

Children's ideas about infant care

A comparison of rural Nso children from
Cameroon and German middle class children



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“To accomplish great things, we must dream as well as act.” (Anatole France, French novelist (1844-1924) and winner of the Nobel Prize in Literature 1921)

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ABSTRACT

In this study, children's ideas about childcare were investigated cross-culturally, considering gender differences as well as developmental and cultural factors. Children between 4 and 8 years of age were interviewed. A rural Nso sample representing a prototypical interdependent context (N=72) and a German middle-class sample representing a prototypical independent context (N=64) were selected. Through the help of picture cards that showed children caring for babies, the children were asked to answer what aspects of care (e.g. primary care, body contact, or object stimulation) are most important and why they are important. Furthermore, the children were asked to elaborate on what they would like to teach a baby and how to react in certain situations, such as infant crying. It was assumed that the children's ideas reflect the characteristic model of childrearing of the respective cultural community. Older children were expected to express more elaborated ideas, but gender differences in the knowledge about infant care were not expected. Results indicate that the Nso and German children apply different caregiving models. The Nso model is characterized by multiple caregivers, co-occurring care, high sensitivity to negative infant signals, and a focus on body contact. The German model, on the other hand, was based on exclusive attention by the mother and distal parenting, such as object stimulation, face-to-face interaction, and vocal interaction. The German children's unexpected focus on primary care and motor development is discussed with respect to different practical caregiving experiences of the German and Nso children and varying sense of responsibility for infant care. Concerning age and gender differences, the hypotheses were predominantly confirmed. Finally, methodological challenges of cross-cultural research and of interviews with children are discussed, and perspectives for future research are presented.

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1. INTRODUCTION

“What cross-cultural evidence we can find indicates that nonparental caretaking is either the norm or a significant form of caretaking in most societies. Yet socialization research rarely takes this fact into account.” (Weisner & Gallimore, 1977, p. 169)

Although this statement dates 30 years back, it is still true. This bias between the wide spread of nonparental caretaking and the little research attention may result from the fact that researchers from Western technological societies act on the assumption that the nuclear family is the norm. In favor of a focus on maternal care, the influences of extended family members, such as cousins, uncles, and aunts were disregarded. Yet, the involvement of older children in the care of younger ones is very widespread (Weisner & Gallimore, 1977). Child caretaking ranges from performing specific tasks for another child under the supervision of adults to complete and independent full-time care; it includes explicit training and direction of another child’s behavior as well as just keeping an eye on a younger sibling (Weisner & Gallimore, 1977). While anthropological field research has delivered extended descriptions of child caretaking in the family and community context, psychological research has focused on the area of sibling interactions in laboratory settings, thus neglecting the eco-cultural context. The level of beliefs has been considered by neither of the disciplines.

The present study is aimed at analyzing children’s ideas about infant care, because caregivers’ beliefs are seen as the key to a better understanding of their behavior. Ideas about child rearing are shaped by own life experiences and reflect the perception of which skills are needed and which values are important to become a competent member of the community. Thus, to know about these beliefs helps to understand how cultural values are maintained. Since child rearing cannot be understood independent of the eco-cultural environment, children from different cultural contexts were sampled: rural Nso children from Cameroon, representing a prototypical

interdependent context, and German middle-class children, representing a prototypical independent context.

The following sections provide an overview about the theoretical background of the study. The universal nature of caregiving is outlined and the ontogenetic development of nurturance as well as gender differences are described. Subsequently, the cultural influences on child rearing are considered, and a theoretical model to conceptualize those influences is presented. Ultimately, two models of childrearing, the Nso and German models, are introduced before the assumptions of the study are formulated.

The method section begins with a description of the two samples and their recruitment. The main focus of this section is on presenting the research procedure that was applied to assess the data and on the measures that were extracted from the data.

In the result section, the results of the study are presented according to the respective research questions. Afterwards, in the discussion section, a summarization of the results is given and two different models of childrearing held by the children of the two samples are sketched out. Subsequently, the results are discussed with respect to acceptance or refusal of the hypotheses before methodological problems are addressed. Finally, the outlook presents ideas for future research.

2. THEORETICAL FRAMEWORK

2.1 Nurturance: A universal human attitude

Caregiving and nurturance are universal patterns of behavior. Human infants as well as newborns of many animal species are biologically prepared to activate innate nurturing behaviors in their caregivers. First of all, infants show typical physical characteristics which are called babyiness (Kindchenschema) (Lorenz, 1943). According to Lorenz (1943) babyiness comprises a proportionately large head as compared to the small rest of the body; a large curved forehead; large, round eyes that are located relatively low in the face; a small, short nose; round cheeks; and a small chin. Accompanied by the clumsy movements of the infant, this physiognomic pattern contains what is commonly referred to as “cute,” and adults generally react to that key stimulus with positive emotions combined with the motivation to care for the infant. A multitude of studies found that pictures of human infants or baby animals were preferred to pictures of adults and therefore elicited physiological responses as pupil dilation or changes in heart rate and skin conductance (for a review see Berman, 1980).

Furthermore, infants are equipped with a number of behaviors that enable them to promote and maintain proximity to caregivers and thus ensure survival and establish social relationships. These so called attachment behaviors of the infant were described by Bowlby (1969) as crying, smiling, babbling, looking, and grasping. Besides these communicative signals, babies are equipped with specific predispositions to process information. They prefer human faces to any other visual stimulus (e.g. Morton & Johnson, 1991), are able to partition language (Jusczyk, 1997) and detect contingencies (Watson, 1985). Caregivers, on the other hand, are equipped with a complementary behavioral pattern, which Papoušek and Papoušek call the intuitive parenting program (Papoušek & Papoušek, 1987). This pattern includes a number of communicational adaptations, such as the greeting response, baby-talk (motherese), and the eye-to-eye distance regulation that are shown by mothers on the first day after birth. Thus,

caregivers choose a distance between the infant's and their own eyes that allows the infant to see the caregiver's face clearly despite the infant's limited powers of accommodation. They talk to infants using a higher pitch, frequent repetitions, and a simple structure with what they intuitively adapt to the infant's limited communicative and information-processing capabilities. Moreover, caregivers respond to infant signals, such as smiling or vocalizing within a latency of 200 to 800 msec. This latency is above that of simple reflexes but below that of intentional responses (Papoušek & Papoušek, 1987). These intuitive behaviors have been found across ages, sexes, and cultures so that "almost any experienced member in the social environment is likely to possess similar didactic capabilities with which to complement and enhance the infant's integrative needs" (Papoušek & Papoušek, 1987, p. 675). Frodi and Lamb (1978) concluded that the patterns of baby responsiveness reflect species-specific predispositions because even 8- and 14-year-olds showed the characteristic pattern of emotional as well as physiological responses to infant cries and smiles. The occurrence of these response patterns was neither influenced by the amount of experience with infants nor by the experience of parenthood. Cross-culturally, even 2- and 3-year-olds seemed to be 'prepared' to respond positively to the eliciting appearance and behavior of babies (Whiting & Edwards, 1988). This result also suggests that this baby-directed behavior is not learned.

Keeping in mind this universality, the following paragraph deals nevertheless with the question of what constitutes an "experienced member" or how caretaking or nurturing behavior develops during ontogenesis and which factors influence its development. Subsequently, gender differences concerning nurturance will be discussed. Potential influences of the socio-cultural environment will be introduced in the second chapter.

2.1.1 The development of nurturance in childhood

Nurturance is a broader concept than care giving. Following the definition of Fogel, Melson, and Mistry (1986), nurturance is “the provision of guidance, protection and care for the purpose of fostering developmental change congruent with the expected potential for change of the object of nurturance” (p. 55). It includes immediate satisfaction of needs (literally care giving) as well as other behaviors that reflect the anticipation of developmental consequences. Thus, teaching as a basic precondition for the transmission of culture is also included. Three aspects of nurturance are distinguished, which are interest, knowledge, and behavior. These preconditions to foster the development of another will be addressed in the following paragraphs.

2.1.1.1 Children’s interest in babies

Lorenz (1943) described that even very young children (less than two years old) showed adult-like responsiveness to objects holding babyish characteristics, e.g., dolls. Second graders preferred infant pictures over pictures of persons of other ages (Berman, 1986).

However, in the laboratory setting, preschool-aged and infant siblings preferred to interact with their parents rather than with one another, if they had the choice (Lamb, 1978a). But these preferences do not explain the knowledge or skill in infant care, which will be discussed in the following paragraphs.

2.1.1.2 Children’s knowledge about infant care

Children’s cognitions about infant care are the least studied aspect of nurturance. There is little known about the ideas that children hold concerning infants and their care. Hence, Melson, Fogel, and Toda (1986) were “struck by the richness and appropriateness of young children’s cognitions about infants and about their care” (p. 1525). All children in their study, even the 3-year-olds, were able to identify babies among pictures of persons of different ages. Furthermore, each child could generate at

least one idea about how to care for an infant. This result was by and large replicated by Garner, Jones, and Palmer (1994), who found that 80% of the preschoolers in their study mentioned at least one caregiving script. Although the majority of children perceived themselves as able to care for an infant, there was a general increase of knowledge about infants and their care with increasing age. However, this trend was stronger for children with younger siblings (Melson, Fogel, & Toda, 1986). The authors concluded that knowledge about infants depends on the frequency of involvement with infants, but only if the child has reached a certain age (7 years in this study), and is thus able to participate in caring for the infant. This effect that increased contact with infants led to more accurate knowledge about infant development has also been reported for young adults (Gullo & Paludi, 1989).

The knowledge about infant crying also increased with age (Zahn-Waxler, Friedman, & Cummings, 1983). All of the fifth- and sixth-grade children were able to discriminate cries of preterm and full-term babies while just under half of the preschoolers were able to do the same. Furthermore, the cries of the preterm babies were described by the children as deviant, thus reflecting the children's awareness of the "normal" range of cries.

2.1.1.3 Nurturing behavior by children

Most studies concerning nurturance in children concentrated on sibling interactions and used observations of actual caregiving behavior. The overall picture reveals amazing caretaking skills in children. In her review Dunn (1983) summarized that even 2-year-old children are able to comfort and take care of their infant siblings. Concerning their speech, 2- and 3-year-old children made systematic adjustments when talking to their 14-month-old siblings (Dunn & Kendrick, 1982). The authors concluded from the children's appropriate use of clarification features of baby-talk that the 2-year-olds hold beliefs about the linguistic and cognitive status of the infants. This interpretation would imply a great knowledge about infants, which would require far more

perspective-taking skills than 2-year-olds perform. Therefore, the interpretation of baby-talk as representing an intuitive behavior that need not be learned (cf. Papoušek & Papoušek, 1987) seems to be more appropriate.

Infants and preschool-aged siblings take differential roles in their interactions (Lamb, 1978b). Whereas the 12- and accordingly 18-month-old infants in Lamb's study mainly followed, the preschoolers led. The younger siblings observed and tried to imitate, while the older ones modeled and showed nurturant types of dominance and assertion. The longitudinal design revealed remarkable stability in sibling directed behavior over six months. Interestingly, the behavior of the infant at the first observation was a better predictor of the sibling's behavior at the second assessment than the sibling's own behavior. Furthermore, there was an increase over time in the infants' willingness to direct social behavior to their siblings. These results draw attention to the infant as an active part of the nurturing interaction. Even though it is obvious that fostering development cannot be independent of the person whose development is fostered, very few studies consider this aspect seriously.

The emotional state of the infant or the expression of a need for nurturance was considered in several studies. In response to infant cries, children from preschool age to preadolescence reacted with verbalized empathy and intentions to caretaking, emotional arousal, and actual helping (Zahn-Waxler, Friedman, & Cummings, 1983). The observed increase with age in the caregiving responses was in contrast to other studies that described a typical response pattern shown by children of different ages (2 to 7 years) when confronted with crying babies (Berman, 1987). This pattern consisted of immediate reactions and continued repetition of responses as long as the crying continued.

A setting that causes infant distress is the separation from the mother. Preschoolers are able to comfort their siblings actively and effectively (Stewart, 1983a, Stewart & Marvin, 1984). When a stranger entered the scene, the infants treated the older siblings as a secure base for exploration. Even subtle signs of distress (e.g. listless manipulation of a toy or looking furtively at the stranger) were recognized by the

caregiving children. These results revealed amazing skills in those 3- to 5-year-olds, because the role of an attachment figure required much sensitivity to the infant's feelings, correct interpretations of the reasons for those feelings, and the knowledge about appropriate responses. Therefore the relationship between caregiving and social cognition was addressed in future research (Stewart & Marvin, 1984; Garner, Jones, & Palmer, 1994).

Perspective-taking, not age, proved to be associated with the development of sibling caregiving (Stewart & Marvin, 1984), and emotional role taking has been suggested to be the most important dimension (Garner, Jones, & Palmer, 1994). Interestingly, the mothers' behavior reflected the relation between social cognition and caregiving (Stewart & Marvin, 1984). The majority of mothers who requested caregiving from their older children when leaving the room had children who were classified as perspective-takers. Nevertheless, on the basis of this correlational result, it is not possible to determine whether the mothers intuitively knew about the relation and therefore only requested caregiving when they had recognized that their older child was able to understand the potential distress of the baby or whether the mothers' behavior fostered perspective-taking skills as well as caregiving behavior in the preschoolers. Internal state discourse has been discussed to stimulate the development of both perspective-taking and sibling caretaking. Empirical data showed that mother-child discussion about the baby's feelings and skills is positively associated with friendly sibling relationships, but a direct relation with the child's ability to take care of the sibling was not found (Howe & Ross, 1990). A trend indicating that maternal discourse, especially at leave-taking is associated with preschoolers' caretaking, was reported by Howe and Rinaldi (2004). However, they found no support for the assumption that mothers would adjust their discourse style according to children's perspective-taking skills. In fact, toddler distress in the separation situation was the best predictor for preschoolers' caretaking in their study.

There needs to be far more research done to understand the impact of all members involved in these complex family interactions, but it is noteworthy that even very brief demonstration and instructions by an adult could stimulate children's interaction with a toddler, at least when the children were 5 to 7 years old and not younger (Berman & Goodman 1984; Berman, 1986).

According to the above definition of nurturance, sibling teaching is an important aspect of nurturance. A developmental trend in the teaching pattern of Maya children in Mexico has been reported by Maynard (2002). The 3- to 5-year-olds were developmentally at the beginning point of teaching, but by the age of 8 years the children were highly skilled teachers for their toddler siblings. Kwara'ae children from the Solomon Islands were also observed as insightful and flexible teachers who taught lessons about language and culture from the age of about 6 years (Watson-Gegeo & Gegeo, 1989). However, younger children were less competent and applied rules mechanistically and without understanding them.

In multi-age groups, toddlers learned most through nonverbal interaction with their slightly older siblings (Rabain-Jamin, Maynard, & Greenfield, 2003). The youngest child in the group was often in close proximity of a 3- to 5-year-old sibling and imitated this child, although the older siblings often organized the teaching situations and dominated the conversation. What seems to be a contradiction shows again that the younger partner and his or her preferences and needs play an important role in the nurturing interaction. Within the zone of proximal development (Vygotsky, 1978) the play of siblings was even more advanced than the play with an adult, because the explicit demonstration of the siblings was more helpful than the more subtle leading of the adults (Zukow, 1989).

Accordingly, older siblings at preschool age seem to act rather as a model than a teacher. These children do not directly influence the behavior of the younger siblings (Lamb, 1978a). Nevertheless, Lamb ascribed a significant role to siblings in the infants'

development, namely in the “mastery of object environment” (p. 57). Concerning the use of a toy, preschoolers were actually able to instruct their younger siblings directly, but the effectiveness of instructions was constrained by the perspective-taking skills of the preschool age children (Stewart, 1983b). However, brothers and sisters do not only foster cognitive and language development but also socio-emotional development, such as the development of empathy and conflict resolution (Ervin-Tripp, 1989).

2.1.1.4 Summary

Prosocial behaviors were shown even by 18-month-old toddlers in sibling relationships, but the older siblings were significantly more likely to share, comfort, help, and cooperate (Dunn & Munn, 1986). This increase could either reflect changing capabilities or motivation.

The motivation of children to nurture an infant or toddler is influenced by many contextual factors. Thus, situational factors as the presence of the parents (Lamb, 1978a), the expressed need for care (Howe & Rinaldi, 2004), or the explicit assignment of a caretaking role (Berman, 1986) were associated with nurturing behavior. Moreover, the broader cultural context plays an important role for the development of nurturance (cf. chapter 2.2).

However, the fact that nurturance, especially knowledge about infant care and actual nurturing behavior, increases with age is empirically well supported (e.g., Melson, Fogel, & Toda, 1986; Zahn-Waxler, Friedman, & Cummings, 1983; Maynard, 2002). Pelletier-Stiefel and colleagues (1986) criticized that age was confounded with birth rank in most studies. These authors showed in their longitudinal home observations of sibling dyads that nurturance as well as aggression was a function of the relative sibling position in the family, but not associated with age.

Nevertheless, developmental changes in social-cognitive and socio-emotional abilities constitute convincing support for age effects. Nurturance, as described above, requires perspective-taking, because the fostering of development has to be adjusted to

the expected potential for developmental change in the partner (Fogel, Melson, & Mistry, 1986). The differentiation of the three types of cultural learning and associated social-cognitive skills proposed by Tomasello, Kruger, and Ratner (1993) may help to understand the development of perspective-taking as required for nurturing behavior. Tomasello and colleagues described a first level of perspective-taking at about 9 months of age. The infant has acquired the abilities of joint attention and social referencing and has developed a concept of persons as intentional agents. Thus, simple forms of cooperation and helping become possible. At about 4 years of age children develop a false belief understanding. They are able to differentiate between their own and another person's perspective. Children at that age start to internalize instructions (instructed learning) and show evidence of regulating the learning of others. Only at about 6 or 7 years of age do children become able to understand complex second order mental states, the precondition for collaborative learning and effective teaching.

