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# Telling a “baby story”: Mothers narrating their pre-schoolers’ past across two cultural contexts

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Mothers from two middle-class contexts from Berlin, Germany ( $n = 35$ ), and Delhi, India ( $n = 28$ ) told a baby story to their 3-year olds about an event that had happened during the children’s first year of life. The contexts represented two cultural models: the model of psychological autonomy (Berlin) and the model of autonomy-relatedness (Delhi). We investigated the culture-specific functions of this reminiscing task as reflected in the structure, content and specificity of the stories. The stories in both contexts were minimally interactive and the children contributed few elaborations themselves. Stories told by the Berlin mothers were longer, and more specific. Mothers in both contexts were similarly elaborative relative to being repetitive. The stories were highly child-centred in both contexts but even more child-centred for Delhi. Importantly, maternal narrations from the Berlin context were embedded in a frame story that characterised the child’s individual past; stories thus constructed “exclusive baby stories”. Most stories told by the Delhi mothers had no frame story but instead were about what the child used to do as a baby in general; they thus constructed “routine baby stories”. Results are interpreted in the view of the underlying self, social and directive functions of this reminiscing task.

**Keywords:** Autobiographical memory; Reminiscing; Functions; Culture.

Autobiographical memory contains long-term recollections of the past that are personally significant and compose an individual’s life history (Nelson, 1993). These personal memories serve three different main functions: self, social and directive, and are thus central for the development of personhood, social relationships and learning/giving advice (Bluck & Alea, 2002). The process by which children learn how and why to create personal memories is highly influenced by the way socialisation agents discuss personal memories with them (Nelson & Fivush, 2004). The way mothers reconstruct the past with their children varies in turn as a

function of cultural context, mirroring culture-specific socialisation goals (SGs; e.g., Wang, 2007). So far, investigations have mainly focused on mother-child reminiscing about shared events (that the mother and the child experienced together) or unshared events (that the child had experienced alone; see Fivush, Haden, & Reese, 2006, for a review). However, a cross-cultural study of New Zealand Maori mothers indicates that the stories mothers tell about their children regarding events that the children have experienced but cannot remember, e.g., their births, are also relevant for the children’s autobiographical memory

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development (Reese, Hayne, & MacDonald, 2008). In the present study, we investigated the structure, content and specificity of stories mothers tell to their pre-schoolers regarding events that happened within the child's first year of life across two cultural contexts: middle-class families from Berlin, Germany, and Delhi, India. The way mothers reconstruct the child's past in these kinds of stories will be interpreted in view of culture-specific socialisation of the functional uses of personal memories.

## Cultural models

Cultural orientations have been described as varying in their emphases on the dimensions of autonomy and relatedness (e.g., Kağıtçibaşı, 2007). Both autonomy and relatedness are basic needs that beg to be satisfied in all humans (Deci & Ryan, 2000); however, the mode in which these needs are expressed varies across ecosocial contexts (Keller & Kärtner, 2013). Cultures described as representing typical autonomous contexts (Western, urban, highly educated middle-class contexts) value autonomy and relatedness via psychological modes (e.g., mental and self-reflective), whereas contexts typically referred to as relational (non-Western rural contexts with little formal education) emphasise hierarchical relatedness and action autonomy (e.g., the self-directed and responsible actions supporting the family/social system; Keller & Otto, 2011). Mothers in psychologically autonomous cultures value an independent autonomous self and want their children to be aware of their presumed uniqueness. Mothers in relatedness-oriented cultures, by contrast, place importance on an interdependent, socially embedded self-concept in which children adapt to a social hierarchy and live up to their social responsibilities (Keller, 2011). There is more variability in non-Western urban contexts where higher education is as prevalent as it is in Western urban contexts (Keller, 2007). In these settings (e.g., middle-class families in Asian contexts), mothers emphasise both psychological autonomy and aspects of hierarchical relatedness (Kağıtçibaşı, 2007; Keller & Kärtner, 2013). In such a context, children tend to develop psychological autonomy within a social system in which they have responsibilities.<sup>1</sup>

<sup>1</sup>For easier legibility, we might refer to "autonomy" and "relatedness" only in the following; we then mean psychological autonomy and hierarchical relatedness.

The contexts investigated in the present study are the cultural model of psychological autonomy and the cultural model of autonomy-relatedness. The model of psychological autonomy is represented by educated middle-class families from Berlin. The model of autonomy-relatedness is represented by educated middle-class families from Delhi. These contexts are particularly interesting because previous studies have shown several similarities in children's development in both settings, such as mirror self-recognition and prosocial behaviour (Kärtner, Keller, & Chaudhary, 2010) as well as children's memory contributions during joint reminiscing (Schröder et al., 2013) despite their different underlying models (e.g., Keller et al., 2006).

## Mother–child reminiscing across cultures

A substantial body of research has focused on mother–child joint reminiscing during the pre-school years as it relates to the development of children's autobiographical memories (Fivush et al., 2006). Joint reminiscing is an activity that is common in many cultures (e.g., Eisenberg, 1985; Melzi, 2000; Minami, 2001; Mullen & Yi, 1995; Reese et al., 2008; Schröder et al., 2013; Wang, 2007; see also Leichtman, Wang, & Pillemeyer, 2003), although exceptions have been reported as well (Everett, 2009). However, the way parents construct the personal past with their children varies among cultures with respect to the style (structure), the content as well as specificity. These differences will be outlined in the following report.

With respect to structural style, elaborativeness has been revealed as a differential characteristic of parents that has a particularly strong influence on children's ability to recall personal memories (e.g., Reese & Fivush, 1993). Highly elaborative mothers embellish conversations with diverse information instead of repeating information that has been mentioned before. They mainly provide new information, pose open-ended questions and regularly confirm the children's contributions. Thus, they build a rich scaffold of event information and thereby support children's retrieval; additionally, they encourage children to actively participate in reminiscing (Fivush et al., 2006). Compared to children of low elaborative mothers, children of mothers who adopt a high elaborative reminiscing style contribute more memory elaborations during an on-going conversation across the pre-school years and during

memory recall with an independent person (Farrant & Reese, 2000; Harley & Reese, 1999; Nelson & Fivush, 2000; Reese & Fivush, 1993; Reese, Haden, & Fivush, 1993). The influence of elaborative reminiscing on children's memory has also been confirmed by experimental studies (e.g., by implementing standardised elaborative reminiscing by an experimenter; e.g., McGuigan & Salmon, 2004) or studies in which mothers are trained in elaborative reminiscing (Reese & Newcombe, 2007).

