haden et al., 2009). Mothers did not differ in their use of open-ended question elaborations but in their use of yes-no questions, statements, and confirmations. This might be due to reciprocal mechanisms between maternal and child contributions, which will be discussed later on (in *relations between maternal and child contributions*). More generally, these results suggest that differences among cultural contexts might be more or less distinct depending on the specificity of investigated categories.

How did children's memory recall vary across different cultural contexts? Previous studies have shown that children of mothers adopting an elaborative style in contrast to children of mothers being more repetitive provide richer memory information. Numerous studies have shown this relation within samples of the same sociocultural contexts (see Fivush, Haden & Reese, 2006 for a review) or by comparing sociocultural contexts representing mostly the cultural models of psychological autonomy and autonomy-relatedness (e.g., Wang, 2007).

In line with these previous studies in general were the results (Study One and Two), that children of the psychological autonomous contexts with mothers adopting the elaborative-evaluative style provided the most memory information. In contrast, children of the relational contexts with mothers using many repetitions and few elaborations and evaluations provided the least memory information. For the autonomous-related contexts the results were heterogeneous as they were for the maternal reminiscing styles. Children of the

urban Nso context recalled as little memory information as did children of the relational contexts (rural Nso and rural Gujarat); according to their mothers' repetitive and low elaborative reminiscing style. Children of the Delhi (with three years of age) and Tallinn (with four years of age) contexts contributed as many memory elaborations as did children of the psychological autonomous contexts. Memory provision of children from the San José context was moderate (with three years of age) compared to the relational contexts, even though their mothers adopted hybrid styles, similar to mothers of the Delhi context.

Mothers of the Tallinn context used overall fewer elaborations than mothers of the autonomous contexts, however, they used as many open-ended question elaborations as did mothers of the autonomous contexts (Study Three) and had a similarly high elaboration-to-repetition ratio (Study Two). This might explain children's high provision of memory elaborations. For the Delhi and San José contexts (Study One), the specific type of (hybrid) style pattern might be explanatory: Overall, children of mothers with any hybrid style characterized by a high frequency of evaluations (i.e., elaborative-evaluative, evaluative, and evaluative-repetitive) recalled significantly more memory elaborations compared to mothers adopting any other style pattern. More mothers of the Delhi (46%) than San José (37%) context adopted a hybrid style pattern characterized by a pronounced frequency of evaluations. This could be a possible explanation, which is, however, only based on descriptive statistics.

Which relations exist between maternal reminiscing style and children's memory contributions? In the first study, we conducted level-oriented (i.e., regressions) and typology-based (i.e., children's memory as a function of maternal style patterns) analyses. The regression analyses revealed that across cultural models maternal evaluations were associated with children's memory contributions. In the autonomous contexts, this was the only significant predictor. In the autonomous-related contexts, maternal repetitions were an additional but negative predictor. Only in the relational contexts, maternal elaborations were

positively related to children's memory contributions beside evaluations. This result was similarly found in Study Three with four-year-old children: In the autonomous contexts maternal confirmations were the strongest predictor for children's provision of memory information.

So far, elaborations were revealed as the best predictor for children's memory contributions (e.g., Reese & Fivush, 1993; Wang, 2007); and specifically, open-ended question elaborations (e.g., Farrant & Reese, 2000; Haden et al., 2009). Different correlation patterns might be due to reciprocal mechanisms between mother and child contributions. It is possible that the function of different maternal style elements might vary as a function of what children contribute to the conversation independently. This might explain age differences across psychological autonomous contexts as well as culture specific differences: The more children contribute to the conversation without being explicitly encouraged (e.g., through open-ended questions), the more positive enforcement on the mothers' part (through positive evaluations) might elicit further child input. Children of psychological autonomous contexts learn to engage in past event talk for its own sake and with three and four years of age they might already contribute to the conversation on their own. At younger ages, maternal (open-ended question) elaborations might still be the most relevant factor for children's memory contributions (e.g., Haden et al., 2009 investigating 18-30 months old children). In cultural contexts emphasizing relational adaptation, however, reminiscing might represent an interactional situation for children to comply with the mothers' conversational lead: Children only contribute to the conversation when being asked –independent of their age.⁴

Thus, there might be different functions underlying children's memory contributions in general and independent of their competence to do so. Children might contribute to the conversation in order to express their unique perspective. In this case they may want to

⁴ Note that we did not investigate different kind of elaborations (e.g., open-ended questions, statement elaborations etc.) in Study One but Study Two only. As we examined the aggregate of different types of elaborations in Study One, we cannot conclude about correlation specificities (e.g., for open-ended questions) within cultural contexts representing all three cultural models. This would be worth to look at in future studies.