It is at that age period, between 5 and 7 years, where a number of cultures change the social place of children (Rogoff et al., 1975). Developmental theorists predict stage changes at this age. Piaget, for example, expected the transition from preoperational to operational thinking (Piaget, 1923). In Western societies this is the age of school entrance and many traditional societies also hold the idea that 'sense' comes to the child at this age (Rogoff et al., 1975). Children between 5 and 7 are expected to be teachable and take responsibility for their own social behavior as well as to understand social rules and their meaning and flexibly use them. Accordingly, children of this age start to participate in the care of younger children, household chores, subsistence tasks, and other cultural activities (Weisner, 1996; Rogoff, 1996). Although children as young as 4 years perform caregiving tasks, mothers across cultures prefer 7- or 8-year-old child nurses, because younger caretakers are more likely to treat the baby inconsistently, overstimulate the baby, or react egoistically dominant or aggressive (Whiting & Edwards, 1988). Thus, the socio-cognitive development as well as the cultural practice suggests changes in nurturance around this age.

2.1.2 Gender differences in nurturance

The concept of nurturance is not confined to the care of infants, but also applicable to pets or even hobbies or skills (Fogel, Melson, & Mistry, 1986). Therefore, no gender differences in the general motivation to nurture are expected; rather, differences in the objects of nurturance that are preferred by male and female persons are expected (Melson & Fogel, 1988a). A summary of research results (Fogel, Melson, & Mistry, 1986) revealed that boys and girls between 2 and 4 years prefer same-sex infants as objects of their nurturing, between 4 and 6 years both prefer female infants, and after the age of 6 years girls nurture all babies irrespective of their gender whereas boys shift their nurturing towards other objects, such as pets. However, because this study is concerned with children's ideas about infant care, the following discussion of gender differences addresses children's nurturance towards babies exclusively. As in the previous section, the three aspects of nurturance (interest, knowledge, and behavior) will be discussed separately.

2.1.2.1 Gender differences in children's interest in babies

There is a broad consensus that females are more interested in babies than males. Females show stronger preferences for pictures of human infants or baby animals as compared to males (see review by Berman, 1980). The youngest participants in these self-report design studies were second graders. Even at that age the gender differences were confirmed.

The operationalization of interest as willingness to interact with a videotaped infant also revealed this gender effect for 8- and 14- year-old children (Frodi & Lamb, 1978). Another measure for interest in babies has been the time children spent near a baby (Berman, 1986, 1987; Melson & Fogel, 1988b). Gender differences in terms of girls showing more interest in babies than boys were validated in these studies as well, although only for older preschoolers. Before the age of 4 or 5 years, boys and girls reacted similarly to the presence of an infant. In a waiting room setting with a live baby,

gender differences in behavior towards the baby emerged only during adolescence, but were absent among 8- to 9-year-olds (Feldman, Nash, & Cutrona, 1977).

2.1.2.2 Gender differences in the knowledge about infant care

Although there is scarce empirical data, it seems that girls and boys are equally knowledgeable concerning infant care (Melson & Fogel 1988b). Boys and girls between 3 and 8 years of age did not differ in their knowledge about babies and their care and accordingly both were equally likely to express that they would be able to care for an infant by themselves (Melson, Fogel, & Toda, 1986). But, at the same time, boys and girls associated infant care with adult females and attributed more nurturant characteristics to them. Moreover, studies with older participants (adolescents or young adults) revealed gender differences. Females scored higher on tests of knowledge of infant development than males (Gullo & Paludi, 1989).

2.1.2.3 Gender differences concerning nurturing behavior

Cross-cultural studies revealed that “involvement with infants is one of the most consistent sex-differentiated behavioral domains of middle childhood” (Edwards, 1993, p. 336). Nevertheless, the empirical evidence is not as clear as gender stereotypes would suggest. There are a number of variables one has to consider in looking at gender differences. One of them is the kind of behavior. Whereas girls showed more social behavior (e.g., looking, offering, or taking over toys) towards infant siblings than boys, boys touched their younger siblings more often than girls (Lamb, 1978b).

Another important aspect is the age of the siblings. The six-culture study revealed that girls showed a steady increase in nurturant behavior, whereas boys stayed constantly on a low level during the period from 3 to 11 years (Whiting & Whiting, 1975). Between 7 and 11 years of age girls offered more help and gave more support than boys, but there were no differences between the 3- to 6-year-old girls and boys across several cultural groups (Whiting & Edwards, 1973). These results were confirmed in

laboratory settings as well. After the age of 4 or 5 years, girls were more likely than boys to attend to babies (Melson & Fogel, 1988b). Older girls interacted most with the babies and older boys the least (Berman & Goodman, 1984). This striking interaction between age and gender also contained qualitative differences in behavior. Older girls did not only interact more often with the baby, but also in many different ways (Berman, 1987). Whereas the other children engaged only in mutual toy play with the baby, older girls showed, offered, and gave toys to the baby. Furthermore, older girls verbally interacted with the baby (e.g., greeting, calling, or instructing) and physically interacted with the baby (e.g., lifting, holding, or carrying the baby), which was almost never shown by the other children.

However, these gender differences are influenced by situational variables. The request to take care of the infant increased gender differences (Melson & Fogel, 1988b; Berman, 1986), whereas some gender differences in spontaneous play with an infant were not found consistently (Berman, 1986). Guidance or short demonstrations by adults equally influenced boys and girls to interact more with the infant (Melson & Fogel, 1988b; Berman, 1986; Berman & Goodman, 1984).

Once engaged with the infant, children of both genders were equally responsive to infant behavior and especially to infant distress (Melson & Fogel, 1988b). They were equally likely to help the mother of a crying baby in a waiting room setting, but girls verbalized more empathy towards the crying baby during an interview afterwards (Zahn-Waxler, Friedman, & Cummings, 1983).

At separation from the mother, female preschoolers reacted to infant siblings' distress more responsively than boys and received slightly higher caregiving scores (Stewart & Marvin, 1984; Garner, Jones, & Palmer, 1994). These gender differences were not associated with differences in social cognitive measures, such as cognitive perspective taking, emotional situation knowledge, or emotional role taking (Garner, Jones, & Palmer, 1994), but gender composition highly influenced the caregiving behavior. Younger sisters received more caregiving (Stewart & Marvin, 1984). In dyads

with older sisters, 55% responded to their toddler's distress, but older brothers responded only in 27% of the distress situations, and the boys never responded if their younger sibling was male (Howe & Rinaldi, 2004).

According to Stewart (1983a), older sisters tended to give more care than demanded, whereas older brothers seemed to give just as much care as requested. These completely different response patterns for girls and boys had been shown for mothers and fathers before. Therefore, Stewart suggested explaining these gender differences in attachment behavior towards siblings by modeling of the same-sex parent.

However, gender differences in nurturing behavior are not discussed without controversy. Neither gender nor gender composition effects on prosocial behavior were reported by Dunn and Munn (1986). They alternatively found the age gap between the siblings to be correlated with prosocial behavior. Concerning helping or sharing with unknown younger children, even opposite gender differences have been reported with boys showing more helping or sharing (Berman, 1986). In the context of sibling teaching, gender differences were rarely studied. So far, it seems that boys who are able to take another person's perspective teach most effectively, because they provided specific instructions about the process, whereas girls and non-perspective-taking boys only described desired results (Stewart, 1983b). However, till now, the data set is far too small for ultimate conclusions.

2.1.2.4 Summary

Based on the research presented, we can conclude that there are gender differences in nurturance. However, the magnitude of reported differences depends on physical and social qualities of the situation, the measure used to assess nurturance, and the experimental or prior role relationship between the participant and the infant (Berman, 1980).

Thus, the largest gender differences were found in self-report studies (Berman, 1980). Moreover, the presence of the experimenter and/or other participants increased

differences (Berman, 1980). These circumstances were interpreted by Berman as fostering socially appropriate responses that are in line with traditional gender role behavior. Therefore, gender differences in nurturance were discussed as a result of gender-role identification and societal expectations.

Studies using physiological measures provided no support for the assumption that females are more responsive to infants than males (Frodi & Lamb, 1978). These data suggest that responsiveness to babies is rather species-specific than that there are biologically determined gender differences in responsiveness. The fact that gender differences in nurturance have only been reported for children older than 5 or 6 years (Whiting & Edwards, 1973; Melson & Fogel, 1988b; Berman & Goodman, 1984; Berman, 1987) has also been interpreted as contradicting the innate differences hypothesis. However, inborn differences do not need to show from birth on. Socio-biological approaches rather propose the epigenetic perspective that genes define which environmental factors can influence behavior, but, at the same time, environment defines which genes become active in which way and at which time (Chasiotis & Volland, 1998).

In fact, girls and boys divide themselves and are divided by cultural practices into gender-segregated peer groups at the age of 5 to 7 years (Weisner, 1996; McHale, Crouter, & Tucker, 1999). Because of this interaction of socialization pressure and self-socialization, it does not become clear whether girls are more nurturant because they are more often assigned to child care tasks or whether they are more often assigned to child care because they are more nurturant. Support for the assumption that gender differences reflect social learning that is fostered by task assignment is discussed in the findings of Whiting and Edwards (1973). They reported that gender differences were smaller in societies where boys were also required to tend babies and perform other domestic chores. Given the fact that women have the major responsibility for infant care across cultures, the greater pressure towards nurturance for girls prepares them for their future roles (Edwards, 1993). Nevertheless, Edwards (1993) emphasized the importance

of self-socialization whereby children choose their preferred social companions and models for imitation or identification as well as the settings and activities that influence their developing behavior. This view is highly compatible with the epigenetic perspective because it considers genetically based predispositions as well as environmental factors.

2.2 Child rearing as cultural activity

Having discussed the universal nature of caregiving as well as its development and gender differences in caregiving in the previous chapter, we will now focus on the influences of the eco-cultural environment on patterns of child rearing.

Although it is a universal socialization goal to raise children in a way that allows them to participate successfully in adult life, the characteristics that constitute a competent adult vary broadly across cultures (LeVine, 1977). Therefore, the actual socialization strategies also show great variation according to the cultural environment. In order to conceptualize these variations, prototypical cultural models of the self will be described in the following paragraph.

2.2.1 Cultural models of the self

Cultural models of the self have been specified on the basis of two independent dimensions: agency, with the poles autonomy and heteronomy, and interpersonal distance, ranging from relatedness to separateness (Kağıtçıbaşı, 1996, 2005). Because cultural models of the self are assumed to reflect the requirements of the eco-cultural environment (Hewlett & Lamb, 2002; Whiting, 1963), they have been linked to certain contexts. These eco-cultural contexts are defined according to Keller (2007a), who further conceptualized the “Whiting model for psycho-cultural research” (Whiting, 1977) by the physical environment, population parameters, and the socioeconomic structure.

The model of interdependence is characterized by high levels of relatedness and heteronomy. The self is defined via the membership in a hierarchically organized group, in particular the family. A well-developed person accepts social norms and shows obedience, respect, and loyalty towards the elderly (Kağıtçıbaşı, 1996; Markus & Kitayama, 1991). The interdependent model describes traditional rural families with low levels of formal education in subsistence-based economies with high fertility rates and infant mortality, where intergenerational interdependence is needed to ensure economic survival of the family (Kağıtçıbaşı, 2005).

The model of independence is characterized by a high level of autonomy and separateness. The individual is defined by stable traits and personal attributes and thus regarded as unique and separate from others (Markus & Kitayama, 1991). Well-adapted persons embody self-confidence, competitiveness, and independent functioning (Kağıtçıbaşı, 1996). The independent model portrays urban educated families in Western industrialized or post-industrialized information societies with low fertility and infant mortality rates and high life expectancy (Kağıtçıbaşı, 2005).

The model of autonomous relatedness is characterized by high levels of autonomy as well as relatedness. The individual is required to combine autonomous functioning and integration into the family group. This model applies to urban educated middle-class families in societies with an interrelated cultural heritage (Kağıtçıbaşı, 1996, 2005).

The fourth theoretical self concept, the separate and heteronomous, has not been conceptualized as a prototypical model, because it is rather a pathological model that is characteristic for hierarchical neglecting or rejecting families (Kağıtçıbaşı, 1996).

2.2.2 Cultural models of child rearing

These cultural models of the self constitute possible 'endpoints' of development that define parenting ethnotheories as well as parenting practices. To describe parenting and its cultural variations during the first months of an infant's life, the component model of parenting has proved to be very useful (Keller, 2002).

2.2.2.1 The component model of parenting

The component model of parenting proposes parenting systems and interactional mechanisms that have evolved as adaptation to evolutionary requirements (Keller, 2002, 2007a). These components of parenting are conceptualized as universal and basically independent from each other, so that each mechanism can theoretically operate within each behavioral system. However, certain combinations are more likely than others, and the occurrence of these different combinations depends on environmental demands (Keller, 2002, 2007a). The six parenting systems (primary care, body contact, body stimulation, object stimulation, face-to-face exchange, and the narrative envelope) that are differentiated by Keller are briefly described in the following sections.

The primary care system comprises all parenting activities that are aimed at ensuring the health and survival of the infant, e.g., providing food and hygiene. Although health and physical growth are the basic requirement for all development, the focus given to that phylogenetically oldest parenting system varies according to environmental factors. This differential emphasis was reflected in the formulation of two different models of early child care (LeVine et al., 1994). LeVine and colleagues (1994) differentiated the pediatric and the pedagogical model. The Gusii in Kenya followed the pediatric model and primarily focused on the protection of the infant from life-threatening illness and environmental danger. Considering the high infant mortality rate in Africa, this strategy is highly adaptive. In contrast, in the pedagogical model of the white middle-class US families, the caregivers saw themselves more as teachers, and early

educational interactions were their main focus. Survival and health did not direct immediate interaction in this environment with very good medical care; they are rather background concerns.

Body contact represents another parenting system. Although body contact or carrying an infant may also serve the purpose of protection against life-threatening environmental hazards, it is associated with other psychological functions as well. Extensive body contact and close proximity with the caregiver supports the development of feelings of belongingness and social cohesion. The amount of body contact that babies experience also varies tremendously across cultural environments. Gusii infants up to six months were held by their mothers or other caregivers about 80% of the observational time (LeVine et al., 1994). Three to 4-month-old infants of Aka foragers and Ngandu farmers in the Central African Republic were also held or touched by their caregivers most of the time (99% and 79% respectively), whereas Euro-American families from Washington DC used a variety of technological devices (e.g., infant seats or cribs) in which to place their infants, who therefore were held or touched only 18% of the time (Hewlett & Lamb, 2002).

The body stimulation system contains all kinds of parental behavior that stimulate the infant bodily. These can range from mild swinging to wild lifting up and down or from gently petting to intensive massage. Motor stimulation by moving the arms or legs of the infant are as well included as certain routines in motor handling of the baby such as putting the baby to stand during bathing (like in rural Gujarat, India) or supporting the child's head. Body stimulation patterns are strongly directed by beliefs and ethnotheories of the caregiver. What is considered as necessary for healthy development in one cultural community may be regarded as maltreatment in another. The function of body stimulation can be seen in accelerating motor development, which is especially adaptive in environments where early walking is required to start training for participation in subsistence activities.

All parenting activities that tend to direct the infant's attention to toys or the material world in general belong to the object stimulation system. The amount of object stimulation depends on the availability of partners for social interaction who may be replaced by objects in Western contexts. On the other hand, the existence of adequate objects also plays a role, especially in traditional communities. The psychological function of object stimulation can be described as fostering exploration and thus cognitive development.

The face-to-face system constitutes the context for mutual eye-contact and pseudo-dialogical communication between baby and caregiver. The exclusive dyadic attention devoted to the child fosters the development of the feeling of uniqueness. The importance given to this parenting system is very high in Western societies, where the amount of eye-contact at three months of age has been reported as something related to developmental consequences, such as developmental delays or behavioral problems (Keller & Gauda, 1987).

The sixth parenting system of the component model of parenting is the narrative envelope. Language is a very important medium of parenting, since "talking is certainly one of the most frequent, if not the most frequent, parental behavior children experience" (Shatz, 1991, p. 139). Even before birth children hear their parents talking to them or interacting with others. Language has a double function in transmitting cultural values. On the one hand, caregivers can directly tell their children what is right and what is wrong. On the other hand, the style of talking reflects the cultural model of the self and interpersonal relations (Wang, 2004; Han, Leichtman, & Wang, 1998). Thus, children learn cultural lessons via language but also language itself.

In the following sections, the interactional mechanisms as formulated in the component model of parenting (mode of attention, sensitivity towards positive and/or negative infant signals, contingency in terms of prompt reactivity, and emotional warmth) will be introduced (Keller, 2002).

The mode of attention children receive from their caregivers differs according to the socio-cultural environment. In Western urban middle-class, where usually mothers spend most of the day alone with the baby, exclusive dyadic attention is the prevalent mode. The experience of being the center of attention supports the development of a self concept as a unique individual. However, in traditional non-Western contexts mothers can not afford to give exclusive attention to their infants, because their workload forces them to share their attention between the infant and co-occurring household or economic activities. Moreover, mother-infant separation is regarded as inappropriate. Rather, the experienced shared or co-occurring mode of attention fosters development of a self concept as an interrelated co-agent.

Positive and negative affect has been shown to be related with brain activity in different areas (Kuhl & Völker, 1998). Therefore, positive and negative emotionality has been conceptualized as independent functional systems. Accordingly, positive and negative infant signals fulfill different functions in caregiver-infant communication. Whereas negative signals give information about unsatisfied physiological or psychological needs of the infant and thus request regulation, positive signals are related to enjoyable situations and ask for communication. The sensitivity towards positive or negative infant signals varies across cultural communities. The already mentioned different models of early child care reflect these variations (LeVine et al., 1994). The pediatric model selectively responds to distress and the pedagogical model to babble or smiling in order to maximize positive emotionality.

Parental warmth has emerged as an independent dimension of parenting in various factor-analytic studies (MacDonald, 1992). In caregiver-infant interaction, warmth can be expressed via different channels: bodily warmth (e.g., close proximity, cuddling, hugging) or distal warmth (e.g., vocal expression of empathic affect or affective sharing in face-to-face exchange). From an evolutionary perspective, warmth is conceptualized as a mechanism that supports high-investment parenting as a biological adaptation to the prolonged dependency of human children (MacDonald, 1992). Accordingly, warmth

is characteristic of parent-child relationships in a wide range of human societies. However, there is also within- and cross-cultural variation in parental warmth that is related to adaptive functioning in the respective environment. Since a “relationship of warmth and affection between parents and children is expected to result in the acceptance of adult values by the child, identifying with the parent, and a generally higher level of compliance” (MacDonald, 1992, p. 761), it can further be expected that warmth as characteristic of parent-child relationships will be more pronounced in communities with an interdependent cultural model.