The positive relationship between maternal elaborativeness and the richness of children's personal memories has been shown across different cultural settings concurrently as well as longitudinally (Farrant & Reese, 2000; Schröder et al., 2013; Wang, 2006a, 2007). However, mothers in different cultural contexts differ in their degree of elaboration during joint reminiscing. In the literature, the cultural orientations of autonomy and relatedness have often been contrasted with results demonstrating that mothers in autonomy-oriented contexts seem to use elaborative elements more extensively than do mothers in relatedness-oriented contexts (Schröder et al., 2013; Wang, 2007; Wang, Leichtman, & Davies, 2000).<sup>2</sup> These differences emphasise the construction of a more elaborated and thus more detailed and distinct narrative of the child's past experiences. Wang (2007) demonstrated that the use of elaborations (relative to repetitions) during mother-child reminiscing was positively correlated with an independent maternal self-construal and negatively correlated with an interdependent maternal self-construal.

At the content level, mothers from autonomy-oriented contexts focus on autonomous talk that is characterised by references to their children's preferences and personal judgements (Schröder et al., 2013; Wang, 2001). Furthermore, mothers of autonomous contexts refer more often to the child than to other people. In contrast, in contexts also emphasising hierarchical relatedness, mothers mention social norms and moral standards more frequently and focus less on the child than Euro-American mothers but refer more often to other persons (Miller, Wiley, Fung, & Liang, 1997; Mullen & Yi, 1995; Wang et al.,

2000; Wang, 2001). These differences are also mirrored by children's independent memory accounts showing that as early as the pre-school years children have started to internalise their socialisation experiences: compared with their peers in Asian contexts, 3- to 8-year-old children from Euro-American contexts refer to themselves more often than they refer to others, and elaborate on their personal preferences and feelings when they are asked for recent past events as well as when they recount their earliest memory (Han, Leichtman, & Wang, 1998; Wang, 2004a).

Finally, the episodic specificity of personal memories varies across cultures (Wang, 2009). Conway and Pleydell-Pearce (2000) have proposed a knowledge base of autobiographical memory that classifies personal memories into three interrelated levels of specificity: lifetime periods (e.g., the time going to kindergarten), general events (e.g., meeting the play-group every Saturday) and event-specific knowledge (e.g., getting a surprise on the third birthday by being visited by a clown). Episodic specificity thus refers to the degree of detail used to recount past events that occurred at a specific time and place. In a study by Fivush and Wang (2005), European American mothers chose exclusively specific one-point-in-time events when asked to reminisce with their pre-schoolers about the past. In contrast, Chinese mothers chose almost as many general (e.g., going to the park) as specific events (Fivush & Wang, 2005). This cultural difference in episodic specificity is also mirrored in children's (3–8 years of age) independent memory accounts of recent events or their first memories (Han et al., 1998; Wang, 2004a, 2008): children of European American contexts recalled more specific one-point-in-time events compared to their peers from Asian contexts (Korea and China). Euro-American children's memory specificity is correlated with greater autonomous self-descriptions, thus reflecting the distinctiveness and separateness of the self in relation to others, and thus an emphasis by Euro-American contexts on using autobiographical memory to maintain an independent sense of self (i.e., the self function; Wang, 2004a; see also Wang, 2006b).

As analysed in detail based on empirical findings by Wang (2009), the cultural differences in episodic specificity mirror true "cultural" differences in how the past is remembered and cannot simply be explained by methodological artefacts (e.g., ecological validity) or other confounding factors (e.g., general memory capacity,

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<sup>2</sup>Elaborativeness is not a dichotomous concept but varies dimensionally. This explains why intra-cultural differences are prevalent as well (e.g., Fivush & Fromhoff, 1988; Reese & Fivush, 1993), although intercultural differences are more pronounced.

syntax specificities of languages). Thus, these differences as well as the before mentioned ones may mirror culture-specific functions of remembering the personal past.

### Culture-specific functions of reminiscing

Looking at the functions of personal memories and reminiscing means that memories are investigated with respect to the underlying reasons they are shared, i.e., what people use their memories for in everyday life (Bluck, Alea, Habermas, & Rubin, 2005). Studies of adults have revealed three main functions of autobiographical memories: the self function, the social function and the directive function (Bluck, 2003; Bluck et al., 2005): Autobiographical memory serves the function of defining oneself and experiencing self-continuity over time. The social function of sharing memories serves to initiate, maintain and develop relationships. The directive function serves to solve present problems or make future plans based on previous experiences and on the basis of this experience to also give advice to others. Personal memories serving to regulate one's emotions have been named as another directive function (Bluck et al., 2005).

The cultural differences in mother-child reminiscing may be interpreted as reflecting these underlying functions. As analysed by Wang (2004b) based on empirical findings, mother-child reminiscing serves all three functions across cultures, although once again in culture-specific ways. In Western, autonomy-oriented contexts, elaborative, child-centred, and specific reminiscing which encourages children to express themselves serves to facilitate a unique and psychologically autonomous self (Wang et al., 2000). In contrast, in relational contexts, mothers take the leading role in reminiscing (less elaborative, more repetitive) and by referring to other persons, they position the child as part of a social system; thus, the mother facilitates a relational self that is situated in a social hierarchy.

With respect to the social function, reminiscing in autonomous contexts serves to strengthen relationships and emotional bonds. In these contexts, relationships between autonomous selves have to be maintained and negotiated and talking about the shared past seems to be a good framework for doing so (Wang, 2004b). In relational contexts, relationships are mostly predetermined and do not need to be negotiated. The self

boundaries are furthermore not as distinct from others as they are in autonomous contexts (Markus & Kitayama, 1991). Thus, the social function of reminiscing serves less to promote relationships than it does to solving inter-personal conflicts in order to maintain social harmony (Wang, 2004b).