demonstrate the specifics of their memories because it is positively reinforced by their mothers. Children might also try to comply with their mother's style by contributing when and what they think their mothers expect. Thus, children's motivation to contribute memory information might be differently anchored across cultural contexts (Kitayama & Uchida, 2005). In fact, we could demonstrate in a recent study that different dyadic interaction patterns during toddlerhood predicted children's memory contributions in reminiscing with three years of age. In a Berlin middle-class context maternal responsiveness (to child initiatives) during early interactions predicted children's memory, whereas child responsiveness (to maternal requests) predicted children's memory within a Delhi middle-class context (Schröder, Kärtner, Keller, & Chaudhary, under review). Thus, the function of children to contribute memory elaborations during reminiscing seems to differ among cultural contexts: expressing themselves or being compliant. Accordingly, correlation patterns with maternal style characteristics might vary across contexts.

Across contexts, the typology-based analysis (Study One) revealed maternal evaluations as the most influential factor for children to contribute memory information. Overall, children of mothers being highly evaluative (independent of the other dimensions) contributed more information compared to children of mothers with a style pattern characterized by a low degree of evaluations. Unexpectedly, children of mothers with an evaluative style pattern (low in elaborations and repetitions) contributed significantly more to conversations compared to children with mothers adopting any other style pattern. Thus, in an ongoing conversation maternal evaluations seem to be specifically important for children to contribute. However, this effect might not hold longitudinally. As previous studies suggest, maternal elaborations might be most predictive for children's memory longitudinally (Reese et al., 1993). Furthermore, the typology-based analysis was conducted across contexts and culture specificities would also need to be considered here in future studies.

What did mothers and children reminisce about? Another aspect we investigated was the content of mother-child conversations. In Study One we investigated autonomous talk (i.e., personal judgments and opinions), and didactic talk (see Method in Study One). Even though these thematic foci have been found to differ between cultural contexts before (e.g., Wang, 2001b), we could only analyze maternal autonomous talk because didactic talk and children's autonomous talk was rare across all samples. We found as expected that mothers of the autonomous contexts referred to autonomous talk significantly more often than mothers of the relational contexts. The autonomous orientation on the content level becomes also apparent in the conversation example of the Berlin dyad (p. 28), in which the mother is asking the child about personal judgments/opinions: "What was the nicest present?" or "Do you like swinging?".

For the autonomous-related contexts, content differences were reflecting their cultural orientation similarly as for structure: Mothers of the Delhi and San José contexts were referring to autonomous talk as often as mothers of the psychological autonomous contexts, whereas mothers of the urban Nso context used little autonomous talk as mothers of the relational contexts. Thus, mothers of the Delhi and San José contexts were encouraging children to contribute their own opinions more often, reflecting a higher autonomy orientation on the content level. Mothers of the urban Nso context were in contrast low in their references to autonomous talk, mirroring a low autonomy orientation as for the relational contexts. As discussed for results on structure, this might be related to urban Nso parent's migration history.

In Study Two we looked at mothers' referring to the child relative to referring to social contexts (i.e., other persons) and at children's referring to themselves relative to social contexts. Overall, mothers of all contexts referred to the child more often than to social contexts (all ratios > 1). However, in line with our hypotheses, mothers and children of the autonomous as well as autonomous-related contexts had a significantly higher ratio of

child/(self)-to-social context references compared to mothers and children of the relational context. When looking at the Berlin (p. 28) but also Delhi (p. 31, even though this sample was not included in Study Two) conversation examples, mothers are only referring to the child and not to other persons (e.g., “What did *you* get?”; “What did *you* do...?”). In the autonomous contexts mothers referred to the child over three times more often and up to six times more often than to other persons (mean ratios: 3.3 - 5.6). In the relational context, this ratio was significantly lower than in all other contexts (1.7). As exemplified in the rural Nso conversation (p. 29), the mother is asking what other people were doing and not what the child was doing (e.g., “*Who* gave it?”; “The *mother* of Leo said...”). In children, the ratios were overall lower than in mothers (even < 1 for the rural Nso children); however, the differences between contexts were the same. Again, the cultural orientations are mirrored in the thematic focus mothers and children take during reminiscing: Autonomy orientation was related with higher child centeredness whereas relatedness orientation was associated with a greater focus on other people. These differences are expected to yield the development of different self-concepts in adults (Keller, 2007; Markus & Kitayama, 1991).