Prompt reactions to infant signals are part of the intuitive parenting program (Papoušek & Papoušek, 1987). Perfectly adapted to the infants’ short memory span, these reactions within a latency window of less than one second enable infants to detect the relation between their own activity and the reaction of the caregiver. These contingency experiences help the infants to learn that their behavior has consequences and thereby develop a concept of the self as a causal agent that is linked to the independent cultural model. Correspondingly, there is empirical evidence that the frequency of contingent parental responses to infant signals differs across socio-cultural environments and that these differences are related to different developmental pathways. German middle-class mothers reacted more contingently to their infants at three months of age than rural Cameroonian Nso mothers (Keller, Kärtner et al., 2005). Furthermore, children who experienced more contingency showed earlier mirror self-recognition, an important developmental milestone that points to the development of a categorical self-concept (Keller, Kärtner et al., 2005).

Before the component model of parenting will be applied in the description of two specific cultural models of child rearing, the following paragraph will discuss the role of parenting ethnotheories.

2.2.2.2 Parenting ethnotheories

The term ethnotheory (c.f. folk theory) reflects the intellectual roots of this construct in anthropology (Harkness & Super, 1996). Ethnotheories are shared representational frameworks of a respective cultural group (Keller, 2003). Parenting ethnotheories form the bridge between cultural models and parenting behavior (Keller, 2007a; Harkness & Super, 1996, Morelli & Verhoef, 1999) and thus between the culture and the individual. Although ethnotheories are socially shared belief systems, they are nonetheless constructed in the minds of individual parents and thus represent “the basic paradox of mind and culture” (Harkness & Super, 1996, p. 6).

However, child-rearing customs do not only reflect cultural values, but also demonstrate adaptations to environmental pressure experienced by earlier generations (LeVine, 1977). These adaptive solutions to hazards that treat the survival of children eliminate the necessity for parents to deal directly and mentally with these hazards (LeVine, 1977). Therefore, parents often can not explain their practices and are not aware of its adaptability. That leads critics of the concept to their argumentation that ethnotheories are the mere product of social scientists and respondents (Sigel & Kim, 1996).

The growing field of research on parenting ethnotheories is far from uniformity. This diversity is also evident in the terminology used by different researchers (Harkness & Super, 1996). The respective definitions indicate whether the concept is understood as explicit or implicit, whether it emphasizes rather cognitive or affective aspects, and whether a consistent system of beliefs or a loose collection of opinions is assumed. What is common to all conceptualizations is the assumption that these beliefs, ethnotheories, or ideas guide parental behavior and actions (Sigel & Kim, 1996). If ethnotheories thusly have effects on socialization, it must be assumed that they are passed on to the next generation during socialization processes. It has been observed that 5-year-old children have already adopted similar positions as their parents concerning physical punishment (Holden & Zambarano, 1992). These authors termed

this process “parentization” and concluded that what “the first place children learn about child rearing is through their own experiences with their parents” (Holden & Zambarano, 1992, p. 167). However, the degree of transmission of parental values or ideas is related to the pace of change of environmental conditions (Lamm, Keller, Yovsi, & Chaudhary, 2008).

Studies on parenting ethnotheories comprise material on parental goals, estimates of children’s competencies at various ages, views about good or bad parenting, and general beliefs about the nature of children and how they develop (Goodnow, 1988). There are only few studies addressing more than one of the aforementioned aspects, but a cross-cultural analysis revealed that these aspects are linked in a hierarchical relation (Keller, Lamm, Abels, Yovsi, Borke et al., 2006). Socialization goals were shown to mediate the relation between cultural models as expressed by the degree of family cohesion and parenting ethnotheories about parenting practices (Keller, Lamm, Abels, Yovsi, Borke et al., 2006).

In this study, several of these aspects will be examined. As proposed by Goodnow (1988) the term “ideas” will be used in this work because it represents this variety and avoids the connotation of conviction. Since it cannot be expected that the children consciously reflected their ideas and it is also unknown whether the children’s ideas really form a coherent system or are rather loosely connected, this labelling is appropriate.

2.2.3 The Nso model of child rearing

2.2.3.1 The eco-cultural context

The Nso constitute one of more than 239 ethnic groupings living in Cameroon (Nsamenang, 1992a) and belong to the Tikar group in the Western Grassfields (Kaberry, 1952). Nso forms the largest chiefdom in the Bamenda Grassfields, which is today “a state within a state, a complicated place where the multiple strands of chieftancy, secret

societies, titles, lineage and clan politics, gender, and seniority – all informed by national politics and the marketplace – are interwoven into complex multivocal, multiethnic patterns” (Goheen, 1996, p. 46). The Fon is in the center of that complex political system. He is regarded as the “father of his people” and as a symbol of their unity (Goheen, 1996).

The majority of the 250,000 Nso people lives in Nsoland (Banso) (Nsamenang, 1992a), which equals contemporary Bui Division in the Northwest Province of Cameroon. Kumbo is the traditional capital of the chiefdom as well as the capital of Bui Division. In Kumbo and its immediate surroundings live about 60,000 people (Goheen, 1996). The remaining Nso live in villages in the ancestral land; only some have migrated to Bamenda, the capital of the Northwest Province, or to the urban centers in the south (Douala and Yaounde).

Most people in Banso live from subsistence farming. Over 90% of food consumed is homegrown, and 85% of all households are classified as “rural” (Goheen, 1996). However, farming is allocated as women’s work, whereas men’s primary identification is as warriors and hunters. These two occupations are no longer performed by men nowadays; thus, men’s labor consists of coffee farming and a variety of entrepreneurial activities. Although only a few men hold wage or salaried jobs (in Goheen’s sample only about 20 percent) and the remaining declare themselves as farmers, men nevertheless do not participate in food crop production (Goheen, 1996). They rather grow cash crops, like coffee, kola nut, raffia bush, and palm trees for palm wine.

An average Nso household consists of 6 to 8 persons (Keller, 2007a; Goheen, 1996; Yovsi, 2003). Most households belong to larger compounds which are composed of patrilineally related men and their families. Compounds are headed by a lineage head, who is accepted as the political and ritual leader by the persons living in the compound (Goheen, 1996).

Children are highly valued and desired by the Nso. The proverb “To die childless is to die completely” asserts what is common thought (Nsamenang, 1992a). According to the Nso, children are gifts from God, and, thus, a couple gains great respect after the birth of a first child and childlessness is seen as a cosmo-cultural deficit (Nsamenang, 1992a). However, the desire is not simply for children, but rather for many children. The number of children is an important indication of status. As a result, about 50% of the population are children under the age of 15 years (Goheen, 1996). The average number of children per family has been reported as ranging between 4.7 and 5.9 (Nsamenang, 1992a).

The Nso are relatively well educated given the Cameroonian mean (literacy rate 67.9%, The World Factbook, 2008), although there are many illiterates, especially among the older generation. Most Nso parents received at least some education, and many completed primary school (Morelli & Verhoef, 1999, Yovsi, 2003, Keller, 2007a). Nowadays, over 60% of the Nso children attend primary school (Goheen, 1996), but secondary schools are only located around Kumbo and thereby not within reach for most of the children (Keller, 2007a). Furthermore, sending a child to secondary school requires school fees and takes a helping hand away from the household.

National statistics reveal that in Cameroon 40% of the population are attached to indigenous beliefs, 40% are Christians and 20% Muslims (The World Factbook, 2008). Almost all Nso still practice traditional religion, albeit most of them are baptized Catholics (Banadzem, 1996). The Nso do not perceive an inconsistency between Christianity and traditional religion, because missionaries used Lamnso and its religious vocabulary in church services to popularize Christianity and borrowed symbolisms from Nso traditional religion in order to transmit Christian concepts (Banadzem, 1996). Therefore, Nso tradition is still very powerful. There is wide consensus that the Fon Nso “embodies the highest religious and political values and thus power of the highest order” (Goheen, 1996, p. 56). He is seen as a mediator between the ancestors and the living people and

is the chief officiant in the dynastic ancestral cult, who is responsible for the well-being of the Nso people (Goheen, 1996).

2.2.3.2 The Nso socialization goals and ethnotheories

According to the Nso, parenting is aimed at initiating the child as a member of society, but first and foremost it is aimed to secure the life and health of the infant (Yovsi, 2003). This description of parental goals corresponds to the universal goals of parents and the natural hierarchy among them that has been formulated by LeVine (1977). LeVine proposed the first goal as the physical survival and health of the child, the second as the development of behavioral capacities for economic self-maintenance, and the third as the development of behavioral capacities for maximizing cultural values. In consideration of the contextual conditions described in the previous paragraph and the high infant mortality rate (Cameroon: 65.8 per 1,000 live births, The World Factbook, 2008), it seems necessary that the first goal becomes the primary concern of the parents. Nevertheless, when asked for their goals explicitly, parents highly emphasize the acquisition of prosocial skills and hardly ever raise the issue of survival and health. This apparent contradiction may be due to the evolution of adaptively functioning customs that prevent parents from directly dealing with these concerns (LeVine, 1977). However, when conceptions of parenting were studied more concretely through evaluation of videotaped mother-infant interactions, Nso women addressed more primary care and body contact and less face-to-face exchange and exclusive attention than Northern German women (Keller, Völker, & Yovsi, 2005). Thus, a strong focus on the two parenting systems which serve the purpose of security and protection became obvious. Behavioral development and a treatment of the baby as an emotionally responsive individual were less emphasized.

Following the list of LeVine (1977), the second and third goal can hardly be discussed independently, since cultural values did not evolve in a way that was detached from the eco-cultural context. In the case of the Nso, the acquisition of

prosocial skills undoubtedly serves both goals, because good relations with the kin group constitute a high cultural value but are at the same time essential for the child's future subsistence. Therefore, the child is seen "as a 'plant' growing up in the middle of a field – the kin group" (Nsamenang, 1992b, p. 326). Reference to the broader community is indispensable to develop full selfhood (Nsamenang & Lamb, 1993). The extended family plays a very important role for good child care, as the Nso proverb "when we share children, we build up the family" illustrates (Verhoef, 2005). By means of experiences with multiple caretakers, children should become familiarized with important members of the extended family and learn about their obligations as family members (Morelli & Verhoef, 1999).

Good children display obedience and respect, and furthermore parents and grandparents expect filial service, hard work, and helpfulness of them (Nsamenang & Lamb, 1993). The Nso understand socialization as succession of social rather than maturational stages. Accordingly, different roles are allotted to children at different life stages depending on their demonstrated level of social competence (Nsamenang & Lamb, 1993). Thus, socialization values focus on social competence and shared responsibility within the family system and ethnic community (Nsamenang & Lamb, 1994). Social intelligence is valued more than academic degrees, but nevertheless about half of the Nso parents surveyed by Nsamenang (1992a) expected their children to perform well in school. Although formal schooling is highly valued (Morelli & Verhoef, 1999), it is not accepted for personal striving but rather as profit for the group. This subordination of individual interests to those of the group is prototypical of traditional rural communities (Kağıtçıbaşı, 1996; 2005) and explained by the saying "individuals come and go but the group persists" (Nsamenang, 1987, p. 279).

The importance of these socialization values is emphasized by enormous agreement among the people. There is only little intracultural variation (Lamm & Keller, 2007), but substantial levels of agreement among respondents across religion, habitats, and generation (Nsamenang & Lamb, 1995; Lamm, Keller, Yovsi, & Chaudhary, 2008).

Even though the social life of adult men and women is strictly segregated, only about half of the parents favored differential gender socialization, but even those did not further elaborate in which ways girls and boys should be raised differently (Nsamenang, 1992; Nsamenang & Lamb, 1993).

2.2.3.3 The Nso child rearing practices

The Nso proverb “a child is only its mother’s in the womb” reflects the view that socialization is a shared responsibility among members of the social network (Nsamenang & Lamb, 1993; 1994). Shared caregiving arrangements render possible that 3-month-old infants got body contact more than 80% of their attentive waking time and over 50% of their sleeping time (Keller, Abels, Lamm, Yovsi, Völker, & Lakhani, 2005). These Nso babies were hardly ever alone (7.5% of the observational time) and were nursed in response to negative signals.

High rates of body contact as well as body stimulation form the proximal strategy of parenting infants that is prototypical for rural traditional non-Western communities and has been observed in the Nso community repeatedly (Keller, 2007a; Keller, Künsemüller, Abels, Völker, Yovsi et al., 2005). Good parenting is defined as an individually adapted pattern of vestibular and kinesthetic stimulation (Keller, Yovsi, & Völker, 2002). This parenting strategy has also been associated with a typical verbal/vocal behavior of the caregiver that is characterized by a low amount of talking, skeletal and highly repetitive talking and many references to the community of kin and ancestors and social obligations (Keller, 2007a).

Accordingly, direct instruction is not a usual practice in Nso socialization; rather, hands on experience is the main form of instruction (Nsamenang & Lamb, 1993; 1994). Cultural competence is primarily learned through observation and imitation and co-participation in major activities. Learning through guided participation as exercised by the Nso (Nsamenang & Lamb, 1995) has been reported as a prototypical form of

learning in a number of non-Western communities (Rogoff, Mistry, Göncü, & Mosier, 1993).

2.2.3.4 The role of siblings

In the face of the great number of children in the Nso community (see chapter 2.3.1), it is self-evident that every Nso child grows up with siblings. Moreover, not only children of the same parents, but also other relatives of the same age (e.g., cousin, aunt, uncle, half sibling) are referred to as siblings.

From birth on, Nso infants become integrated in the social net of the extended family. Visitors come to welcome the newborn. Even young children take part in this event. They often come to the newborn's house, visit the baby, are allowed to handle it, and do passive babysitting (Yovsi, 2003). Gradually, the children are trained to become babysitters. They are expected to observe and imitate parents, are exposed to all caregiving activities, and are increasingly allowed to perform them (Nsamenang, 1992c). From the second month on, babies are left for increasingly longer periods with the sitters, who take up the job completely, with the exception of breastfeeding. Thus, after weaning, the main part of day care is provided by sibling caregivers (Nsamenang, 1992c), and the toddlers are more under the mentorship of older siblings and peers than of parents or other adults (Nsamenang & Lamb, 1993; 1994). Some Nso mothers even say that the siblings know the baby better than they themselves, and some infants look to the babysitter, not the mother, for security during threatening situations (Nsamenang, 1992c).

This pattern of child care has also been reported from other African communities, such as the Mandinka in Senegal (Whittemore & Beverly, 1989) or the Gusii in Kenya (LeVine et al., 1994). Of course, sibling caregiving is adaptive to the heavy burden of subsistence carried by the mothers (Weisner & Gallimore, 1977), but nevertheless older siblings function as competent socializing agents for their younger siblings and not merely as monitors for the most basic biological needs (Watson-Gegeo & Gegeo, 1989;

Whittemore & Beverly, 1989). Caregiving siblings educate their younger brothers and sisters about the values and activities of the community into which they are both growing (Ervin-Tripp, 1989). On the other hand, the older child gets the opportunity to learn and practice adult roles (Serpell, 1992) and is disciplined and socialized through responsibility for a younger child (Weisner & Gallimore, 1977). Hence, sibling caregiving is an important aspect of socialization for both the older and the younger sibling, as it fosters prosocial and affiliative behavior, strengthens collective responsibility within the group of siblings, and thus enhances interdependence (Watson-Gegeo & Gegeo, 1989; Weisner, 1982; Rogoff, 2003).

Nearly all Nso children, boys and girls alike, have caregiving experiences. However, parents expect girls to be a better care provider than boys (Nsamenang, 1992a). Therefore girls, start caregiving from age 3 whereas boys do not usually start until the age of 5 or 6 years (Nsamenang, 1992c). Although nowadays most children attend school, this does not restrain them from performing their traditional tasks; rather, a reorganization of time takes place (Nsamenang, 1992c).

2.2.4 The German middle-class model of child rearing

2.2.4.1 The eco-cultural context

Germany is a highly industrialized and urbanized country (only 2.5% of the employed persons work in agriculture and forestry, Statistisches Jahrbuch 2006). Although the sociocultural orientation towards independence has a long tradition (Keller, 2007a), a new wave of individualization has been described by sociologists since the 1980s (Beck, 1986). The reunification of Germany in 1989 further increased the social trend of individualization, since economic instability grew and required more social and geographical mobility.

Education is highly valued in the “nation of the thinkers and poets.” A literacy rate of 99% (The World Factbook, 2008) and 12.4% with a university degree among those

over 20 years of age reflects this fact (Statistisches Jahrbuch 2006). Education becomes increasingly important in the competition for jobs, but, on the other hand, this expansion of education also fostered the emancipation from traditional forms of life, normative ties and social dependencies (Beck, 1986).

Household size is rather small in Germany. A percentage of 37.5% are single-person households and only in 3.9% of the private households live 5 or more persons (Statistisches Jahrbuch 2006). Children live in 22.8% of all households (Statistisches Jahrbuch 2006) and only 13.9% of the population are children under the age of 14 years (World Fact Book, 2007). The fertility rate is 1.4 children per woman, which is a rate among the lowest in the world (The World Factbook, 2008). Because of the good medical care, infant mortality is also low, with 4.1 deaths per 1,000 live births (The World Factbook, 2008).

Before children are born, typically in the late 20ies or early 30ies of the parents, usually both parents are working outside the household. After childbirth, this pattern changes to only 32.5% of mothers with children under the age of 3 years and 85.5% of the men working (Statistisches Jahrbuch 2006). Thus, fathers work outside the home to earn money to ensure the family income, whereas women usually stay at home and perform the practical chores of childcare. There are hardly any other caretakers available because relatives typically do not live in the neighborhood and other babysitters have to be paid. It is quite a balancing act for many women to organize the familial life, because the every day activities of the members of the family do not follow a common schedule but are rather determined by institutional demands as well as individual decisions (Beck-Gernsheim, 1994).

Religion does not play a major role in the normal course of life for most of the people. About 28% of the population are not affiliated with any religious group, but even the remaining, who divide nearly half-and-half into Protestants and Roman Catholics (The World Factbook, 2008), do not strictly follow religious norms.