In autonomous contexts, the directive function is applied in talking about practical problem solving and behavioural guidance during mother-child reminiscing (Wang et al., 2000). In relational contexts, the directive function is reflected in maternal references to social norms and moral standards; reminiscing thus functions as a moral lesson (Wang, 2001; Wang et al., 2000).

These cultural differences in the functions have similarly been revealed when Euro-American and Chinese mothers were asked directly why they shared memories with their children (Kulkofsky, Wang, & Koh, 2009). Their replies suggest in addition that mothers might not be consciously promoting all functions but some functions might be implicitly expressed in their reminiscing behaviour without explicit awareness (Kulkofsky et al., 2009). This result has also been revealed for young adults (Kulkofsky, Wang, & Hou, 2010). Across both studies, mostly social functions seem to be consciously invoked, whereas self- and directive-functions are less commonly specified.

Furthermore, the predominant function of mother-child reminiscing appears to vary within cultures depending on the emotional valence of the reminiscence event. Wang and Fivush (2005) asked Euro-American and Chinese mother-child dyads to talk about a positive and a negative past event. Overall, the inter-cultural differences were in line with other studies described earlier. However, talking about a positive event, in both cultural contexts mothers were more elaborative and talked more about the child's preferences and judgements as well as more about other persons (relative to the child) than when reminiscing about a negative event. Thus, the authors suggest that reminiscing positive events may facilitate talk about both who the child is (self function) and who the child is in relation to others (social function). When reminiscing about negative events, mothers of both cultural contexts talked more about the child's emotions and more about the causes of emotional experiences than they did when discussing positive events. Thus, reminiscing about negative events may specifically function to teach children emotion regulation competencies (Wang & Fivush, 2005).

Studies with Maori and Pakeha mother-child dyads have further demonstrated that the relevance of different kinds of reminiscing tasks for children's autobiographical memory also varies across cultures (Reese et al., 2008). They found that in the Maori (more relational-oriented) families, stories told *about* the child were more relevant to children's autobiographical memory development than discussing shared events *with* the child. In the present study, we investigated a similar reminiscing task in which the mother was asked to tell a story to the child about her/his distant past. Examining this kind of task might provide additional insight into the functions of the narrative socialisation processes across cultures within a different reminiscing task.

## THE PRESENT STUDY

In the present study, we aimed at investigating maternal SGs in order to verify the cultural models of the two contexts as well as the topics, structure, content and specificity of a reminiscing situation in which the mother was asked to tell a story about the child from the child's first year of life. Thus, this situation differed from joint reminiscing, where mother and child talk about a recently shared past event. By giving few instructions to mothers—we did not specify the topic of the baby story or ask the mother to name a specific event she would talk about—we hoped to obtain a picture of how mothers would spontaneously approach the task and to determine whether this approach would reflect culture-specific functions as related to the underlying cultural models.

We chose two cultural contexts representing two cultural models: Berlin middle-class families with high formal education levels to represent the model of psychological autonomy, and middle-class families from Delhi (India) also with high formal education to represent the combined model of autonomy and relatedness.

With respect to *inter-cultural* differences we expected, in line with the underlying cultural models, that the relative value placed on autonomous compared to relational SGs would be higher in the Berlin than in the Delhi context. Based on the literature on joint reminiscing, we furthermore predicted that mothers of both contexts would not differ in being elaborative (as opposed to being repetitive) and in making elaborative statements (as opposed to elaborative

questions). Consequently, we expected that children would not differ in their degree of memory contributions, which in all cases was expected to be low due to the task requirements. We expected that stories told by the Berlin mothers would be more specific, whereas we predicted Delhi mothers' accounts would be more generic (as for other Asian contexts). This difference was equally expected for children's contributions. Furthermore, we hypothesised that references to the child relative to others (child-centeredness) would be higher in the Berlin setting compared to the Delhi context based on results in joint reminiscing in these contexts. We had no explicit hypotheses about the stories' length.

With respect to *intra-cultural* differences we expected that according to the cultural models, Berlin mothers would value autonomous SGs for their children more than relatedness-oriented goals (such as obedience); for Delhi mothers, we expected that autonomous and relational SGs would be valued equally. We expected within both contexts that mothers would be more elaborate than repetitive; that they would tend more to make elaborate statements than to ask questions (because the task was to tell a story); and that they would refer more to the child than to other persons (because the task was to tell a story about the child). Also for children we expected across contexts more self-references than references to other persons. We expected, however, that mothers in the Berlin context would refer to specific aspects of the reminiscence more often than they would refer to general aspects; whereas for the Delhi context, we expected a similar number of references to both specific and general story aspects (in line with their hybrid cultural model).

## METHOD

### Participants

Mother-child dyads were assessed in Berlin, Germany ( $n = 35$ ) and Delhi, India ( $n = 28$ ), that is, the capitals of the respective countries. They were visited within 4 weeks after the child's third birthday. Child gender was equally distributed across contexts (Berlin: 48.6% female; Delhi: 46.3% female),  $\chi^2 = 0.87$ ,  $p > .10$ . Socio-demographic information for two Delhi families was missing, so the following analyses included  $n = 26$  Delhi families only. In the Berlin context, 70.6% of

children were firstborns, whereas 29.5% of children were firstborns in the Delhi context,  $\chi^2 = 5.48$ ,  $p < .05$ . Mothers of both contexts did not differ in their years of formal education,  $t(59) = 0.89$ ,  $p > .10$  (Berlin:  $M = 15.29$ ,  $SD = 3.57$ ; Delhi:  $M = 15.96$ ,  $SD = 1.78$ ). However, mothers of the Delhi context were significantly younger when they had their first child ( $M = 26.27$ ,  $SD = 3.16$ ) compared to mothers from the Berlin context ( $M = 31.66$ ,  $SD = 3.16$ ),  $t(59) = 4.87$ ,  $p < .001$ . Delhi dyads also lived in bigger household sizes (persons living together:  $M = 6.33$ ,  $SD = 2.29$ ) compared to Berlin dyads ( $M = 3.66$ ,  $SD = 0.80$ ),  $t(59) = 6.41$ ,  $p < .001$ . These similarities and differences reflect the socio-demographic profiles of Western-educated and non-Western-educated urban middle-class families (Keller, 2007).