An interesting result in Study Two was also the correlation pattern between the maternal content talked about and children’s memory. In none of the autonomous or the autonomous-related contexts, the content (child-other ratio) mothers talked about was related to children’s memory contributions. However, in the rural Nso context there was a negative correlation demonstrating that a higher child-other ratio on the mothers’ part was related to a lower provision of memory elaborations on the child’s part. Children in this context apparently were contributing more to conversations when the content talked about by the mothers was less child centered but more focused on social contexts. As children of relational contexts are socialized towards interdependence and self-effacement, they might be less used to reflect on their own experiences and opinions than on what others were doing.

How did children draw themselves? In Study Two we also asked children to draw a picture of themselves. We expected that children's culture specific self-representations would be reflected in their self-drawings: Children of autonomous contexts were expected to draw themselves bigger - pronounced and space-demanding- whereas children of the relational contexts were expected to draw themselves smaller -mirroring greater self-effacement (Rübeling et al., 2011). Children's self-drawings of the autonomous-related context were expected to be intermediate in size. Mean differences among contexts confirmed these hypotheses. Thus, as early as with four years of age, a task not guided by an adult (as reminiscing) but being independently conducted by the child, reflected children's culture adaptive self-representations across cultural contexts. On an individual level, this measure (i.e., size of self drawings) was only correlated with maternal and child reminiscing characteristics (structure or content) within the autonomous but not autonomous-related or relational contexts. As discussed before, the different functions of children's memory contributions might be explanatory (Schröder et al., under review): Children's contributions during reminiscing might function to express themselves in autonomous contexts but to be compliant in more relational contexts. Because of that the individual link across tasks (self-drawing and reminiscing) might be missing within the contexts valuing relatedness.

3.2 Conclusions

According to the ecocultural approach, we could demonstrate that the three cultural models manifest in mother-child reminiscing. Mothers transported culture specific meaning in discourses with their preschoolers. In line with social interaction theory (Vygotsky, 1997) this was applicable for how mothers reminisced –the structure- and what about they talked –the content. The different reminiscing styles and thematic foci are meaningful within the different sociocultural environments and foster children's development of becoming a competent societal member: At this early developmental stage, children had already internalized the

respective cultural orientation. This was reflected in their memory contributions, the content they referred to, and in their independent self-drawings. Thus, when looking at the three- and four-year-old children, the cultural pathways described for the previous infant and toddler years in the introduction, continued as adaptive courses to the different sociocultural contexts: Children were expressive and more self-centered in the autonomous contexts, whereas children showed greater self-effacement and social focus in the relational contexts. Overall, the developmental pathway of psychological autonomy might be entitled as “sticking out”, whereas the developmental pathway of relational adaptation might be entitled as “fitting in” (Markus & Kitayama, 1991). For children of the autonomous-related contexts, results continued to be more heterogeneous, however, overall they mirrored the hybrid orientation in their cultural emphases.

The studies support the notion that psychological processes have to be considered and interpreted in relation to the cultural context in which they unfold (Keller, 2007). This refers to level-oriented (mean differences) as well as functional (correlation based) analyses: Becoming a competent member of a specific cultural context requires very different skills within universal domains, such as mother-child discourse. Additionally, in this process the effect of socialization strategies on the adults’ part may vary across different sociocultural contexts: The same socialization strategies might lead to different outcomes on the child’s side as well as different socialization strategies might lead to the same outcomes in the child. Thus, the mechanisms of action also vary depending on the cultural context in which they operate.

3.3 Limitations and Outlook

The present studies’ conclusions can only be made for the setting of mother-child reminiscing - not considering the actual frequency of this specific type of dyadic discourse. It will be important for future studies to assess naturally occurring conversations in different

cultural contexts to investigate past-event recall on a meta-level: occurrence, typical interlocutors, and recall-form. First, it can be expected that conversations about past events occur less often in relational and possibly also autonomous-related contexts compared to autonomous contexts (Everett, 2005; Mullen & Yi, 1995). Based on questionnaire data, our own results point to differences in the frequency of reminiscing among contexts (Study Three). Secondly, there might be cultural variability in the interlocutors typically involved in past event conversations. In relational contexts it might be more common for children to reminisce with older siblings and in bigger groups rather than in dyadic settings with their mothers (Keller, 2007). Third, the form of recalling the past might vary. In the Maori culture for example, reminiscing is traditionally established in a narrative form rather than in discourses (Reese et al., 2008).

This demonstrates the general dilemma of cross-cultural research. Investigating the same phenomena (here mother-child reminiscing) across different cultural contexts might be at the expense of ecological validity. Investigating different phenomena across cultural contexts (depending on the natural occurrence within contexts) hinders direct comparability. Both approaches have its value and lead to different but important conclusions about differences and similarities of psychological phenomena across cultures. Even though the natural occurrence of the investigated interaction (reminiscing) might vary across cultures, in the present studies all mothers felt comfortable to talk with their children about past events.