2.2.4.2 Socialization goals and ethnotheories of the German middle class

The independent sociocultural orientation is reflected in the socialization goals of the German middle class parents. Mothers from Berlin scored high on autonomous socialization goals (e.g., develop self-confidence or self-esteem) and lowest on relational socialization goals, such as learning to obey elderly people (Keller, Lamm et al., 2006). In a sample of Northern German families, this result was confirmed (Keller, 2007a). These families also valued the expression of own preferences and personal talents as well as being different from others much more than respect, sharing with others, and maintaining social harmony.

Even concerning babies, this focus on the development of independence is predominant. Infants are believed to have own preferences, emotions, and cognitions (Keller, Hentschel, Yovsi, Lamm, Abels, & Haas, 2004). Therefrom, a child-centeredness follows, as reflected in the sensitivity concept of the attachment theory (Ainsworth, Blehar, Waters, & Wall, 1978). Thus, exclusive dyadic attention in face-to-face interactions is regarded as a most important interaction feature to get truly involved with the baby and his or her point of view (Keller, Völker, & Yovsi, 2005). This perspective—that the baby should take the lead in the interaction—becomes especially pronounced with respect to body stimulation (Keller, 2007a). The mothers strongly argue against motor training, but training of early self regulation is positively evaluated. Therefore, co-sleeping and immediate reactions to negative infant signals are seen as spoiling. Babies are expected to spend time alone and to entertain themselves with toys (Keller, 2007a). Toys are regarded as essential for (cognitive) development, but breastfeeding and body contact are rather functionally valued, because it enables face-to-face contact for instance (Keller, 2007a).

The intracultural variation among the ideas of the German parents is greater than in interdependent communities (Lamm & Keller, 2007). Furthermore, German mothers referred in ethnotheory interviews to their own experiences and explicitly mentioned that they were expressing their private opinion (Kärtner, Keller, Lamm, Abels, Yovsi, &

Chaudhary, 2007). Thus, the parenting ethnotheories of the German parents appear to be an active construction of the respective parent that is in line with the independent sociocultural orientation and seems to reflect that German parents have hardly any experience with babies when becoming parents. Therefore, they need to develop their parenting knowledge and skills with the help of books or other media and professionals.

2.2.4.3 Child rearing practices of the German middle class

German infants are cared for by someone other than the mother only very seldom. Corresponding to the goal of early independence, an assessment of infants' every day experiences revealed that Northern German infants were all alone, without anybody within view about 40% of the observational time (Keller, Abels, et al., 2005). Furthermore, primary care was provided independent from the state of the infant. In videotaped play interactions with the mother, German infants experienced face-to-face positions in about 78% of the time and object play in nearly 40% of the time (Keller, 2007a). This parenting behavior represents the distal strategy of parenting infants that is prototypical for urban Western middleclass communities (Keller, 2007a; Keller, Künsemüller, Abels, Völker, Yovsi et al., 2005). This child rearing strategy also involves a tendency to react verbally to infant signals (Keller, 2007a). The voluminous and elaborated talking towards the infant is characterized by references to the infant's autonomy, giving the infant choices, and praising the uniqueness of the baby. This practice implies a dialogue model, where the child is given a quasi-equal status in the communicative process. A longitudinal analysis of communicational patterns between mothers and infants during the first three month of life revealed that German infants produced more communicative signals than Nso infants, and German mothers answered a higher number of signals contingently than Cameroonian Nso mothers (Keller, Otto, Lamm, Yovsi, & Kärtner, 2008).

Since the living world of adults and children is strictly segregated, learning often takes place in institutionalized contexts. Children learn cultural practices through

instruction in kindergarten; school; or specific contexts, such as music school or sports club (Keller, 2007b). Even babies in the first year of life attend special courses with their mothers in order to promote optimal development.

2.2.4.4 The role of siblings

At first glance, siblings do not play such a major part for German children. As expected from the low fertility rate, half the children in Germany grow up without any siblings (Kasten, 1995). Those, who have siblings, are free to decide whether and how much they deal with their siblings. There are no rules for the structure of the relationship (Bank & Kahn, 1989). However, in the typical two-child family, sibling relationships are unique, and siblings are an important constant in the individualized life with much geographic mobility, frequent divorces and remarriages, and increasing rates of employed mothers (Bank & Kahn, 1989).

Nevertheless, sibling caregiving is not a regular experience for German children. The typical small birth interval does not foster such arrangements, and, most notably, families do not take economic advantage of sibling caregiving (Zukow, 1989). Germans can be expected to follow the prototypical sequence of Western communities with becoming a caregiver only after marriage and formation of their own household (Weisner, 1987). However, there is no empirical evidence for that pattern, and the results from a Scottish sample of primary school children (Kosonen, 1996) underline the necessity of studying the issue of sibling caretaking in Western communities. Although British legislation strongly discourages leaving children in the care of other children, nearly all children reported that they looked after their siblings or were looked after by their siblings sometimes.

However, the fact that mothers are the best available and most skilled caregivers does not mean that they also have the most influence on the socio-emotional development of their children (Bryant, 1989). It is not enough to study dyadic interactions without taking into account the potential moderator effects of other relationships.

Parental and sibling caretaking do not occur in isolation, but are rather parts of a complex system of interactions between family members (Bryant, 1992). Therefore, several authors conclude that siblings are underestimated and unutilized as socializing agents in Western cultures (Zukow, 1989; Cicirelli, 1994). Siblings spend a significant amount of time together, frequently imitate each other, and generally seem to enjoy each others company (Azmitia & Hesser, 1993). They implicitly take care of each other although they are not assigned this responsibility (Bryant, 1989). The common conception of brother and sister as best friend or guardian reflects this, but is in contradiction to the typical scientific examination that focuses on sibling rivalry (Ervin-Tripp, 1989).

In fact, sibling rivalry has historically been the most studied aspect of sibling relationships, because of the assumption that later differences in personality result from it (Dunn, 1993). Recent empirical studies revealed that rivalry is not just the opposite of friendly cooperation, but that rivalry and cooperation are rather two independent dimensions (Dunn, 1993). This may clarify the assumed contradiction between everyday concept and scientific focus. However, rivalry is closely linked to the typical Western socialization ideal and the independent self concept. Accordingly, children should develop autonomy, independence, self-confidence, and assertiveness (Kağıtçıbaşı, 1996, 2005; Keller, Lamm et al., 2006). The consequential child-centeredness of the parents also fosters jealousy and rivalry when a sibling is born and the exclusive dyadic attention has to be shared with the sibling, especially when the new baby needs more attention during the first months. Because of the nuclear family setting and, many times, long distances to other family members, there are often no persons available who could compensate for the dyadic loss, as has been reported from many non-Western communities (e.g., Levine & Levine, 1963; Maretzki & Maretzki, 1963).

2.3 Assumptions of the study

2.3.1 Assumptions concerning cultural differences

As widely discussed in the previous chapter, child rearing is a cultural activity that is aimed at socializing children to acquire the intelligence needed in the respective cultural environment. Therefore, it is assumed that the children's ideas about child care are informed by the respective cultural model of parenting, i.e. the Nso children are expected to follow the Nso model of child rearing, and the German children are expected to follow the child rearing model of the German middle class. More specifically, the following assumptions are hypothesized.

2.3.1.1 Who should take care of babies?

The responsibility for child care is widely shared in the Nso family tradition, and children are involved in the care of younger siblings whereas in the nuclear family setting of the German middle class, the parents are responsible for child care. Therefore, it is expected that the German children refer more frequently to the mother or the father as best caregiver for a baby than the Nso children. The latter are expected to prefer other persons and also children as caregivers.

2.3.1.2 What should babies learn from the caregiver?

It is also expected that the children have adopted the respective socialization goals of their cultural community. For example, the Nso children want the baby to learn to take responsibility for the community and to find their place within the hierarchical community whereas the German children focus more strongly on individual competencies.

2.3.1.3 How should babies be taken care of?

Since the Nso prefer the proximal strategy of parenting (as observed in Nso mothers' behavior and Nso mothers' and grandmothers' ethnotheory interviews) whereas German families focus on the distal strategy of parenting (found in mothers' and fathers' behavior and maternal and grandmaternal ethnotheories) (Keller, 2007a), it is expected that the Nso children more strongly emphasize primary care, body contact, body stimulation, and regulation of distress than the German children. On the other hand, it is expected that the German children more strongly focus on object play, face-to-face interaction, and vocal interaction in combination with exclusive dyadic attention and a maximization of positive affect.

2.3.1.4 How should caretaking and other activities be organized?

Because the rural subsistence-based living of the Nso results in heavy workloads, child care usually occurs with shared attention during other activities. The Nso children are expected to apply this pattern and mention co-occurring care in the interviews. The German children are expected to prefer exclusive care, since the experience of exclusive dyadic attention fosters the feeling of uniqueness and independence.

2.3.1.5 How are ideas about child care justified?

It is expected that the argumentation of the Nso children is more orientated towards the community and the baby whose survival is the major goal of caregiving whereas the German children are expected to incorporate their own needs, desires, and preferences in their reasoning according to their independent cultural orientation.

2.3.2 Assumptions concerning age effects

2.3.2.1 Age and knowledge about child care

It is between five and seven years where basic developmental changes in social-cognitive and socio-emotional abilities are assumed. Therefore, it is expected that knowledge about child care also increases around that age, i.e. that older children have more scripts concerning infant care available than younger children.

2.3.2.2 Age and cultural patterns

Furthermore, the practice of many cultural communities shows that children of that age are assigned new cultural tasks and take more responsibility. Hence, it is expected that older children adopt the respective cultural model of their community more strongly than younger children.

2.3.3 Assumptions concerning gender differences

2.3.3.1 Gender and knowledge about child care

As previous empirical data suggest, it is expected that girls and boys of the researched age do not differ concerning their knowledge about child care.

2.3.3.2 Gender preferences for a babysitter

Nevertheless, it is expected that parents regard girls as better babysitters than boys, because there is empirical evidence from different cultural communities that girls are assigned more caregiving tasks than boys and that parents prefer girls as babysitters for their infants.

2.3.3.3 Gender and content of ideas about child care

Concerning gender differences in the content of the children's ideas about infant care, there is no precise assumption hypothesized. Reports about behavioral differences between boys and girls are inconsistent, and there are no studies at all about children's ideas. Therefore, the analysis is aimed at elaborating whether there are uniform gender differences across the different cultural communities.

3. METHOD

3.1 Participants

The participants of the study were 136 children between 4 and 8 years of age. This age range was selected because it includes the age at which children start to care for babies and the age that mothers prefer for babysitting (Whiting & Edwards, 1988). It also covers the 5-to-7 shift (Weisner, 1996; Rogoff, 1996), an age period, where many cultures change the social roles of children and new social-cognitive and socio-emotional abilities have developed. Nso children of that age are referred to as “children who can fetch water” (Verhoef, 2005) thereby indicating that they are assigned new roles and responsibilities within the community.

The Nso sub sample consisted of 72 children living in Kumbo or surrounding villages in Bui division in the Northwestern province of Cameroon (see Figure 3.1). The 64 German children lived in Osnabrück, a town with about 160,000 inhabitants in Lower Saxony. The sub samples were selected in order to represent different cultural models of child rearing as described in the previous chapter. The sociodemographic characteristics of the sub samples are presented in Table 3.1.

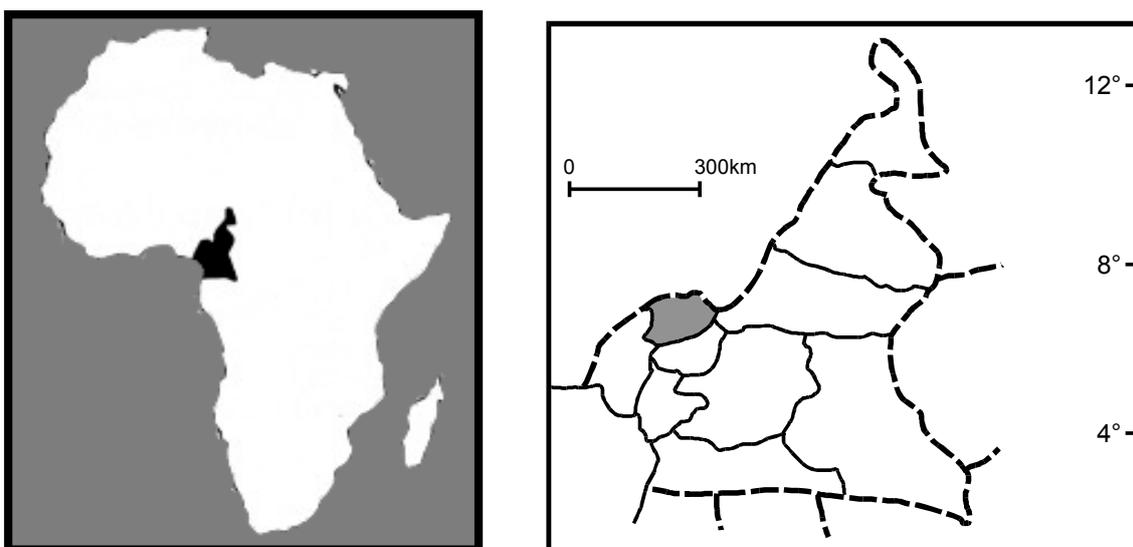


Figure 3.1: Location of the study area (a) Cameroon in Africa, (b) Northwest Province in Cameroon (Yovsi, 2003)

The two sub samples were similar concerning gender distribution, but the German children were slightly older than the Nso children. However, in line with the eco-cultural profiles outlined in the last chapter, the Nso children had more siblings and lived in larger households. Furthermore, the level of formal education of the parents from Osnabrück was higher than that of the Nso parents. The religious affiliation also reflected the respective cultural standards as described earlier (Nso: 47.9% Catholics, 22.5% Presbyterian, 15.5% Baptist, 12.7% Muslims; Osnabrück: 44.4% Catholics, 25.4% Protestants, 4.8% Orthodox, 4.8% Muslims, 20.6% no religion).

All children older than 6 years attended school at the time of data collection. The younger children were in kindergarten or nursery school, and only 10% of the Nso children were at home. The most striking differences between the two sub samples referred to the experiences with infants. Whereas all Nso children had experiences as an active babysitter for a younger sibling, neighbor, cousin, niece or nephew, only 20% of the children from Osnabrück reported such experiences. Even when asked for regular contact with a baby without caregiving responsibility, only 38% of the German children confirmed that experience.

Table 3.1*Sociodemographic background of the Nso and German samples*

<i>Sociodemographic variables</i>	Nso, Cameroon (N=72)	Osnabrück, Germany (N=64)	<i>F</i> (1, 135)
Mean age of children (in years)	6.1	6.5	4.71*
Mean number of siblings	3.3	1.2	43.58***
Mean number of persons per household	6.6	4.0	83.07***
Mean duration of school attendance (in years)			
Mother	6.9	12.4	115.17***
Father	6.2	12.4	81.22***
			$\chi^2_{(4, N = 136)}$
Percentage of female children	56.9%	55.4%	.17
Percentage of children attending school (including pre-school or kindergarten)	89.8%	100%	6.84*
Percentage of children with experience as babysitter	100%	20.3%	91.38***

Note. * $p < .05$; ** $p < .01$; *** $p < .001$.

3.2 Recruitment and procedure

3.2.1 Recruitment of the Nso sample

The Nso children were recruited via health centers. First of all, local authorities of the village were asked for permission to conduct the study. Then nurses or community workers contacted the families with children of the respective age or gave us the names and addresses of these children. Household heads and mothers were informed about

the study; they were told that we were interested to learn what children know about infant care and child rearing. When they had agreed to the participation of the child, mother and child came to the health center or a private home, where the interview with the child and an interview with the mother concerning the sociodemographic background were conducted. All families that were asked took part in the study. Only one child was too shy and did not answer our questions, although the family had agreed to the child's participation.

3.2.2 Recruitment of the German sample

The recruitment of the German children took place in schools and kindergartens. First of all, the principal was asked, and, in the case of primary schools, a research proposal was sent to the education authority. In case of a positive response, the parents of the potential participants were contacted via letters explaining the study. The parents were informed that we were interested in children's ideas and beliefs about infant care and good parenting. They were asked to resend the signed form of consent and the questionnaire with sociodemographic information (see Appendix 1). Children, of whom both documents were present, were interviewed in a separate room in the school or kindergarten during their normal stay. The return rate varied greatly between 40% and 100% depending on the institution. One interview was cancelled, because the child did not want to be interviewed.

3.2.3 Procedure

The children were interviewed individually by a trained female research assistant in their respective native language, which was German in the Osnabrück sample and Lamnso in the Nso sample (see Figure 3.2). The interview consisted of two parts.



Figure 3.2: Interview setting with a German girl

In the first part, five picture cards were shown to the child. The use of pictures or other materials has been recommended for interviews with children of that age in order to illustrate the topic and stimulate the narration (Krüger & Grunert, 2001). The cards portrayed other children from the respective cultural background interacting with a baby (see Figure 3.3). The pictures were chosen to represent five of the parenting systems—primary care, body contact, body stimulation, object stimulation, and face-to-face interaction—all of which are specified in the component model of parenting (cf. chapter 2.2.2.1). Because it is not possible to display the “narrative envelope” adequately in a picture, this sixth system was left out. From the five pictures, the child was asked to choose the one that represented the best care for a baby or that showed the most important behavior towards a baby. It was then probed why the child thought that this was the best way of caring for a small baby. All cards were successively discussed in that way. This picture card interview method has already been used successfully in the assessment of maternal and grandmaternal ethnotheories of German and Nso women (Lamm, Keller, Yovsi, & Chaudhary, 2008).



Figure 3.3a: Nso set of picture cards

The second part of the interview followed a semi-structured manual (see Appendices 3 & 4). It was asked for general aspects concerning babysitting (e.g., what a babysitter needs to learn before starting that task or what a baby should learn from the babysitter) as well as for potential behavior in specific care situations (e.g., when the baby is crying or when the babysitter would like to play with his or her friends instead of

babysitting). Questions were always introduced in a way that facilitated reference to the child's own experiences. It seemed necessary that children were allowed to speak about concrete situations, since the interview task would otherwise not have met the abilities of children of that age (Heinzel, 2000). Answers were elaborated by following the child's argumentation and asking for further reasons.