## PROCEDURE

Trained female researchers fluent in the respective languages (German, Hindu and English) visited the families at home. Among other tasks, mothers were asked to tell a story about the child that had happened within the first year of the child's life. Mothers chose the place for the story telling with their child. The researcher left the room, and the mother called her back in when they were finished; no time limit was given. The baby story was audiotaped and later transcribed verbatim. The German stories were transcribed and coded in German, and the Indian stories were translated and transcribed in English (in case they were in Hindu). Furthermore, mothers were asked to provide socio-demographic information and to fill out a questionnaire assessing maternal SGs.

## MEASURES AND CODING

### Maternal SGs

We assessed maternal SGs concerning psychological autonomy and hierarchical relatedness based on seven items rated on a Likert-type scale from 0 (*not at all*) to 2 (*absolutely*). The questionnaire investigated what mothers perceive as important for children to develop during the first years of life. Similar versions of this questionnaire have been revealed as a reliable measure of cultural orientation in previous studies (Kärtner et al., 2010). The scale assessing psychological autonomy was composed of four items ("develop independence",

"develop self-confidence", "learn to become assertive" and "develop self-esteem"); the scale assessing hierarchical relatedness (i.e., obedience) included three items ("learn to obey the elderly", "learn to obey their parents" and "learn to control their feelings"). For the scale psychological autonomy, Cronbach's alpha was 0.51 for the Berlin context and 0.67 for the Delhi context. For the scale hierarchical relatedness, Cronbach's alpha was 0.53 for the Berlin context and 0.64 for the Delhi context. Inspection of the answer frequencies per item revealed that in the Berlin several items were only rated on two levels of the three-point scale. Thus, the variability was lower in the Berlin context leading to a lower internal reliability. For the final measure, we subtracted the mean of the relational scale from the mean of the autonomous scale to control for individual or cultural answering styles (see Kärtner et al., 2010). Questionnaires were not available for  $n = 1$  mother from the Berlin context and  $n = 5$  mothers from the Delhi context.

### Story coding

The following categories were coded for mothers and children in the baby stories.

#### *Length*

Propositions served as the coding unit to determine the stories' length (see Reese & Fivush, 1993). Propositions are independent clauses with a unique verb; for example: "We were celebrating there when you were small" was coded as one proposition, whereas "We were celebrating and eating there" was coded as two propositions. There were exceptions for evaluations and prompts. Maternal or child confirmations ("Yes", "Hmm"), negations ("No") and prompts ("And then?") were also coded as propositions as they represent a contribution to the conversation as well. All propositions on the mother's and child's part were coded as an indicator for the length of the stories.

#### *Specificity*

In addition, all propositions were coded as either general or specific following the procedure by Han et al. (1998). The code for a general proposition was applied for maternal and child utterances that referred to general reoccurring aspects of the past, for example, "When you were little, we used to go for a walk, and most of

the time, we met Sarah". For this utterance, two general propositions were applied (as this utterance contains two independent clauses). Maternal and child propositions that referred to specific aspects of a story indicating a particular occurrence of an event were coded as specific; for example: "And at your baptism, we all went to see grandma in the party room". For this utterance, one specific proposition was applied.

### *Structure*

The coding procedure applied to analyse the structure of the baby stories was adapted from Reese and Fivush (1993). For all codes, propositions served as the coding unit, and codes were exclusive.

*Maternal elaborations.* Elaborations were coded for maternal utterances (propositions) that contributed new information to the story that had not been mentioned before. Maternal elaborations were sub-coded for (1) elaborative statements (e.g., "We always met Sarah"); and (2) elaborative questions (including open-ended questions, namely *wh*-questions; e.g., "What happened at your baptism?" as well as closed questions, ones the child could only answer with "yes" or "no"; e.g., "Were we celebrating?").

*Maternal repetitions.* This code was applied for maternal utterances (propositions) containing no new information but repeated information she had provided before in a question or statement. Elaborations and repetitions were thus exclusive.

*Child elaborations.* On the child's part, utterances (propositions) that provided new information were coded as child elaborations. Only information that had not been mentioned by the mother or child before were coded for this category. Child elaborations could be provided as questions or statements by the child.

### *Content*

On the content level, subject-verb constructions served as the coding unit; thus, each unit with a verb in an independent or dependent clause was coded exclusively if one of the categories applied (e.g., "You were eating mash when you were sitting in the high chair" would receive two content codes). Content was coded for child- and other-references in line with previous studies (Wang, 2001; Wang & Fivush, 2005).

*Child-references.* Maternal utterances referring to the child fell into this category as well as child utterances referring to him- or herself. Deciding was the subject of a sentence (question or statement) or the subject implied by the verb; for example, "You were eating mash when you were sitting in the high chair" received two child-references.

*Other-references.* Maternal or child utterances referring to other persons (neither the child nor the mother) as the subject of a sentence were coded for other-references; for example, "... when grandma was visiting us".

### *Reliability*

Two trained research assistants independently coded 20% of all transcripts for structure and content. Inter-rater agreement was 91.0% for structure (maternal style and child memory; Cohen's kappa = 0.90) and 93% for content (Cohen's kappa = 0.91).

### *Story topics*

In line with previous studies (e.g., Fivush & Wang, 2005), stories were coded for their overall topical framework (e.g., vacation, accident, birthday). A topic was applicable when the content was put in some kind of context; either of a one-point-in-time event (e.g., the child's baptism) or a re-occurring event (e.g., what happened when the child played in the garden). Inspecting the stories in the first place revealed that determining a topical framework was not possible for most stories of the Delhi context. Thus, the category "no story frame" was added as category. Furthermore, the category "plot" was added as some mothers were talking about the story line of a song or TV series. Two independent raters coded all stories and the agreement was with 95% high.

## RESULTS

### **Plan of analyses**

We first report cultural differences in the maternal SGs. We then describe results for the length of stories and their specificity, followed by analyses for the structure of stories, namely the use of maternal elaborations and repetitions, maternal use of statements and questions as well as children's elaborations. Next, we report results

for the child/self-centeredness of stories for mothers and children. Lastly, we analysed the overall content topics of the stories. To analyse the SGs, specificity, structure and content of the baby stories, we first report inter-cultural differences followed by analyses for intra-cultural differences, respectively. Means and standard deviations for all variables are listed in **Table 1**.