Another aspect worth to look at in future studies are interactional mechanisms between maternal and child turns. In the present study only separate units of mother and child were considered. The interactive process and the reciprocal mechanisms during mother-child reminiscing could be investigated through contingency analyses (e.g., Reese et al., 1993), for example with a dynamic systems approach (Petra, Benga, & Tincas, 2005). Longitudinal studies could be revealing in this area. Investigating procedural aspects across cultures could provide additional insight of culture specific socialization processes. Furthermore, we did not

consider non-verbal aspects of conversations. Considering for example the tone of voice, gaze, volume or gestures and its interplay with verbal aspects during reminiscing across cultures would also be an interesting field for future studies.

The unit of children's memory elaborations is also worth to discuss. Child memory elaborations refer to child contributions containing new information about the event discussed which were not mentioned before (e.g., Reese & Fivush, 1993). It is important to keep in mind that the accuracy of recall is not relevant to the studies at hand. However, we cannot determine the personal relevance of the discussed events. Consequently, we do not know whether the discussed events will be remembered in the long term and thus actually become "autobiographic". The studies are limited to conclude about general processes to "create" personally meaningful memories in mother-child discourses. We can, however, suggest that the maternal reminiscing style is consistent across time and conversational partners (Farrant & Reese, 2000; Haden, 1998; Harley & Reese, 1999; Reese et al., 1993; Wang, 2007). The analyses should therefore generalize across time and past event conversations.

3.4 Practical Implications

The present studies represent basic developmental research. However, the results provide important implications for the development of application/intervention programs and studies in the field of elementary pedagogic. As a result of the debate about language promotion in day-care centers and latest evaluation studies demonstrating failure of most implemented programs, we have started to develop an intervention program for preschool teachers based on the findings of previous and our own research. The practical implications of our findings are demonstrated by shortly outlining the main ideas of the approach's conception.

In contrast to most other language promotion programs, training linguistic competences (e.g., grammar, vocabulary) in settings separated from daily activities, we took

an everyday-life approach. As fundamental research shows children acquire language through social interactions with competent members of their social environment without being explicitly taught in specific linguistic competencies. The basic goal of the outlined approach is, thus, to frequently involve children in authentic and meaningful conversations (e.g., talk about personal past events). For adults to achieve this goal, we considered structural as well content related language behavior:

Conversational structure: Our and other cross-cultural studies demonstrated that style characteristics associated with the elaborative-evaluative reminiscing style boost children to contribute new information to conversations (Boland, Haden, & Ornstein, 2003; e.g., Cleveland & Reese, 2005). Others and we demonstrated this relation *across cultural contexts* (e.g., Wang, 2007). Thus on the structural level, elements of the elaborative-evaluative style are important to encourage children to talk. Furthermore, the relation of maternal elaborations and evaluations and children's contributions varied between contexts in our studies. We interpreted this varying relationship to be influenced by differences in children contributing independently to the conversation or only when being asked. In line with Vygotsky's zone of proximal development (e.g., Vygotsky, 1997), adult's support can maximize children's skills when it does exceed the child's basic developmental stage but not overstrain the child's ability (exceeding the zone of proximal development). Thus, caregivers should be sensitive and adapt to the child's individual conversational course.

Conversational content: Within the relational contexts, the fewer mothers referred to the child relative to others the more children contributed to the conversation. Thus, in order to encourage children of more relational oriented contexts to contribute to conversations, the child centered focus prevalent in the German, urban middle-class contexts, should be reduced in favor of a more social oriented focus. This thematic focus could have the positive side effect of enhancing the development of social-emotional competencies in all children and moderate a partly extreme orientation towards autonomy and individualism.

We are thus conducting an intervention study by training kindergarten teachers to adopt a *high elaborative* and *socially focused* conversation style during kindergarten's everyday life. The effect on children's language and social development will be evaluated longitudinally.

3.5 Closing Remarks

So far, most knowledge in the discipline of psychology is based on people from contexts representing the cultural model of psychological autonomy; or as Henrich and colleagues refer to, people from "WEIRD" regions: "Western, Educated, Industrialized, Rich, and Democratic" environments (Henrich, Heine, & Norenzayan, 2010). Yet, findings are often generalized for the human species. This does not satisfy the discipline's complexity. Culture should be considered as the immanent factor of human's psychological functioning. In an age of increasing globalization and migration, the need to expand mainstream psychology to other cultural contexts than WEIRD ones becomes even more essential. Understanding psychological functions as cultural phenomenon can contribute to a better reflection of one's own culture specific worldview as well as to more tolerance towards other, varying worldviews. Psychology considering culture is relevant to everyday- and work-life, and thus most relevant to educational curricular, and the development of intervention programs.

4 References

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