Figure 3.3b: German set of picture cards

The duration of the interviews ranged between four and 19 minutes; on average they were 10 minutes long. The interviews were audio-recorded and transcribed verbatim. The interviews in Lamnso were translated into English by bilingual assistants.

In the Nso sample, the mothers were interviewed after the children in order to assess the sociodemographic information. This interview was fully standardized and followed the sociodemographic questionnaire (see Appendix 2). The research assistant filled in the information into the questionnaire during the conversation. This proceeding was necessary because some of the mothers were not able to read and write, and none of them was used to dealing with such questionnaires.

Within the questionnaires that assessed the socio-demographic information (see Appendices 1 & 2), the parents of both samples were also asked about their gender preferences for babysitters. In the form of a closed-ended question, parents were invited to give their opinion whether they thought that girls or boys can care better for an infant.

3.3 Measures

The transcribed or transcribed-and-translated interviews were coded using the software package Atlas.ti (Muhr, 2004).

3.3.1 Diversity of ideas

In order to operationalize the knowledge of the children, the diversity of children's ideas was measured across the whole interview. Therefore, the following coding categories were developed based on manuals for the coding of mother-child conversations about past events (e.g., Reese, Haden, & Fivush, 1993).

Elaboration: Statements that provide a unique piece of information that the child has not mentioned before were coded as elaboration. That includes comments which either move the conversation to a new aspect or add information about a particular

aspect. Negations or other phrases with a similar content, but different meaning, were also coded as elaborations.

Repetition: Statements that add no new information as they repeat a previous statement (of the child) or the gist of it or the concept mentioned in a previous statement were coded as repetition (regardless of which person is talked about; only the differentiation between I and other persons was regarded as new information and coded as elaboration). Reduplications were not coded as repetitions but rather treated as one proposition.

Off-topic talk: Talking on a meta-level or not directly related to the questions was coded as off-topic. Talking about themes unrelated to the content of the pictures and mainly talking about the process of making a choice was also included in this category.

Coding units were complete propositions defined by unique or implied verbs (not auxiliary verbs) in independent clauses. Codes were mutually exclusive. Incomplete propositions, question tags, I-statement introductions, or yes/no-answers were considered as unclassifiable utterances and not coded.

In order to calculate inter-rater reliability, 15% of the interviews from both cultural communities were coded independently by two different coders. The inter-rater agreement for the identification of propositions averaged 91% (consistently coded propositions divided by the sum of consistently coded propositions and non-consistently coded propositions). Cohen's Kappa (Cohen, 1960) was calculated as a measure of agreement and ranged between $\kappa = .77$ and 1. The average agreement for the Nso interviews was $\kappa = .89$, and for the German interviews it was $\kappa = .80$.

As measures of children's knowledge about infant care, scores were calculated, which are independent of the number of spoken words because the length of the interviews varied. The frequencies of elaborations, repetitions, and off-topic talk were divided by the number of spoken words.

3.3.2 Coding of the picture card interview

During the interview it was noted which picture card was chosen first, which second and so on. The order of picture cards gave information about the importance given to the respective parenting system by the child.

Furthermore, the mentioning of the parenting systems and interactional mechanisms (cf. chapter 2.2.2.1) in the interview was assessed. The coding manual had been developed in cross-cultural studies on mothers' parenting ethnotheories (Keller, 2007a). The categories, their definitions, and coding examples are presented in Table 3.2.

Inter-rater reliability was calculated on the basis of 10 interviews from both cultural communities analyzed by two different coders. To obtain a coefficient of agreement, Cohen's Kappa was calculated (Cohen, 1960). The overall agreement for the Nso interviews resulted in $\kappa = .84$. For the German interviews the agreement ranged between $\kappa = .69$ and $.80$. Therefore, all German interviews were coded by two coders independently, and, afterwards, disagreements were discussed and resolved together.

Since the length of the interviews varied greatly between the children and the absolute number of mentioned categories varied also, percentage scores were used for further statistical analyses. The frequency of each category was divided by the total number of codings in order to calculate these scores.

Table 3.2*Coding of the Picture Card Interview*

Code name	Definition: Comments referring to...	Example
Primary care	nursing, diapering, bathing, washing, combing etc. or securing the child's health	This is nice because she is swaddling the baby.
Body contact	mode and extent of body contact and expression of bodily warmth	She is carrying the baby on the lap.
Body stimulation	motor exercises, motor handling, and massaging	She has lifted the baby up.
Object stimulation	objects and object exploration	The girl is giving the baby a rattle.
Face-to-face interaction	the facial system and vis-a-vis facial behavior	They're looking at each other's faces.
Narrative envelope	vocal stimulation through the caregiver (talking, singing, naming) and vocal interaction between caregiver and infant	She is saying something to the baby.
Negative emotions	negative emotions or emotional states, behavior of the caregiver regulating or preventing infant distress	Then he will no longer be crying.
Positive emotions	positive emotions and emotional states of the baby, thereby emphasizing the importance of positive affect and emotionality	Then the baby will be happy.
Distal warmth	positive emotion or the emotional expression of behavior toward the infant (also affective sharing)	The sister is fond of the baby.
Contingency	the temporal aspect of caregiving behavior toward the infant's signals	(code did not occur)
Exclusive attention	concentration of attention toward the baby	They are looking after the baby.

3.3.3 Content analysis

A quantitative content analysis was conducted in order to analyze the second part of the interview. In doing so, the codes were developed from the material. During several turns, the categories were gradually abstracted from the original interview text. First of all, each answer was described by a keyword. Then, keywords that were related to similar aspects were combined. Therefore, pairs of coders discussed the meaning while repeatedly relating to the original formulation of the answer. This procedure of abstraction and aggregation was repeated until a reasonable number of different codes remained for each question. The following example (see Table 3.3) serves to illustrate the procedure. In the first column of the table, the children's answers in their original formulations are documented. In the second column, the assigned keywords are presented, and, in the following columns, the categories resulting from the abstraction and aggregation are shown. Whereas "wants food," "is hungry," and "wants breast milk" were integrated into the category "hunger" in one step, two steps of aggregation were needed to build the category "illness/pains" from "downfall," "insect bite," "stomach ache," and "fever."

The answers of each question were analyzed separately in that way. The justifications for the inquiries were coded analogously across the whole interview.

Table 3.3*Coding example from the question “Why do babies cry?”*

Answer of the child	Keyword	first step aggregation	second step aggregation
Then he has fallen on the ground.	downfall	bodily harm	illness/pains
Because he has fallen down from the bed.	downfall		
Something usually bites him.	insect bite		
That his stomach is aching.	stomach ache	ache	
It is a fever that makes him cry.	fever	illness	
That they should give him food.	wants food	hunger	
When he is hungry he cries.	is hungry		
Then he wants to suck the breast milk.	wants breast milk		

3.4 Data analysis

Mainly, two kinds of analyses were conducted. Measures that met the demands of interval scales were analyzed using MANOVA techniques whereas nonparametric tests were used to analyze nominal or ordinal variables.

One MANOVA with cultural community, age group, and gender as independent variables tested the effects on the scores measuring the diversity of children’s ideas (elaboration, repetition, and off-topic talk) as dependent measures. A second 2 (cultural community) x 2 (age group) x 2 (gender) MANOVA was used to analyze the effects on

the parenting systems and interactional mechanisms scores. The main- and interaction-effects of these MANOVAs will be reported separately in the context of the respective hypothesis. A third MANOVA with only one independent was conducted to test the cultural differences with respect to the justifications of children's ideas.

The hypothesized cultural or gender differences with respect to the questions from the semi-structured part of the interview or the parent's questionnaire were tested using Chi-square significance tests or Fisher's exact test in order to examine the association of rows and columns of the frequency tables.

The differences between the children of the two cultural communities concerning the picture card choices were analyzed by means of the Mann-Whitney U test.

4. RESULTS

In the first part of the results paragraph, some general results will be described, and, in the second part, the results of the hypotheses testing will be presented.

4.1 General results

The children spoke on average 341 words during the interview. The length of the interviews was neither influenced by the age of the participant nor by the gender. However, German interviews were longer than Nso interviews (see Table 4.1). Therefore, a ratio score was calculated as a measure of elaborateness and repetitiveness in the following analyses. The number of elaborations and repetitions were divided by the number of spoken words.

Although the German interviews were longer, the Nso children mentioned more coding categories in the picture card interview than the German children (see Table 4.1). Because of this difference in the total number of codings, a percentage score was calculated for the following analysis. The frequency of each coding category was divided by the total number of codings. Two German children did not refer to any parenting system or interactional mechanism. Therefore, the German sample was reduced to 62 children in the following analysis.

Table 4.1*General descriptions of the Nso and German interviews*

	Nso, Cameroon (N=72)		Osnabrück, Germany (N=64)		<i>F</i> (1, 128)	η^2
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)		
Number of words	307.6	92.2	377.8	212.4	5.79*	.04
Number of codings in the picture card interview	13.4	4.4	5.2	3.0	144.14***	.53
Frequency of off-topic talk	11.2	3.7	11.4	7.5	.10	
Elaboration score	.10	.02	.11	.03	.59	
Repetition score	.05	.01	.02	.01	119.15***	.48
Number of given reasons	5.2	1.2	4.2	2.3	11.78**	.08

Note. 2-level (cultural community) ANOVAs. η^2 = partial eta-square.

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

However, the German children did not talk off-topic more frequently than the Nso children (see Table 4.1). Thus, the German children answered the questions of the interviewers and talked about their ideas about babies and their care. But the expression of their ideas differed markedly from the Nso interviews. Whereas Nso children talked about concrete caregiving behavior and direct consequences for the baby, the German children often explained consequences of the baby's behavior on themselves or argued in a more general sense. The following two examples from interviews are meant to illustrate this difference*.

* I = interviewer, C = child (here and in all following excerpts)

C: She has carried the baby on the back.

I: Why is it good to be carrying the baby on the back Ber?

C: Because when the mother goes to the farm and he is crying, they will then carry him on the back and soothe him.

I: So when you back-carry him when the mother is not around, he will no longer be crying?

C: Yes

I: Why is it not good for the baby to be crying Ber?

C: Because then he will be coughing and then he will have nose bleeding.

(Nso boy, six years old)

I: What is most important, if you care for a baby?

C: To give something to drink, to give something to eat and to change the diapers.

I: And why is all that important?

C: Because otherwise, otherwise—eating and drinking is the most important. I do it also, and she cannot do it on her own; therefore, therefore—she cannot do it. And, therefore, one needs to give her something to eat and to drink also, but one also needs to change diapers; otherwise, she stinks.

(German girl, seven years old)

The elaborateness of the Nso and German children did not differ (see Table 4.1). Children of both communities mentioned an equal number of different caregiving behaviors. Thus, there was no difference in the knowledge concerning babies and their care between the children of the two cultural communities. However, there was an amazing difference in the style of talking, since the Nso children used significantly more repetitions than the German children.

Furthermore, the Nso children gave more explanations about why a certain care activity was important (see Table 4.1). It can not be excluded that different interview styles in the two samples produced this difference. It could be possible that the Nso interviewer more frequently asked for reasons or insisted more on explanations. However, the cultural community x gender interaction also showed a significant effect,

$F(1, 128) = 5.36, p < .05, \eta^2 = .04$. Subsequent t-tests revealed that German boys gave fewer reasons than Nso boys, $t(44.78) = 4.28, p < .001$, but girls of the two samples did not differ concerning the number of given reasons, $t(47.68) = .74, p > .05$. Nevertheless, for the following analysis of children's argumentations, a score was calculated that controlled for the total number of given reasons. Since two German children did not give any reason for the preferred behavior, the German sample was reduced to 62 children in the following analysis.

4.2 Cultural differences

4.2.1 Best babysitter

As expected, the children of the two cultural communities differed significantly in their evaluation of the best caregiver for a baby (see Figure 4.1). Whereas the majority of the Nso children named themselves as best babysitter, more than half of the German children said that the mother can care for a baby best. Fathers or adults in general were never mentioned by the Nso children. Fisher's exact tests (Preacher & Briggs, 2001) confirmed that German children mentioned mother and father more often as best caregiver than Nso children, $p < .001$ (one-tailed), and Nso children held that children are the best babysitters more often than German children, $p < .001$ (one-tailed).

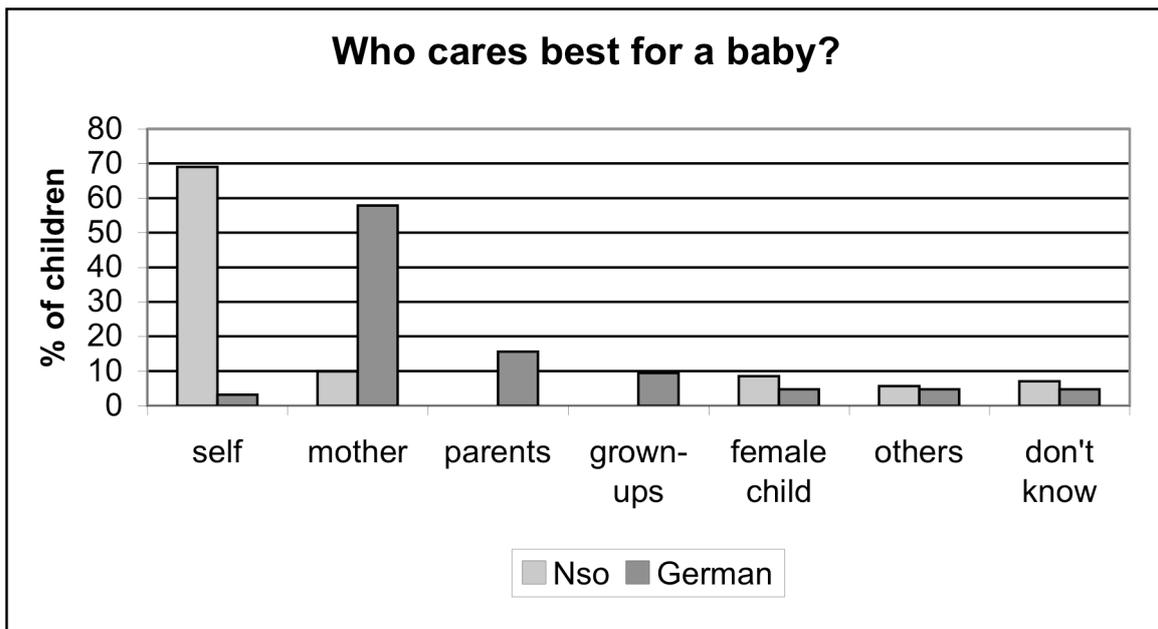


Figure 4.1: Percentage of children that mentioned the respective person(s) as best caregiver for a baby
 Note. $\chi^2(6, N = 135) = 81.27, p < .001$.

The answers to the question of why a certain person is the best caregiver for a baby revealed that the German and Nso children applied different sets of criteria for their decisions. Nearly 80% of the Nso children referred to concrete activities in interaction with the baby (e.g., playing, the way of carrying, or soothing). For the German children, on the other hand, a good caregiver was composed of knowledge and experience (31%); parenthood (22%); and personal characteristics of the caregiver (20%), such as being tall but also having a sense of responsibility.

4.2.2 Socialization goals

The results concerning the socialization goals expressed by the children are presented in Figure 4.2. Nearly half of the German children said that they can teach a baby how to walk, crawl, stand up, or sit, but only 11% of the Nso children mentioned such motor skills. Nso children most frequently answered that they could teach a baby how to play, which was not further specified. For the German children, this was also the

second most frequent answer, but, in the majority of cases, they talked about playing in the context of mastery of toys or objects. Cognitive skills, language abilities (e.g., talking, writing, counting), and eating were equally mentioned by children from both cultural communities. Amazing cultural differences were found concerning the teaching of household tasks, which was indicated by nearly 25% of the Nso children, but never mentioned by a German child. On the other hand, no Nso child talked about teaching conventions, but about 20% of the German children explained that they would like to teach a baby how to behave correctly (e.g., not to be aggressive, not to destroy things, or not to take away toys). About 10% of the German children did not give an answer that could be coded, but declared that they would not know what they could teach a baby.

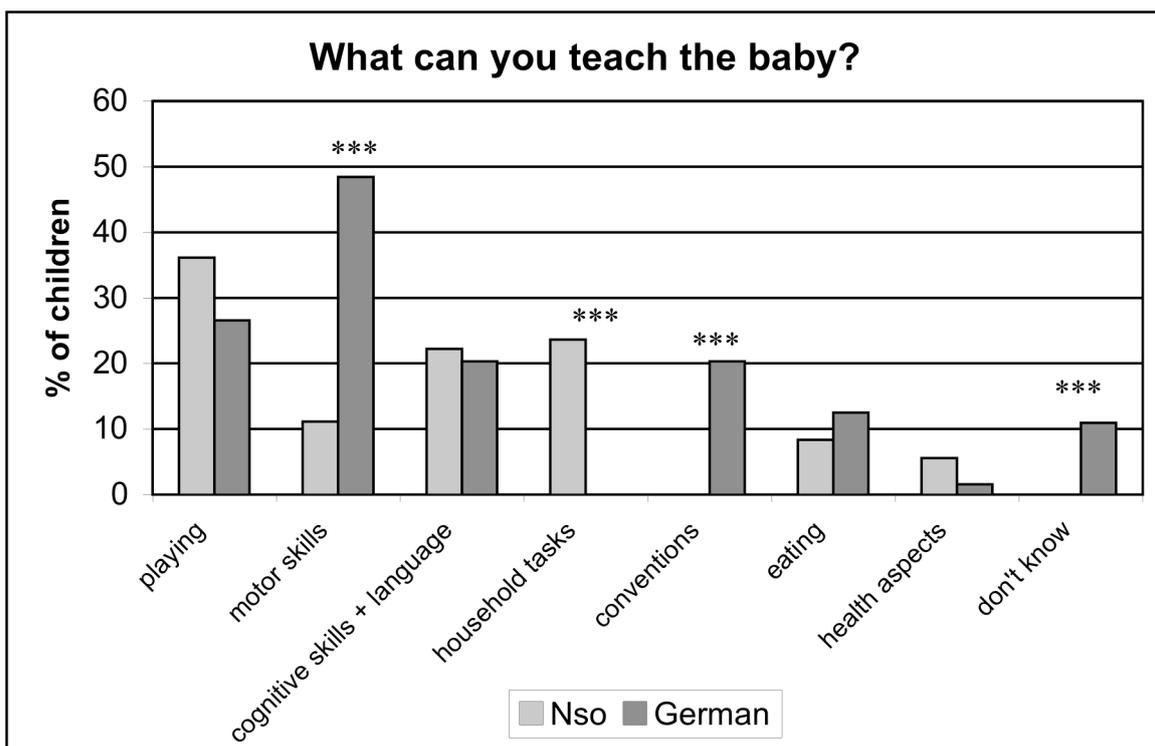


Figure 4.2: Percentage of children that mentioned the respective educational goals (multiple answers were possible) with results of Fisher's exact test
 Note. *** $p < .001$.