For inter-cultural differences, we calculated several independent sample *t*-tests; for intra-cultural differences several paired *t*-tests. In order to control for Type one error inflation, we adjusted the significance level of  $p < .05$  for all variables depending on the number of *t*-tests conducted. For most variables (except length and child elaborations), we calculated one independent sample *t*-test in order to investigate inter-cultural differences (here, we were looking at the respective proportions) and two paired sample *t*-tests in order to investigate intra-cultural differences. Thus, we

divided  $p = .05$  by three and set the significance level to  $p < .017$  in these analyses. We took relative values for most analyses on inter-cultural differences in order to avoid a potential confound with length. As an indicator for effect size, Cohen's *d* is reported for independent sample *t*-tests. According to Cohen (1988), *ds* between 0.20 and 0.49 can be interpreted as small effect sizes, values  $> 0.50$  are medium, and  $ds > 0.80$  are large effect sizes. Across analyses, there were no effects for the children's gender, so we omitted this variable from all analyses.

## Maternal SGs

In order to verify the cultural models based on the maternal SGs, we compared the difference score (psychological autonomy scale minus the hierarchical relational scale) between the two contexts. As expected, a *t*-test revealed that the orientation towards psychological autonomy was significantly higher in the Berlin context ( $M = 0.62$ ,  $SD = 0.57$ ) compared to the Delhi context ( $M = -0.10$ ,  $SD = 0.48$ ),  $t(54) = 4.93$ ,  $p < .001$ , Cohen's *d* = 1.35.

Looking at intra-cultural differences regarding autonomous- versus relatedness-oriented goals within contexts, *t*-tests revealed that mothers from the Berlin context valued psychological autonomy significantly more than hierarchical relatedness as a SG,  $t(33) = 6.42$ ,  $p < .001$ , whereas mothers from the Delhi context valued psychological autonomy and hierarchical relatedness equally,  $t(21) = -0.96$ ,  $p > .10$ . These results support the different cultural emphases of the assumed underlying cultural models.

## Length

To test for differences in the overall length of stories, we conducted two *t*-tests for independent samples with culture as the independent variable and maternal and child total propositions as the dependent variable. The results revealed that the stories told by Berlin mothers were on average significantly longer compared to the stories told by Delhi mothers,  $t(61) = 4.66$ ,  $p < .001$ , Cohen's *d* = 1.18. Child overall contributions (propositions) did not differ significantly between contexts,  $t(61) = 1.82$ ,  $p = .07$ , Cohen's *d* = 0.46.

**TABLE 1**  
Means and standard deviations for all variables across contexts (proportions and frequencies)

	<i>Berlin</i>		<i>Delhi</i>	
	M	SD	M	SD
Total propositions (length)	37.49	19.90	18.75	13.11
<i>Specificity</i>				
Maternal specificity	0.38	0.47	0.13	0.23
Maternal general propositions	18.49	17.84	11.89	7.96
Maternal specific propositions	12.49	18.37	2.96	7.40
Child specificity	0.38	0.48	0.19	0.38
Child general propositions	4.26	6.43	3.43	4.67
Child specific propositions	2.26	3.79	0.46	1.04
<i>Structure</i>				
Maternal elaborativeness	0.87	0.10	0.90	0.12
Maternal child involvement	0.84	0.15	0.66	0.25
Maternal elaborate statements	19.00	11.80	6.79	6.18
Maternal elaborate questions	3.20	2.85	3.32	3.39
Maternal repetitions	3.20	2.75	1.39	1.64
Child elaborations	1.80	1.95	1.68	2.79
<i>Content</i>				
Maternal child-centeredness	0.79	0.20	0.94	0.10
Maternal child-references	16.31	8.95	11.79	7.25
Maternal other-references	5.29	6.38	0.86	2.09
Children's self-centeredness	0.72	0.39	0.83	0.31
Child self-references	1.74	2.68	1.57	3.19
Child other-references	0.62	1.37	0.36	0.87

Values for frequencies as well as propositions are reported due to inter-cultural analyses being conducted on proportions and intra-cultural differences being conducted with the frequencies.

## Specificity

To test for inter- as well as intra-cultural differences in the provision of specific and general propositions, we calculated three *t*-tests on the maternal variables and another three *t*-tests on children's variables. Thus, the significance level was adjusted to  $p < .017$  across analyses.

To look at inter-cultural differences in the stories' specificity, we first computed the proportion of specific propositions divided by the sum of specific and general propositions. Thus, the higher the proportion the more specific stories were. We took relative values due to the cultural difference in the stories' length. An independent sample *t*-test revealed that mothers of the Berlin context provided significantly more specific aspects in their stories (relative to general ones) than mothers of the Delhi context,  $t(61) = 2.60$ ,  $p < .017$ , Cohen's  $d = 0.66$ . For children, there was no significant difference between contexts,  $t(57) = 1.63$ ,  $p > .10$ , Cohen's  $d = 0.43$ .

Looking at intra-cultural differences with respect to the use of general versus specific propositions within contexts, mothers,  $t(34) = 1.09$ ,  $p > .10$ , and children,  $t(34) = 1.40$ ,  $p > .10$ , of the Berlin context referred to specific and general aspects to a similar degree. In the Delhi context, mothers,  $t(27) = 4.0$ ,  $p < .001$ , and children,  $t(27) = 3.32$ ,  $p < .01$ , referred to general aspects significantly more often than to specific aspects of the story. These results thus confirm our hypotheses that stories of the Berlin context were more specific than stories of the Delhi context.

## Structure

### *Maternal elaborations and repetitions*

In order to test for inter-cultural differences in the elaborative structure of the stories, we computed the proportion of elaborations relative to repetitions by dividing total maternal elaborations by the sum of elaborations and repetitions. Thus, this measure is similar to the elaboration-to-repetition ratio used in previous studies (Reese et al., 1993). We took a relative measure as for specificity due to the cultural difference in the stories' length. Also here, the significance level was set to  $p < .017$  due to conducting three *t*-tests overall.

For inter-cultural differences, we calculated an independent sample *t*-test with the elaboration

proportion as dependent variable. There was no significant difference in the use of elaborations relative to repetitions between contexts,  $t(61) = 0.99$ ,  $p > .10$ , Cohen's  $d = 0.25$ . Mothers in both contexts were highly elaborative relative to being repetitive ([Table 1](#)).