4.2.3 Caregiving strategies

The first choices of pictures in the picture card interview differed significantly between the two cultural communities (see Figure 4.3). Whereas nearly half of the Nso children chose the body contact picture first (compared to 6% in the German group), one third of the German children thought that the picture showing object play represented the best care for an infant (but only 3% of the Nso children).

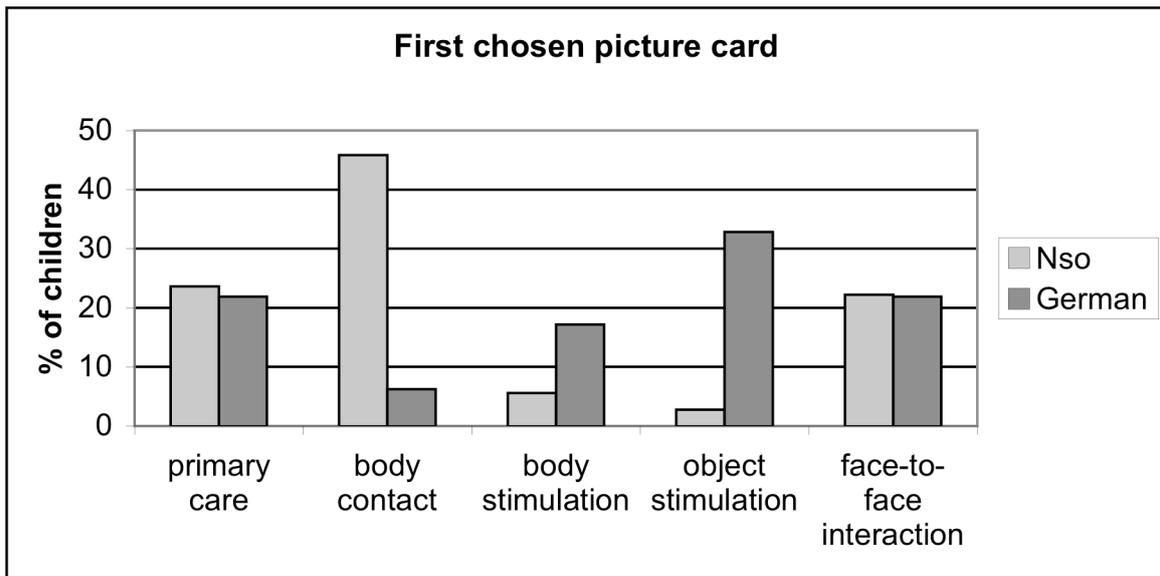


Figure 4.3: Patterns of first choices in the picture card interview

Note. $\chi^2(4, N = 136) = 41.79, p < .001$.

Considering the whole ranking of the picture cards, Mann-Whitney-U tests revealed that the Nso children preferred the pictures representing primary care and body contact more than the German children, who evaluated the pictures showing object stimulation and body stimulation better than the Nso children (see Table 4.2). With respect to the face-to-face picture, there was no difference between the children of the two cultural communities.

Table 4.2*Results of the card choices in the picture card interviews*

	Nso, Cameroon (N=72)	Osnabrück, Germany (N=64)	
	<i>Mean rank</i>	<i>Mean rank</i>	<i>Z</i>
Primary care	59.04	79.14	-3.04**
Body contact	50.06	87.90	-5.76***
Body stimulation	75.75	59.41	-2.53*
Object stimulation	90.49	44.48	-7.03***
Face-to-face interaction	63.53	72.96	-1.44

Note. Mann-Whitney-U test.* $p < .05$, ** $p < .01$, *** $p < .001$.

The MANOVA comparing the parenting behaviors mentioned in the picture card interview revealed a significant main effect for cultural community, $F(10, 117) = 26.43$, $p < .001$, $\eta^2 = .69$. As expected, the German children focused more on object stimulation, face-to-face interaction, and exclusive attention than the Nso children (see Table 4.3). The narrative envelope was only mentioned by two children, but these two were German. The Nso children talked more often about negative emotions and their regulation or prevention than the German children. Concerning body contact, body stimulation, and positive emotions, there were no differences between the children of the two cultural communities. Against the expectation, primary care was mentioned more frequently by the German children than by the Nso children.

Table 4.3*Results of the coding of the picture card interviews*

	Nso, Cameroon (N=72)		Osnabrück, Germany (N=62)			
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>F</i> (1, 126)	η^2
<i>Parenting systems</i>						
Primary care	.09	(.12)	.27	(.18)	49.18***	.28
Body contact	.21	(.10)	.23	(.21)	.25	
Body stimulation	.08	(.09)	.11	(.13)	1.02	
Object stimulation	.08	(.06)	.20	(.18)	29.26***	.19
Face-to-face interaction	.00	(.00)	.03	(.06)	13.32***	.10
Narrative envelope	.00	(.00)	.00	(.03)	.73	
<i>Interactional mechanisms</i>						
Negative emotions	.45	(.16)	.14	(.23)	83.09***	.40
Positive emotions	.08	(.09)	.09	(.21)	.02	
Warmth	.00	(.01)	.04	(.10)	9.11**	.07
Exclusive attention	.01	(.02)	.03	(.09)	4.37*	.03

Note. 2-level (cultural community) ANOVAs. η^2 = partial eta-square.

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

These results were confirmed in the second part of the interview. Answering the question, what is most important, when caring for a baby, 72% of the German children mentioned that it was to attend to the basic physical needs of the baby compared to 8%

of the Nso children. Fisher's exact test revealed a highly significant difference in the frequencies, $p < .001$ (one-tailed). Thus, the following example of an eight year-old German girl represents a typical German answer:

C: That the baby gets enough fodder, thus something to eat.

I: Yes?

C: And that, that one also changes the diapers, that the baby is car--cared well for. And it's good care. That's what I like.

I: Why do you think it is important that one cares well for the baby, that she gets good care?

C: Because, because she can fall ill. And we want – I don't want that, that somebody falls ill or something.

For the Nso children, on the other hand, the most important aspect of caregiving was playing, which was referred to by 74% of the Nso children, but only 23% of the German children. Again, Fisher's exact test revealed a highly significant difference in the frequencies, $p < .001$ (one-tailed). Playing and making the baby smile were used synonymously by the children, and both were seen as prevention of infant crying, which was the main goal of caregiving. The following example from the interview with a five year-old Nso boy illustrates the typical Nso argumentation.

C: The baby and I usually play, and I make him smile.

I: And you make him smile?

C: Yes

I: Why?

C: Because we play.

I: Why do you play with him?

C: So that he won't cry.

Since the differences between the children of the two cultural communities were mostly accentuated with respect to negative emotions, it was analyzed in the second

part of the interview how the children explained infant crying and what strategies they suggested against infant crying. These analyses revealed cross-cultural differences as well (see Figures 4.4 and 4.5). More than half of the German children thought that hunger is a reason why babies cry, but only 18% of the Nso children thought the same. Other popular explanations for the German children were that the diaper is soiled, that the baby needs a pacifier, or that the baby feels anger or fear. These reasons were never mentioned by the Nso children. Children of both cultural communities referred likewise to pains or an illness of the baby as well as the baby's stubbornness or tiredness. For the Nso children, the baby's need for body contact or the baby's loneliness were more relevant explanations for their crying than for German children. Whereas 6% of the German children had no idea why infants cry, 15% of the Nso children were of the opinion that babies cry without any reason.

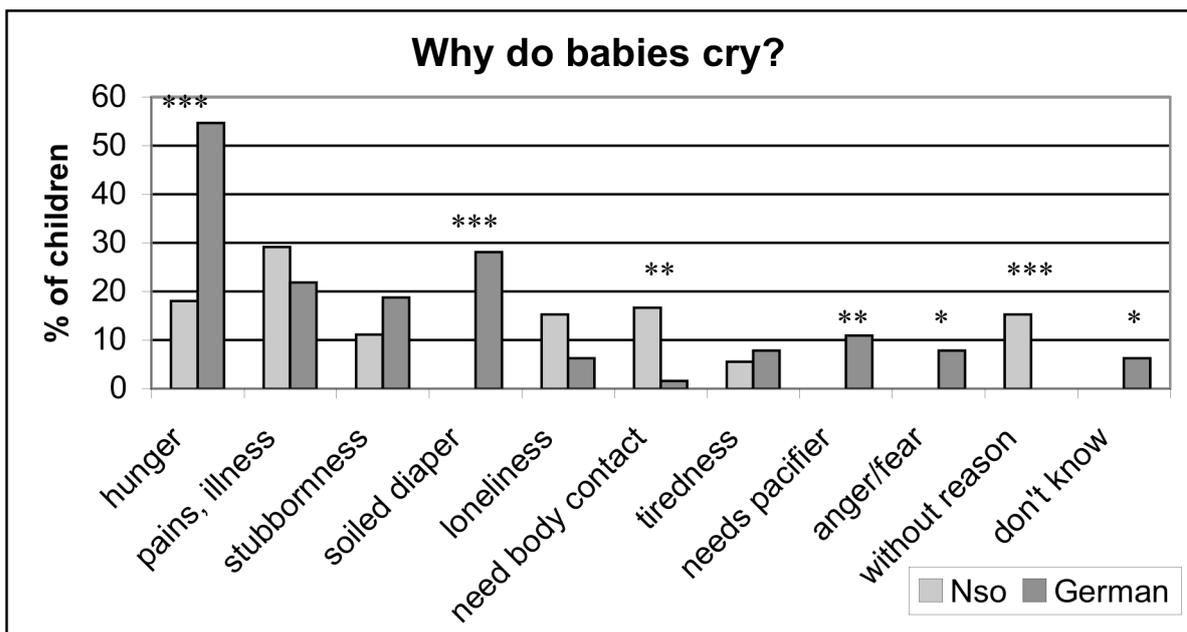


Figure 4.4: Percentage of children that mentioned the respective reason for infant crying (multiple answers were possible) with results of Fisher's exact test
 Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

According to the differing explanations about why babies cry, the suggested reactions to the crying also differed markedly (see Figure 4.5). The typical answer of a Nso child was like this: *“Then they would carry him on the back and move around and soothe him.”* (5-year-old Nso boy). Thus, more than half of the Nso children mentioned that a crying baby needs to be taken and carried on the back or lap. In addition, nearly 30% of the Nso children proposed to rock the baby and nearly 20% suggested calling the mother. The typical German strategy to react to infant crying was the following: *“Then I would make another bottle and then change the diapers and then give the baby the pacifier.”* (5-year-old German girl). These most popular interventions suggested by the German children—feeding, giving a pacifier, changing diapers, and laying the baby down—were never mentioned by the Nso children. More often than the Nso children, the German children also recommended amusing the crying baby with playing or talking.

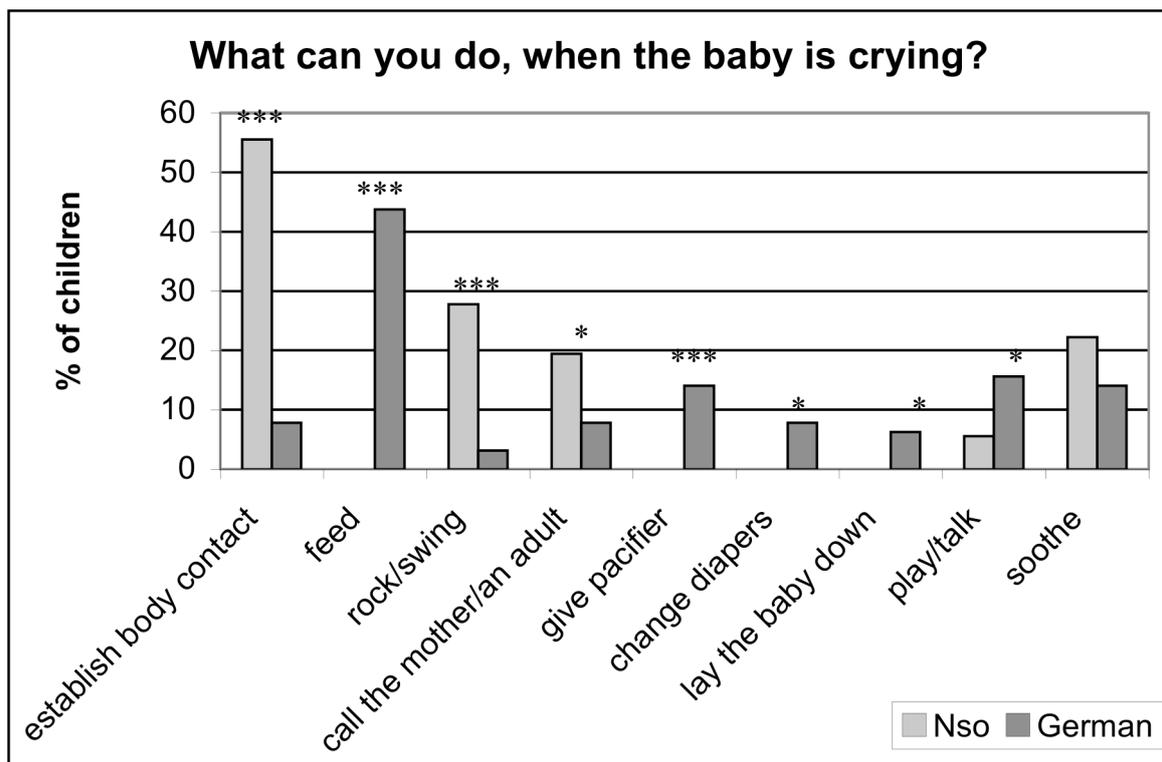


Figure 4.5: Percentage of children that mentioned the respective intervention for infant crying (multiple answers were possible) with results of Fisher’s exact test
 Note. * $p < .05$, *** $p < .001$.

4.2.4 Organization of caregiving and other activities

It was expected that Nso children see caregiving as an activity that occurs in addition to other activities. Thus, 10% of the Nso children referred spontaneously to the fact that it is important to get done household tasks (e.g., fetching water or fire wood) at the same time as caring for a baby. Since German children never mentioned co-occurring activities, Fisher's exact test revealed a significant difference, $p < .05$ (one-tailed).

When asked how they would solve the problem that they have to care for a baby but would rather do something else, like playing with friends, the children of the two cultural communities answered quite differently (see Figure 4.6). Whereas the majority of the Nso children (71%) decided to care for the baby while simultaneously playing, only 20% of the German children decided the same. But, to the same degree, the German children chose to exclusively care for the baby or exclusively play without caring for the baby.

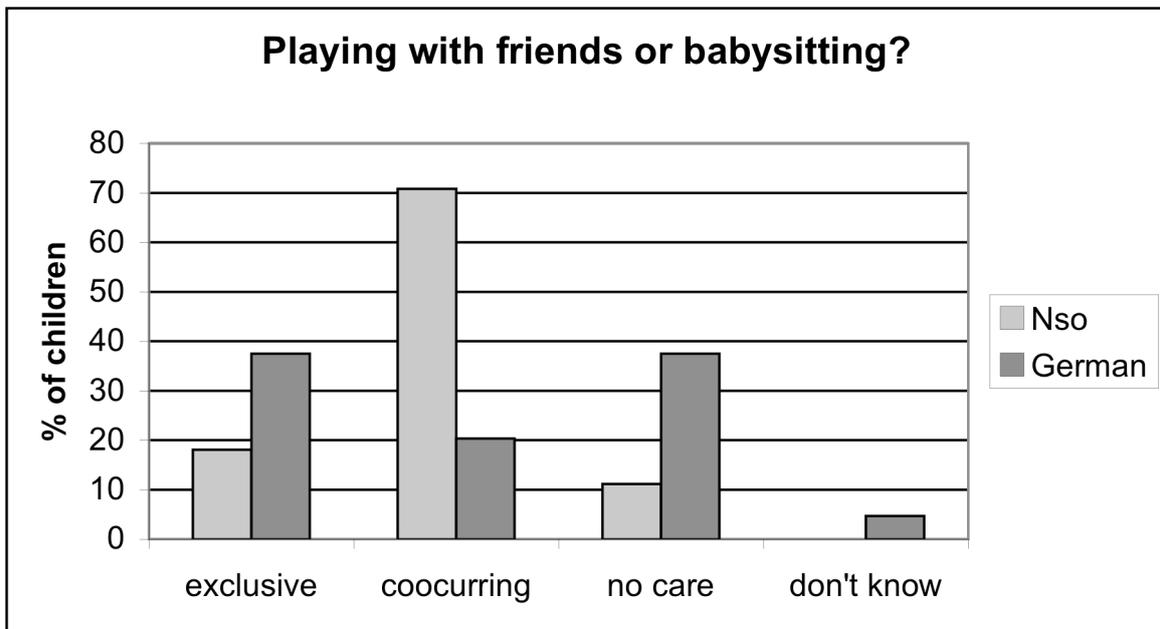


Figure 4.6: Percentage of children that decided for each possibility
Note. $\chi^2(3, N = 136) = 36.49, p < .001$.

4.2.5 Justification of ideas about caregiving

The MANOVA comparing the argumentation of the children revealed significant differences between the two cultural communities, $F(3, 130) = 31.63, p < .001, \eta^2 = .42$.

Table 4.4

Reasoning of the Nso and German children in the interviews

	Nso, Cameroon (N=72)		Osnabrück, Germany (N=62)		$F(1, 132)$	η^2
	M	(SD)	M	(SD)		
Argumentation based on						
own interests	.02	(.06)	.18	(.23)	34.08***	.21
mother's interests	.02	(.08)	.06	(.16)	2.95 ⁺	.02
baby's interests	.96	(.11)	.61	(.29)	90.60***	.41
		(N=72)		(N=58)	$F(1, 128)$	
baby's needs	.25	(.23)	.66	(.35)	66.15***	.34
baby's skills	.09	(.11)	.05	(.17)	2.45	
baby's positive emotions	.02	(.08)	.04	(.11)	.45	
baby's negative emotions	.63	(.27)	.25	(.32)	55.65***	.30

Note. 2-level (cultural community) ANOVAs. η^2 = partial eta-square.