With respect to intra-cultural differences, mothers of both contexts were significantly more elaborative than being repetitive (Berlin:  $t(34) = 9.54$ ,  $p < .001$ ; Delhi:  $t(27) = 7.36$ ,  $p < .001$ ). Thus, in line with our hypotheses, mothers of both contexts were overall highly elaborative compared to being repetitive.

### *Maternal elaborative questions and statements*

In order to test for inter-cultural differences in active involvement of the child by the mother, we computed the proportion of elaborative statements relative to elaborative questions by dividing maternal statements by the sum of statements and questions (referred to as "maternal child involvement" in [Table 1](#)). We took a relative measure for active involvement as well due to the cultural difference in the stories' length. The significance level was again adjusted to  $p < .017$ .

For inter-cultural differences, we calculated an independent sample *t*-test with the statement proportion as dependent variable. There was a significant cultural difference in the provision of statements relative to asking questions,  $t(61) = 3.40$ ,  $p < .01$ , Cohen's  $d = 0.86$ . Mothers' proportion of making statements was significantly higher in the Berlin context compared to the Delhi context ([Table 1](#)). Thus, relative to providing statement elaborations, Delhi mothers obviously were asking more elaborative questions than Berlin mothers.

Intra-cultural analyses revealed, however, that mothers of both contexts made (marginally) significantly more elaborative statements than they asked elaborative questions (Berlin:  $t(34) = 8.08$ ,  $p < .001$ ; Delhi:  $t(27) = 2.49$ ,  $p = .04$ ).

### *Child elaborations*

We calculated a *t*-test for independent samples with culture as the group variable and child elaborations as the dependent variable. The  $p$  level was not adjusted as only one analysis was conducted. There were no cultural differences in children's elaborative contributions to the stories,  $t(61) = 0.20$ ,  $p > .05$ , Cohen's  $d = .05$ . Overall, the children's contributions were low compared to joint reminiscing situations.

## Content: Child-centeredness

In order to test for cultural differences of the stories' child-centeredness, we computed the proportion of child-/self references relative to references to other persons by dividing child-/self references by the sum of child-/self references and other person references. This measure is thus similar to the other-self ratio used in previous studies (Wang, 2001). We calculated two independent sample *t*-tests for mothers and children with child-centeredness as the dependent variable. For the child variable,  $n = 10$  children of the Berlin context and  $n = 14$  children of the Delhi context could not be included in the analysis as the children made no references to either themselves or other people. We again adjusted the significance level to  $p < .017$  as maternal and child variables were subjected to three *t*-test analyses, respectively.

For mothers, contrary to our expectations, the results revealed that the proportion of child-references was significantly higher in the Delhi compared to the Berlin context,  $t(61) = 3.88$ ,  $p < .001$ , Cohen's  $d = 0.98$ . For children, there was no significant difference between contexts,  $t(37) = 0.94$ ,  $p > .10$ , Cohen's  $d = 0.31$ .

In order to investigate intra-cultural differences in child-centeredness, we conducted four *t*-tests for paired samples comparing the frequencies of child-/self-references with other-references for mothers and children within both contexts. Mothers in the Berlin as well as the Delhi context referred to the child significantly more often than to other people (Berlin:  $t(34) = 6.46$ ,  $p < .001$ ; Delhi:  $t(27) = 7.81$ ,  $p < .001$ ). For children's references, the same tendency was revealed, however, not yielding

statistical significance (Berlin:  $t(34) = 2.16$ ,  $p = .04$ ; Delhi:  $t(27) = 2.13$ ,  $p = .04$ ).

## Story topics

The overall topics of stories are listed in Table 2. Interestingly, the majority of stories told by the Berlin mothers (about 86%) could be classified as an overall topic with some kind of frame story, whereas the majority of stories told by the Delhi mothers were not classifiable for an overall topic (about 61%),  $\chi^2(63) = 14.76$ ,  $p < .001$ .

As a topical story could not be determined for most stories told by the Delhi mothers and also for  $n = 5$  Berlin mothers, we looked in more detail what those non-topical stories were about. All non-topical stories mostly detailed aspects that were characteristic of the child when he or she was a baby, namely what the child generally used to do during this time. These characteristics referred to the child's basic needs (e.g., what the child got to eat, breastfeeding, crying, sleeping, peeing, wearing diapers) and/or the child's developmental level (with respect to motor or language development; e.g., the child used to crawl but not walk, what the child used to say or not say). In the Berlin context, all  $n = 5$  mothers referred to the child's basic needs, and  $n = 1$  mentioned the child's developmental level in addition. In the Delhi context  $n = 15$  (of the  $n = 17$ ), mothers talked about the child's basic needs, and  $n = 9$  mothers described the child's developmental level in addition or exclusively ( $n = 2$ ). Moreover, a distinct kind of topic only appearing in the Delhi context was four stories about the plot of a specific story, song or TV series that the child used to look at, sing or watch.

**TABLE 2**  
Topics talked about in the baby stories (percentages and frequencies)

	Berlin (N = 35)	Delhi (N = 28)
Going to baby massage, swimming, sports	20% ( $n = 7$ )	–
Playing in a specific place (e.g., playpen, ball pool)	20% ( $n = 7$ )	7.1% ( $n = 2$ )
Accident, hospital, sickness	11.4% ( $n = 4$ )	7.1% ( $n = 2$ )
Vacation, trip	8.6% ( $n = 3$ )	–
Visitors	5.7% ( $n = 2$ )	–
Church (e.g., baptism), temple	5.7% ( $n = 2$ )	3.6% ( $n = 1$ )
Child's first birthday	5.7% ( $n = 2$ )	3.6% ( $n = 1$ )
Child's birth	–	3.6% ( $n = 1$ )
Other themes (being in garden, finger paint, giving up pacifier)	8.6% ( $n = 3$ )	–
No story frame	14.3% ( $n = 5$ )	60.7% ( $n = 17$ )
About a plot (of a song, story, TV series)	–	14.3% ( $n = 4$ )

## DISCUSSION

In the present study, we investigated the structure, content and specificity of baby stories that mothers from two cultural contexts, middle-class families from Berlin, Germany, and Delhi, India, told their 3-year-old children. Previous cross-cultural studies have indicated the potential relevance of reminiscing presented by the mother (beside the more interactive shared reminiscing) for children's autobiographical memory development (Reese et al., 2008). We were particularly interested in how cultural differences would reflect different underlying functions. We will thus interpret results in view of the self, social and directive functions of the reminisced stories and how these functions serve the underlying cultural models of the two contexts.

In order to probe the cultural models of the two contexts (Berlin and Delhi middle class) based on their socio-demographic profile, we assessed maternal SGs. As predicted, results revealed that mothers of the Berlin context were more exclusively autonomy-oriented than mothers of the Delhi context. For their children's development, Berlin mothers valued psychological autonomy significantly more than hierarchical relatedness (obedience). In contrast, Delhi mothers placed importance on both psychological autonomy and hierarchical relatedness for their child's development. Thus, the assumed cultural models of both contexts could be verified, with Berlin mothers representing the cultural model of psychological autonomy and Delhi mothers representing the cultural model of autonomy-relatedness, in line with theory and previous studies (e.g., Kärtner et al., 2010; see Keller & Kärtner, 2013, for a theoretical overview).

With respect to the directive functions of the stories, we did not investigate to what extent mothers referred to moral standards, problem solving or emotion regulation on the content level that has been related to this function (Kulkofsky et al., 2009; Wang, 2004b; Wang et al., 2000). However, in this case the structure of the baby stories might reflect directive functions. By making more statements than asking questions, mothers of both contexts obviously saw that their task was to inform/teach the child about his or her past. Thus, mothers made little effort to actively involve the child but rather took a leading role in narrating. Consequently, children in both contexts provided similarly few elaborations themselves

(about two elaborative contributions on average). A previous study revealed that during joint reminiscing, children from both contexts provided more than four times as many elaborations on average compared to their contributions to the baby stories (Schröder et al., 2013) in which narration was conducted by the mother. This finding means that child involvement differs in the same way across these two reminiscing contexts for both cultural contexts. Generally, this finding is in line with previous results that showed different reminiscing tasks lead mother-child dyads to take different approaches (Cleveland, Reese, & Grodnick, 2007; Reese & Brown, 2000; Wang & Fivush, 2005).

Because mothers were instructed "to tell a story about the child" and not to "talk about an event with the child" (as in joint reminiscing), the task instruction probably contributed to mothers asking few questions in contrast to making statements. Yet cultural differences speak against such an exclusively self-evident explanation. Mothers of each context did actually vary in their endeavour to involve the child by asking questions: in relation to statements, Delhi mothers asked more elaborative questions than Berlin mothers. In joint reminiscing, asking questions (especially open-ended) has been related to the self-function of encouraging children to express themselves. This is common in autonomy-oriented contexts, in which asking elaborative questions functions to co-construct the past and to elicit the perspective of the child (Fivush et al., 2006; Wang, 2007). In the baby stories, questions might have a different function since children cannot remember these early memories. Mothers of the Delhi context might rather have asked questions to determine whether the child knows about what they did when being a baby (in a general sense); thus, questions might reflect a "test-like" character rather than eliciting the child's personal perspective.

Still, stories of both contexts were highly child-centred, pointing to the overall directive function in both contexts: the child should learn something about his-/herself in the past. Thus, across cultural contexts, reminiscing situations focusing on events children are obviously not able to remember might rather serve the directive function than the social function. The social function like strengthening the relationship between mother and child or defining the child as embedded in a social network (Wang, 2004b) seems to have played a less important role in the reminiscing task to tell a baby story. The

social function might be more prevalent in joint reminiscing. However, how this narrative was arranged by mothers in view of a self-function varied across contexts.

To first summarise, mothers in both Berlin and Delhi were, as expected, similarly elaborative during the stories as also found in another study for joint reminiscing sessions (Schröder et al., 2013). However, Berlin mothers elaborated more on specific details, in contrast to Delhi mothers who elaborated more on general episodes. Intra-culturally, mothers in Berlin referred to specific and general aspects equally, whereas Delhi mothers referred more often to general than to specific aspects of the stories. Based on previous studies demonstrating reminiscing experiences being internalised by children starting at an early age (Farrant & Reese, 2000; Reese et al., 1993; Wang, 2006b), we would have expected this difference being mirrored in child contributions. We did not find any cultural differences (in structure, content or specificity) in children's contributions to the stories. We assume that this was due to children contributing so little to the stories in general across contexts.

Cultural differences in the stories' specificity might also have led to differences in the stories' length. By referring to more specific details, mothers in the Berlin context tended to create longer stories, whereas a more general focus in the Delhi context might have inspired shorter stories. However, an alternative explanation for differences in the stories' length could be the frequency of talking about this kind of stories in everyday life. Stories of Berlin mother-child dyads might be longer because they might never have talked with the child about these types of stories before. In the Delhi context, it is likely that mother-child dyads had engaged in storytelling about the child as a baby before and may even do so regularly. The frequency of such reminiscing does tend to vary across cultural contexts (Mullen & Yi, 1995; Tõugu, Tulviste, Schröder, Keller, & De Geer, 2011), and might lead to the shorter length of stories in Delhi. Investigating the frequency of specific reminiscing situations and the topics addressed in everyday life in these cultures would be interesting for future studies.

With respect to self-functions reflected in the stories' episodic specificity, mothers in the Berlin context constructed a more unique narrative of the child's early past. This reflects the underlying aim of facilitating an independent and

psychologically autonomous self that is exclusive (Keller, 2007). This result parallels reminiscing studies conducted in other autonomy-oriented contexts (Han et al., 1998; Wang, 2004a, 2008). In contrast, mothers of the Delhi context referred more generally to the child's past as a baby, thus promoting the development of a relational self (Wang, 2006b). Additionally, the majority of stories told by Delhi mothers had no explicit frame story, whereas most stories of the Berlin mothers did. In the following section, we refer to two story excerpts (see Table 3) in order to illustrate this difference.