⁺ $p < .1$, *** $p < .001$.

As expected, the Nso children were more orientated towards the baby than the German children (see Table 4.4). But, as in the following example of a five year-old girl,

the German children mentioned their own needs or preferences more frequently than the Nso children.

I: And why do you think this is most important that you soothe the baby if the baby is crying?

C: Because then it is too loud, if the baby is crying always all the time.

I: And why is it not good if the baby is loud when she is crying all the time?

C: Because it is too stressf--... ehm, because it is too loud. My ears break down if it is too loud in the ears.

If the Nso children referred to themselves, then it was only in the context of avoiding punishment for insufficient care.

Contrary to expectation, the Nso children did not explicitly refer to the community in their reasoning, but the German children also did not do so. However, although the frequency of references to the mother differed only marginally, there were qualitative differences. Whereas the Nso children talked about “*not [to] be disturbing the mother*” so that she “*can cook food*” or “*perform her chores,*” the German children mentioned that the parents also need leisure time.

Since the majority of reasons from the children of both cultural communities were orientated towards the baby, these arguments were further analyzed. Nevertheless, four German children never referred to the baby’s interests in their argumentation. Therefore, the German sample reduced to 58 children in the following analysis. A MANOVA showed significant cultural differences, $F(3, 126) = 22.95$, $p < .001$, $\eta^2 = .35$. The univariate analyses (see Table 4.4) revealed that the German children mentioned physical needs of the baby more often than the Nso children, who referred to negative emotions of the baby more frequently than the German children. The prototypical argumentation of the Nso children centers on the sentence “*So that the baby won’t cry.*” Independent of the initial questions, the children come again and again to that point.

4.3 Age effects

4.3.1 Age and knowledge about child care

As expected, the knowledge about childcare was influenced by the age of the children. A MANOVA revealed a significant main effect for age group, $F(3, 126) = 7.07$, $p < .001$, $\eta^2 = .14$. Univariate analyses manifested that those children older than six years mentioned more different caregiving behaviors than younger children (see Table 4.5). Furthermore, the younger children talked off-topic more frequently than the older children, but the repetitiveness did not differ between the children of the two age groups.

Table 4.5

Elaborateness of the younger and older children

	4- to 6-year-olds (N=73)		7- to 8-year-olds (N=63)		$F(1, 128)$	η^2
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>		
elaboration score	.10	.02	.11	.02	5.00*	.04
repetition score	.04	.02	.04	.02	2.00	
off-topic score	.04	.02	.03	.02	13.50***	.10

Note. 2-level (age) ANOVAs. η^2 = partial eta-square.
* $p < .05$, *** $p < .001$.

4.3.2 Age and cultural pattern

The expectation that older children adopt the community-specific cultural model of child rearing more strongly than younger children refers to the age group x cultural community interaction. This interaction effect was only marginally significant in the multivariate analysis, $F(10, 117) = 1.72$, $p < .09$, $\eta^2 = .13$. Univariate analyses revealed only for body contact (see Figure 4.7) a significant interaction, $F(1, 126) = 8.45$, $p < .01$,

$\eta^2 = .06$. Whereas older Nso children focused more on body contact than younger Nso children, $t(70) = -2.71, p < .01$, German children showed a decrease in the emphasis given to body contact with increasing age, $t(60) = 1.94, p < .06$.

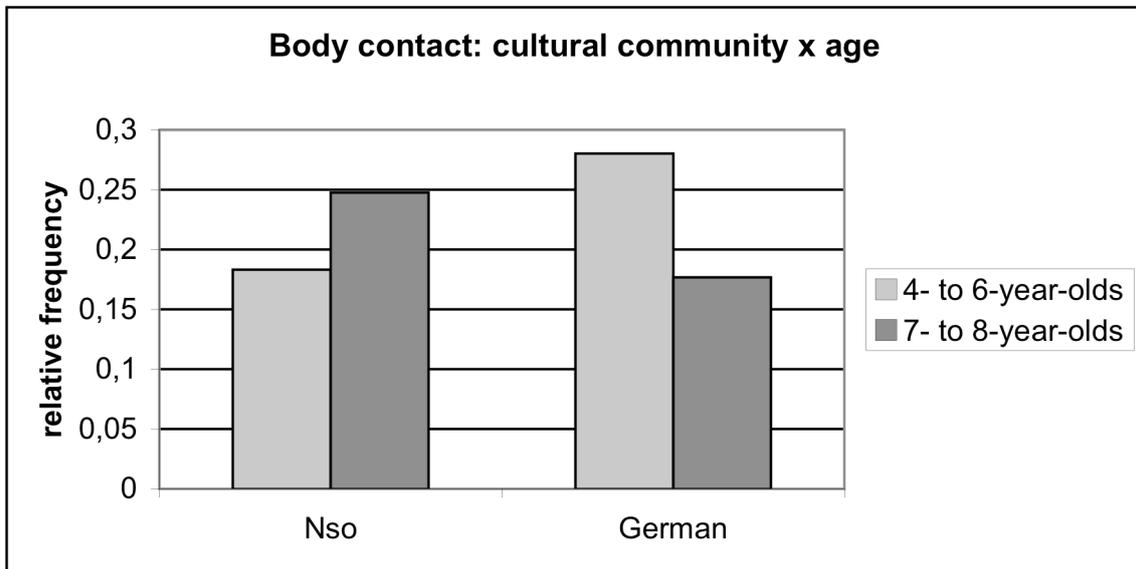


Figure 4.7: Relative frequency of the code "body contact" in the picture card interview

4.4 Gender differences

4.4.1 Gender and knowledge about child care

As expected, there was no significant main effect for gender with respect to the elaborateness in the interviews, $F(1, 128) = .45, p > .05$. Hence, boys and girls did not differ concerning their elaboration score ($M = .11, SD = .02$ and $M = .11, SD = .02$ respectively). Children of both genders formulated an equal number of different ideas about caregiving and demonstrated thusly the same level of knowledge about babies and their care.

4.4.2 Gender preferences for a babysitter

As expected, the majority of parents (60%) were of the opinion that girls are better babysitters than boys (see Figure 4.8). Only 6% of the parents preferred boys, but 34% of the parents said that boys and girls are similarly able to care for an infant, although this answer was not proposed in the questionnaire. However, the cultural background of the parents had also an effect on their answer, $\chi^2(2, N = 110) = 29.93, p < .001$. Whereas the preference for girls was much stronger among the Nso parents (77%), the majority (57%) of German parents gave the politically correct answer that children of both genders can care for a baby equally well. Nevertheless, the remaining 43% of the German parents also preferred girls, and there was not a single case where boys were preferred. The reason for their respective preferences differed between the Nso and German parents. The Nso parents referred to concrete behavior of the children and focused especially on carrying the baby and playing with the baby. The German parents, on the other hand, argued more in an abstract manner. They mentioned the interest in babies and the socialization by the parents as particularly important for a good babysitter. The German parents who preferred girls also noted the maternal instinct as well as role expectations and imitation of the mother.

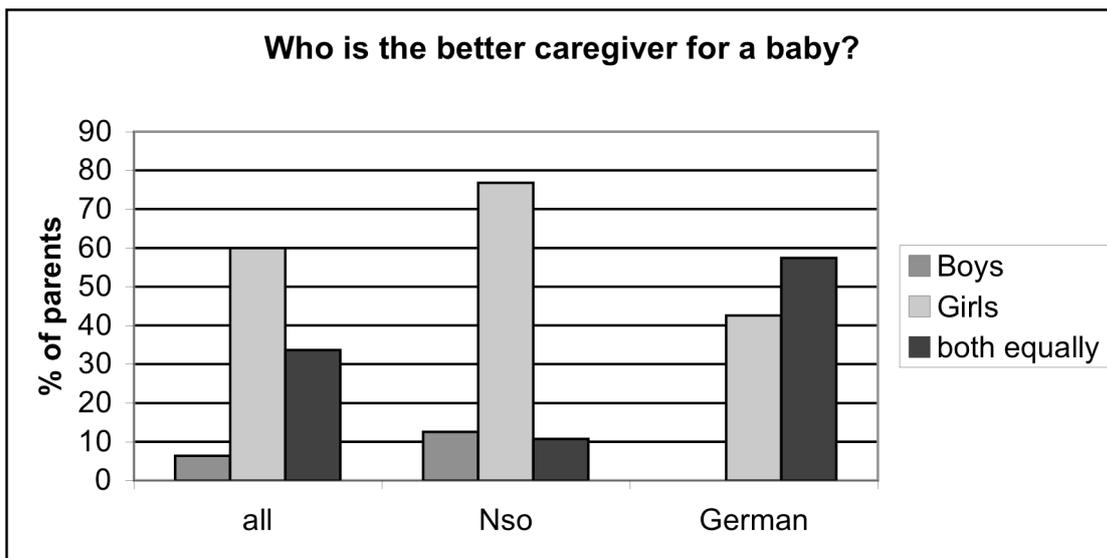


Figure 4.8: Percentage of parents who preferred boys or girls as babysitters

For the Nso parents, the gender preference was also influenced by the gender of their own babysitters, $\chi^2(4, N = 56) = 9.73, p < .05$. Nearly all parents (95%) who had only female babysitters thought that girls can care better for babies than boys. Still, 72% of the parents who had babysitters of both genders expressed the preference for girls, and even half of the parents who had only male babysitters preferred girls.

4.4.3 Gender and content of ideas about child care

The MANOVA comparing the parenting behaviors mentioned in the picture card interview revealed a significant main effect for gender, $F(10, 117) = 3.05, p < .01, \eta^2 = .21$. Girls focused more on positive as well as negative emotions of the baby than boys (see Table 4.6).

Table 4.6

Parenting systems and interactional mechanisms mentioned in the picture card interviews by boys and girls

	Girls (N=77)		Boys (N=57)		<i>F</i> (1, 126)	η^2
	<i>M</i>	(<i>SD</i>)	<i>M</i>	(<i>SD</i>)		
<i>Parenting systems</i>						
Primary care	.18	(.19)	.17	(.16)	.06	
Body contact	.21	(.14)	.23	(.19)	.09	
Body stimulation	.08	(.11)	.11	(.12)	.57	
Object stimulation	.10	(.11)	.18	(.17)	15.69***	.11
Face-to-face interaction	.01	(.04)	.01	(.05)	.01	
Narrative envelope	.00	(.02)	.00	(.00)	.73	
<i>Interactional mechanisms</i>						
Negative emotions	.34	(.24)	.25	(.25)	5.13*	.04
Positive emotions	.11	(.19)	.05	(.09)	5.01*	.04
Warmth	.02	(.08)	.01	(.05)	1.75	
Exclusive attention	.02	(.05)	.02	(.08)	.28	

Note. 2-level (gender) ANOVAs. η^2 = partial eta-square.

* $p < .05$, *** $p < .001$.

Boys talked more frequently about object play than girls. However, there was a significant gender x cultural community interaction (see Figure 4.9), $F(1, 126) = 7.91$, $p < .01$, $\eta^2 = .06$. Subsequent t-tests revealed that the gender difference was only confirmed

for the German children. German boys referred more often to object stimulation than German girls, $t(60) = 3.27, p < .01$, but there was no difference between Nso boys and girls, $t(70) = 1.68, p > .05$.

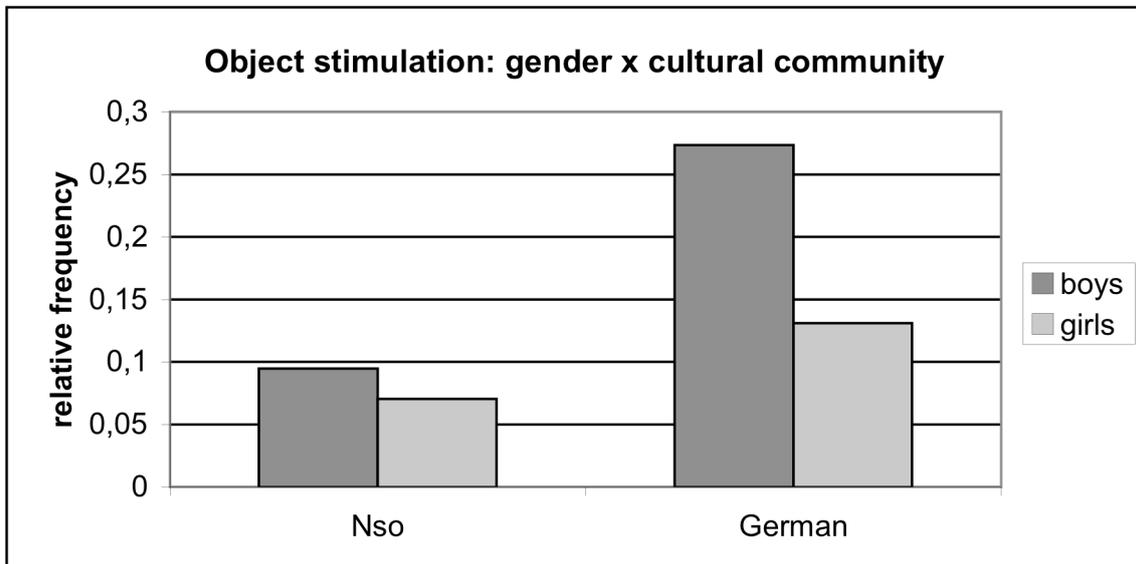


Figure 4.9: Relative frequency of the code object stimulation in the picture card interview

5. DISCUSSION

The present study was aimed at increasing the knowledge about the ontogenesis of ideas about infant care, with a special emphasis on cultural models of caregiving. In the following paragraphs, the results will be discussed with respect to the research questions. Then limitations of the study and suggestions for future research will be debated.

5.1 Cultural differences

As expected, there were differences between the children of the two cultural communities concerning their ideas about early child care. These differences were expected to be expressed in attitudes towards socialization goals, caregiving behavior, the distribution of responsibility for infant care, and the organization of child care. Overall, the results confirmed the assumption that the children follow the respective child rearing model of their cultural community (cf. Table 5.1). Their ideas were consistent with their own experiences as children who grow into the respective cultural environment. More precisely, the German children were convinced that mothers (and fathers) or other adults can care best for babies. This belief is in line with the description of German infants' everyday experiences, which revealed that 3-month-old German infants spend less than 8% of their waking time with people other than the mother (Keller, Abels et al., 2005). The Nso children, on the other hand, believed that children, especially themselves, are the best caregivers for babies. This certainly reflects the fact that all Nso children were involved in the care of a baby in their family, and it also implicates that the Nso children feel more responsible than the German children for caregiving or the wellbeing of the baby.

Table 5.1*Caregiving Model of the Nso and German Children*

	Nso	German
Main caregiver	sibling caregiver	mother
Attentional focus	co-occurring	exclusive
Socialization goals	to teach <ul style="list-style-type: none"> • how to play • household tasks • cognitive skills and language 	to teach <ul style="list-style-type: none"> • motor skills • how to play • cognitive skills and language • conventions
Caregiving strategy	<ul style="list-style-type: none"> • high sensitivity to negative signals • focus on body contact (especially in response to infant crying) • body stimulation in response to infant crying 	<ul style="list-style-type: none"> • focus on object stimulation • primary care (especially in response to infant crying) • face-to-face and vocal interaction

In line with their experiences, the Nso children preferred co-occurring care whereas the German children saw caregiving as an activity that requires exclusive attention, which supports the development of an independent self concept by the experience of being unique. Nso caregivers cannot afford to attend exclusively to the baby, because their workload forces them to carry out household chores and economic activities simultaneously. This shared or co-occurring mode of attention fosters the development of an interdependent self concept, because the babies seldom experience

being the center of attention (Keller, 2007a). On the other hand, they are never alone, and thus closeness and strong family bonds are supported.

Hence, the children's ideas concerning those contextual aspects of child care are adapted to the socio-economic requirements and are in accord with the target self concept of the respective cultural community. However, with respect to the expressed socialization goals and child rearing strategies, the children of both cultural communities also showed variations from the respective adult model of child rearing, which are discussed in the following sections.

5.1.1 Socialization goals

The main educational goals of the Nso children were to teach the baby how to play and how to perform household tasks. Furthermore, they frequently mentioned cognitive skills and language. As expected, the Nso children had the interests of the group in mind when expressing their teaching goals. Teaching the baby household tasks was aimed at preparing the baby for early participation in the performance of those chores. Teaching the baby how to play also reflected group interests, because well playing babies do not cry and disturb the mother when she is cooking or doing other household or subsistence activities. Thus, the aim of playing was for the Nso children to keep the baby quiet; the goal was not to amuse the baby or to get the baby to acquire certain skills, as is typical for the German children. The reference to cognitive skills stresses the fact that formal schooling is highly valued in the Nso community (Morelli & Verhoef, 1999), though it is also seen as profit for the group and not accepted as a means of self-enhancement or personal growth. Thus, the Nso children wanted to instill abilities in the baby that bring benefit to the community. However, they did not explicitly mention relational socialization goals like obedience, control of emotions, or care for the wellbeing of others. For Nso mothers, Keller and colleagues had reported that they agreed to those socialization goals which support interdependence (Keller, Lamm et al.,

2006; Keller, 2007a). Anyhow, this discrepancy may be due to the different methods of collecting data, as the mothers rated their agreement to the socialization goals by completing a questionnaire whereas the children answered open ended interview questions. Nevertheless, it also indicates that the Nso children's ideas are functional and pragmatic and that they do not refer to abstract conceptions.

The German children placed the main emphasis on the teaching of motor skills. They also referred to teaching how to play and teaching cognitive or language skills. Moreover, they mentioned the goal to teach conventions. The German children's educational goals were oriented by the development of individual competencies. As the independent self is defined by personal attributes, such as stable traits, but also individual capabilities, the German children emphasized the acquisition of skills for the purpose of self-enhancement. Thus, learning how to play meant to show how to manipulate objects or ride vehicles (e.g., bobby car or bicycle). Furthermore, the German children emphasized that it is very important to succeed in school. An eight-year-old German girl, who attends the second class of primary school, explained that *"the baby needs to learn this, so that he does not make a mistake, so that he does everything properly at school."* Even for the children, success in school is associated with individual occupational careers and chances for adult life.