In the Berlin sample, the mother did not refer to a specific point in time but to a typical event, namely what happened when the child was crawling through the garden. Thus, a topical story was not necessarily related to a story's episodic specificity. Both mothers focused on what the child did as a baby (e.g., eating). However, in the Berlin story, the child's actions are put into a frame story that characterises the child as having his or her own action agenda. In the Delhi story, in contrast, the mother refers to the child's actions in a non-specific way so as to characterise the child as being a baby. The story is therefore more about what babies eat and do in general rather than what the individual child was doing in particular. Thus, stories were rather about characteristics of a lifetime period (Conway & Pleydell-Pearce, 2000). Stories told by the Berlin mothers focused on the child's own personal past and can be referred to as "exclusive baby stories". In contrast, stories told by the Delhi mothers characterised the child in his or her former social role as a baby (needing to be fed, crying, etc.) can thus be referred to as telling "routine baby stories". These cultural differences in topics' specificity chosen by mothers to reminisce with their children have similarly been found to vary between Euro-American and Chinese mothers (Fivush & Wang, 2005). Furthermore, the cultural difference in topical stories might also have led to a higher child-centeredness in the Delhi compared to the Berlin context. The child needed to be referred to over and over again to reorient the conversation, whereas in topical stories the subject of the story (i.e., the child) might implicitly be known throughout.

With respect to the self, these two modes of past constructions might function to create different types of long-term memory representations. Nigro and Neisser (1983) have differentiated between field and observer memories. Field

**TABLE 3**  
Mother-child story excerpts demonstrating inter-cultural variability in topics

Berlin mother-child dyad ( <i>topical</i> )	Delhi mother-child dyad ( <i>non-topical</i> )
<p>Mother (M): When you were a baby, I let you in the garden, when you were able to crawl already, like Helen. We went to the garden with you, and then you were crawling everywhere between the bushes. And then you always got to the flowers, to the tulips, and pulled the blossoms.</p> <p>Child (C): Yes.</p> <p>M: And then you tried to eat them.</p> <p>C: And what did you say then?</p> <p>M: I was looking at you and asked, "Is this tasty?" And you looked at me and did not answer. And then you pulled up the next one and looked at it.</p> <p>C: And what did you say?</p> <p>M: I said, Isabelle, she is eating the tulips. And then I looked up in a book whether one might eat them. And tulips can be eaten.</p> <p>C: Yes.</p> <p>M: Yes. And then the raspberries grew (...). And then we gave you the raspberries to eat.</p> <p>C: There are.</p> <p>M: Right. You like raspberries a lot. And then you munched them very quickly.</p>	<p>M: What did you used to do when you were a small baby? (...) When you were small, what did you used to do? You used to eat? Drink milk?</p> <p>C: Yes.</p> <p>M: (...) What did you used to eat when you were small?</p> <p>C: Cake</p> <p>M: What else did you used to do? Where did you used to go to play with Papa?</p> <p>C: Phone.</p> <p>M: Which games do you know? (...). Okay, when you were small, you used to ride a small cycle with three wheels.</p> <p>C: Yes, that one.</p> <p>M: That's a big one.</p> <p>C: I used to ride.</p> <p>M: Then you used to drink milk from a bottle.</p> <p>C: Milk, milk.</p> <p>M: Yes, you used to drink milk, and what did you used to eat?</p> <p>C: Mag.</p> <p>M: You used to eat Maggie, apple.</p>

memories are those that present the original perspective as one has experienced the event. Observer memories refer to memories in which the self is looked at from an outside perspective (a kind of bird's-eye view). Berlin mothers might consciously or unconsciously try (through specific, child-centred stories) to enable the child to put her-/himself into the past situation and thus experience the self from inside out. They might aim at the child integrating this early past in their autobiographical self experience. In contrast, reminiscing about general aspects of a life period that characterises the child in its social role as a baby, as in Delhi, might function to foster observer memories. The mother creates a memory that the child experiences from the outside. Respective cultural differences in memory perspectives have been revealed in Euro-American and Asian adults and have been related to the respective underlying self concepts (Cohen & Gunz, 2002). However, these are speculative conclusions and would need to be confirmed in future studies.

In Berlin, the "baby stories" promoted psychological autonomy. In Delhi, the orientation of the stories was primarily relational, whereas we had expected the Delhi stories to promote both psychological autonomy and hierarchical relatedness, as the cultural model and the maternal SGs in Delhi would have implied. Possibly, the cultural models and especially the model of autonomy-relatedness might not be reflected within every socialisation setting. In the context of past event talk, joint reminiscing might function more to promote the child's psychological autonomy (Schröder et al., 2013), whereas when telling a story about the child, as tended to occur in Delhi, the emphasis might fall on the promotion of hierarchical relatedness. Different functions of different reminiscing tasks have been found by other studies (Wang & Fivush, 2005; in this case varying topic valence).

Our study has several limitations. First, we included only one context to represent each of the two cultural models. The inclusion of several contexts representing the same cultural model (based on participants' socio-demographic backgrounds) could clarify our results for the respective cultural model. The representativeness of our results is further limited due to our small sample size. Another limitation is that we did not ask the mothers about the frequency of reminiscing with their children in general, nor did we ask how frequently they told a "baby story" outside the research context. Finally, it would be informative

to investigate the influence of the assessed reminiscing situation to determine the children's outcomes (e.g., the children's self-concepts or memory perspectives) concurrently as well as also over time. Contrasting this situation to other reminiscing situations would also be salutary in future studies.

Our study confirmed earlier findings that different reminiscing tasks might be approached quite differently within and across cultural contexts (Cleveland et al., 2007; Fivush & Wang, 2005; Reese et al., 2008) and thus might also serve different functions (Wang & Fivush, 2005). In summary, stories of the child's early past narrated by the mother obviously predominantly served a directive and self function in both cultural contexts. The social function seemed to be less prominent due to the task requirements. Berlin mothers' child-centred and elaborative stories seemed to function informing the child about her/his personal past in (specific) detail and topical embedded. Mothers thus facilitate the development of an autonomous self in children and potentially field memories. Delhi mothers' child-centred and elaborative stories seemed to function teaching the child about his/her past as being a baby with a general view on this life period. Mothers thus facilitated the development of a relational self in children and potentially observer memories. Other reminiscing situations like joint reminiscing might have different functions. We might thus find, overall, that reminiscing about the child's past serves to create culturally appropriate autobiographical memories in children and in turn support their well-being as members of their respective cultural milieus.

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