The strong focus on motor skills by the German children was astonishing, because the focus on motor development and its acceleration characterizes the Nso model of parenting. Keller, Yovsi, and Völker (2002) reported that Nso women verbalized the developmental goal of accelerating motor growth, which is adaptive in their context. Rural Nso children, who learn to walk earlier, reduce the parental investment in terms of carrying and can furthermore participate earlier in subsistence activities of the family. Some of the children explicitly referred to this relation, as the following example of an eight-year-old Nso girl shows:

I: What are you teaching him again? What should he be doing?

[...]

C: Then I will put him so that he can crawl. Then he will be learning how to crawl.

I: He will be learning how to crawl?

C: Yes.

I: Why does the baby have to learn how to crawl or play?

C: He has to be crawling and walk faster and grow up to help his mother.

This practice of encouragement of motor development is widespread among different African ethnic groups and specific skills that are taught by the caretakers are acquired earlier than suggested by Western standards (Super, 1976). But, in the German model the importance ascribed to motor development also increases. A multitude of theoretical and practical approaches emphasizes the relation between cognitive and motor development, especially in infancy and early childhood (e.g. Zimmer, 2004). Therefore, German parents watchfully observe when their children reach certain motor milestones in comparison to peers and whether they need professional intervention in order to preserve their chances in the competition of life. However, in ethnotheory interviews, German mothers strictly disliked any kind of motor training, because they believed that the baby should take the lead and determine the developmental tempo on his or her own (Keller, 2007a).

The unexpected focus of the German children on motor skills might also reflect the fact that the upcoming developmental tasks in the domain of motor development are most obvious. Melson, Fogel, and Toda (1986) had also reported that references to motor behavior was the second most frequent category, when children were asked to describe infant characteristics. This category was mentioned by 62% of the preschoolers and second-graders and was only topped by references to the babyishness (e.g., smallness or bald head). However, the Nso children did not show this emphasis on the motor domain, which could be explained by their practical experiences with babies. For the accomplishment of their daily tasks, it is more important that the baby does not cry.

Moreover, accelerated motor development also implicates a higher risk, because it is more difficult to ensure the safety of a more mobile infant or toddler.

The reference to social conventions by the German children also formed an unexpected finding. Yet, living in a community that rests upon the basic principle of equality necessitates explicit rules that regulate the rights and duties of each society member. In the Nso community, on the other hand, the (age) hierarchy mainly regulates the living together. Therefore, German children might have more opportunities to experience the negotiation of social conventions. German children also spend more time in institutional care, such as kindergarten, school, sports club, and music school. Those contexts are also characterized by fixed rules. Furthermore, German parents often expect older children to be considerate of younger children by appealing to their understanding of social conventions. Possibly, the children want to pass these conventions on to the younger ones. However, this result might also intensify the indication that the Nso children refer to functional and pragmatic aspects of child rearing rather than to abstract rules.

5.1.2 Caregiving behavior

The results concerning the children's preferences and ideas about caregiving practices and their justifications also manifested that the German and Nso children apply different models of child rearing (cf. Table 5.1). The core of the Nso model is the strong emphasis on body contact. Furthermore, Nso children expressed an enormous sensitivity to negative infant signals. Body contact as well as body stimulation were emphasized strategies in response to infant crying. Thus, a high level of agreement between the adult Nso model of child rearing and the children's ideas has been shown. Observations of Nso babies' everyday life had revealed that 3-month-olds experienced high rates of body contact and body stimulation (Keller, Abels et al., 2005). This proximal strategy of parenting infants has been described as prototypical for rural traditional non-

Western communities (Keller, 2007a; Keller, Künsemüller et al., 2005). Moreover, this strategy is associated with the development of an interdependent self.

The German children's model focussed strongly on object stimulation, but also on primary care, especially in response to negative infant signals. Face-to-face exchange and vocal interaction were also part of the model. Hence, there are considerable parallels to the adult German model of child rearing, which has been characterized by the distal strategy of parenting (Keller, 2007a; Keller, Künsemüller et al., 2005). German infants experienced high rates of face-to-face positions, object play, and verbal reactions to their signals (Keller, 2007a); and German mothers thus fostered the development of an independent self. The German children's focus on primary care is not in line with the established adult model. However, the parenting systems as described in the component model of parenting (cf. chapter 2.2.2.1) will be considered in detail in the following. The role of playing with the baby, which is not clearly represented by a sole parenting system, and the sensitivity to negative infant signals as the most central interactional mechanism will also be discussed.

5.1.2.1 Primary care

It was expected that the Nso children would be more attentive to the primary care dimension than the German children when they talk about good care for an infant. Although the primary care picture had a higher priority in the choices of the Nso children compared to the German children, the Nso children did not address aspects of primary care more often in the interviews. In contrast, the German children talked more about the satisfaction of basic physiological needs of the baby. With respect to the picture card interview, it can be argued that the primary care pictures presented to the children of the two cultural communities differed in their stimulative nature (cf. Figure 3.3 in chapter 3.2.3). Whereas the primary care picture used for the German assessment showed a girl changing the diapers of a baby, there was a girl wiping the nose of a baby in the Nso picture. This nose wiping situation was not as obviously recognized as caregiving as the

changing table situation, which was interpreted as caregiving by all German children. However, the Nso do not use diapers and changing tables and therefore such a picture would not have been valid in their cultural environment.

The strong focus on the primary care dimension exhibited by the German children throughout the whole interview was unexpected. Previous studies that assessed parenting ethnotheories of Nso and German mothers were in line with the expectation which was derived from the differentiation between pediatric and pedagogical models of early child care (LeVine et al., 1994). Nso mothers talked more about primary care than German mothers when commenting on the presentation of videotaped mother-infant interactions from their own and the other cultural background (Keller, Völker, & Yovsi, 2005). However, when the expression of maternal ethnotheories was stimulated by picture cards as in the present study, the German and Nso mothers did not differ in the frequency of addressing primary care (Keller, 2007a).

There are several possible explanations for the German children's emphasis on the primary care dimension. To begin with, these primary care behaviors, such as diapering and feeding are self-evident. Children who observe these behaviors understand their meaning and necessity without further explanation. Therefore, children can directly absorb these aspects in their ideas about child care without a reflection of cultural values. Following up this consideration, it can be speculated that the universal parental goals as proposed by LeVine (1977) are not only organized hierarchically, but are also acquired according to a developmental sequence starting with the most obviously observable and moving to more abstract cultural values. Thus, children infer from their own experiences and learn first that the physical health and survival of a baby has to be preserved before they become aware that early child care also includes the enhancement of certain behavioral capacities for successful functioning in the respective eco-cultural environment.

However, this argumentation does not explain the differences between the German and the Nso children. Analyzing the interviews, it becomes apparent that the

German and Nso children also differ in the way they address primary care and not only in the frequencies of references to primary care. Whereas the German children mention the primary care activities as inherently important, the Nso children refer to aspects of the health or security of the baby in order to explain the relevance of the preferred behavior concerning body contact or body stimulations. The following example of a seven-year-old Nso boy illustrates this pattern:

I: Why is this one [a picture card] nice Si?

C: I cannot allow the baby to be putting something bad in his mouth and I cannot allow him to fall.

I: Then what would you do to him?

C: I would carry him on my lap.

It seems that the Nso children emphasize behaviors which they can perform and which they have to perform in their everyday life. Thus, feeding does not have priority, because the babies are usually breastfed by their mothers. Diapers are also not a part of their normal course of life. But, the caregiving children are responsible for the well-being of the baby in such a manner that they prevent the baby from falling down, from contact with fire and insects or other animals, or from putting something dirty into the mouth. They possess a repertoire of caregiving standards, which they acquired by observation of more experienced models and also through direct instruction by the mother. In contrast, the German children do not have so much practical experiences with babies. Possibly, those who have infant siblings are allowed to take part in diapering or to feed the baby a bottle, but they are never as individually responsible for a baby in the absence of the mother as the Nso children are. Therefore, the German children are not as sensitized to these hazards of life as their Nso counterparts. Their experiences are often restricted to pretend play with dolls. These play situations are in many cases also imitations of activities related to the satisfaction of physiological needs; however, dolls do not get hurt if they fall. Stimulation or interactions as described by other parenting

systems, which are assumed to be more important for German caregivers, are only rarely re-enacted, because dolls do not show the necessary initiatives.

In conclusion, the unexpected emphasis on primary care activities expressed by the German children seems to result from the different perspectives on caregiving which the German and Nso children hold. Whereas the Nso children are experienced babysitters who were explicitly trained for their job and are really in charge, the German children are rather uninvolved observers. When the obvious and observable socialization goals are learned first, the focus on primary care should decrease with increasing care experience or age. The respective age effect was not found in the present study. This might be due to the fact that the studied age range was too small. Nevertheless, the Nso children, who have more experiences in infant care, talked less about primary care. Hence, the possible role of experience gets support by the present results.

5.1.2.2 Body contact

The expectation that the Nso children focus more on body contact than the German children when they qualify caregiving behavior was confirmed by the results. The body contact picture was chosen by the majority of Nso children as representing the best care for an infant. This picture, which showed a girl carrying a baby on the back, reflected the daily experience of the children, because they often carry babies on the back.

However, in the picture card interview, the German children talked as frequently about body contact as the Nso children. Nevertheless, the way of referring to body contact differed between the German and Nso children. Whereas the former often described the body positions of child and baby presented in the pictures without evaluating the extent or way of body contact, the latter expressed clear conceptions about the preferred way of body contact as in the following example from a seven-year-old boy.

I: Why is this one [a picture card] nice Se?

C: Because she is carrying the baby.

I: Because she is carrying the baby?

C: Yes

I: How is she carrying the baby? Mm? In what way is she carrying the baby?

C: She is holding.

I: How is she holding? Why is it good to be holding the baby like this?

C: So that he won't fall down.

Furthermore, the Nso children strongly emphasized the importance of body contact in the context of crying. They expressed the assumption that babies cry because they want body contact. And, accordingly, the majority of the Nso children proposed to establish body contact with a crying baby in order to soothe him or her. This promising strategy of soothing was only rarely mentioned by the German children.

Thus, the overall picture clearly corroborates the expected pattern that body contact plays a main part in the Nso concept of good care but not so in the German concept. This result is in line with the maternal ethnotheories, for which Keller and colleagues (Keller, Völker, & Yovsi, 2005) reported, stating that Nso respondents addressed body contact more often than German respondents. Furthermore, longitudinal observations of maternal behavior also revealed that Nso mothers establish more body contact with their babies than German mothers during play interactions over the course of the first three months of the baby's life (Keller, Borke, Lamm, Lohaus, & Yovsi, under review).

5.1.2.3 Body stimulation

According to the elaborated Nso motor ethnotheory (Keller, Yovsi, & Völker, 2002) it was expected that the Nso children emphasize body stimulation more than the German children. This expectation was not confirmed by the results. The German children favored the body stimulation picture more than the Nso children and the children of the two cultural communities did not differ in the frequency of addressing body

stimulation during the interview. This finding suggests again the speculation that the Nso children focus on behaviors, which characterize their daily experiences. The typical Nso practice of body stimulation (lifting the baby up and down in a vertical position) requires muscular strength and is therefore usually not performed by young caregivers. Furthermore, specific knowledge about the appropriate intensity according to the baby's age and current state is needed (Keller, 2007a). Some of the children demonstrated such knowledge, such as a seven-year-old boy who explained: "*When he eats and you lift him up like that, he will vomit.*" Another eight-year-old girl expressed highly elaborated ideas about the relations between baby's age, body stimulation, and developmental consequences:

C: If you lift like that when the baby is still very small, the breast milk will pass on the baby's legs.

I: Is it bad for the breast milk to pass on the baby's legs?

C: Yes.

I: Why?

C: The baby will not walk as normal people walk.

Some children disliked the lifting completely, which might be due to the absence of strength. They were afraid that the baby could fall down. Possibly that is also the reason why the body stimulation picture, which showed a boy lifting a baby in the typical Nso manner (cf. Figure 3.3a in chapter 3.2.3), was not evaluated as positively as expected. However, although this body stimulation is usually not carried out by children, they know about the function, which becomes clear in the following extract from an interview with a six-year-old girl:

C: *She is lifting the baby up.*

I: *She is lifting the baby up?*

C: *Yes.*

I: *Is it good to be lifting the baby like that?*

C: *Yes.*

I: *Why? When you lift him like that, what happens?*

C: *Then he will walk.*

Moreover, the Nso children frequently proposed body stimulation as a means of distress regulation. This result parallels the result concerning body contact. The Nso children did not talk more often about body contact and body stimulation in general, but, in the context of soothing, these behaviors became very important. Thus, it seems that the distressed state of the baby especially fosters the application of the typical Nso proximal care strategy.

Contrary to expectation, the German children had given a higher priority to the body stimulation picture. This picture showed a kind of stimulation that was much gentler (moving up the arms of the baby, cf. Figure 3.3b in chapter 3.2.3) than the lifting. Therefore, German children are allowed to and able to perform such stimulation by themselves. However, the German children associated different aims with the stimulation. In harmony with the pedagogical model of early child care (LeVine et al., 1994) that is prototypically for Western communities, they focussed on eliciting excitement and maximizing positive affect. The answer of a five-year-old German boy, who explained why he liked the body stimulation picture, serves as an example: *“Because I believe that is totally nice for the baby, and she is laughing.”*

5.1.2.4 Object stimulation

Concerning the play with objects or toys, the expected pattern of cultural differences was completely confirmed by the results. The German children evaluated the object stimulation picture higher than the Nso children, and they emphasized object play

more in the interviews. Although this focus on object play was especially pronounced for German boys (significant cultural community x gender interaction effect), the girls of the two cultural communities also differed significantly. Hence, these results support the assumption that German children adopt the distal strategy of parenting infants that has been reported about German parents and grandmothers (Keller, 2007a).

Some of the German children associated object play with cognitive development, as the seven-year-old boy who explained: *“When he does not yet know that there are toys, then give a little toy.”* This focus on learning by the help of toys is also known from Western mothers, who highlighted the stimulating nature of toys and considered stimulating the senses and the cognitive system as crucial for healthy development (Keller, 2007a).

Observations of sibling interactions had revealed that older siblings are especially important for infants’ mastery of objects (Lamb, 1978a). However, according to the children, the most important argument for the use of toys in interaction with babies was having fun together, as the following two examples illustrate:

C: She is holding a toy in her hand and wants to play with the baby.

I: [...] Why?

C: To cheer up a little bit. So that he is happy.

(German boy, eight years old)

I: Okay. Why do you like this [picture]?

C: Because the child is playing with the baby again. With the rattle.

I: I see.

C: So that she does not scream and cry any longer. So that she is not bored anymore.

(German girl, eight years old)

The Nso children were also aware of the value of toys in order to prevent infant crying or to enhance positive feeling. Thus, an eight-year-old Nso girl stated: *“When he is kicking [the ball] like that he will then be feeling fine.”* This interpretation of object

stimulation had also been reported from Nso mothers, who regarded objects as a useful means of preventing crying and promoting the health of the baby (Keller, 2007a). Furthermore, the Nso children linked interdependent goals to object play. They talked about objects as medium for relational communicational acts, such as this seven-year-old girl: *“Because when she is holding something the baby will take it.”* The exchange of an object is the center of interest, because the infant is introduced to the cultural norm of giving and taking and learns to share. The kind of object is not even mentioned, because it does not play a role.

Hence, the differences between the German and the Nso children concerning their ideas about object stimulation do not only show quantitatively, but also in the meaning the children attribute to object play.

5.1.2.5 Face-to-face interaction

Derived from the strong focus on face-to-face communication exhibited by German mothers (Keller, Völker, & Yovsi, 2005), it was expected that the German children also emphasize face-to-face interaction more than the Nso children. This expectation was confirmed, although there was no difference between the children of the two cultural communities concerning the preference for the face-to-face picture. About 20% of the children of each sample chose the face-to-face picture first. However, this may be due to the fact that the pictures differed with respect to the parenting systems addressed. The German picture showed a mere face-to-face situation without body contact (see also Figure 3.3b in chapter 3.2.3; baby and older girl lying on their stomachs and looking at each other). In the Nso picture there were also a baby and an older girl looking at each other and observably communicating with each other, but the older girl was also carrying the baby on her lap and holding her hand (cf. Figure 3.3a in chapter 3.2.3). Thus, it could be that the Nso children liked the picture because of the body contact or assumed body stimulation. This seems most likely since the Nso children never explicitly mentioned the face-to-face system with respect to this or any

other picture. Throughout the interviews not a single Nso child talked about eye-contact or facial exchange.

In contrast, the German children emphasized the importance of face-to-face contact. As described in the pedagogical model of early child care (LeVine et al., 1994) and in reports about maternal ethnotheories (Keller, Völker, & Yovsi, 2005; Keller, 2007a) they associated face-to-face interaction with raising a smile. The following example from an eight-year-old girl serves as an illustration:

I: Why do you like this picture?

C: Well, because she makes faces and the baby can laugh.

I: I see. Why does she make such faces?

C: Well, so that the baby is totally happy.

The German children also emphasized the interactional mechanisms related to the face-to-face context more strongly than the Nso children. They mentioned more frequently exclusive attention, which is necessary for face-to-face communication. Furthermore, they focussed more on the facial expression of positive emotionality of the older child and on affective sharing between baby and older child (facial warmth) as in the following example of an eight-year-old girl:

I: And why do you like this?

C: Because the girl is laughing so lovely.

I: Okay and why do you think that it is good, if the girl, the girl is laughing? Do you think it is good?

C: Yeah. Then the baby is happy.

I: And why is it good, if the baby is happy?

C: Then they have a lot of fun together.

This focus on facial warmth and exclusive attention is also typical for German mothers (Keller, Völker, & Yovsi, 2005) and underlines once more the distal strategy of early child care that forms the German children's ideas.

5.1.2.6 The narrative envelope

With respect to the narrative envelope it was expected that the German children emphasize vocal interaction with the baby or vocal stimulation of the baby more than the Nso children. This assumption was not supported by the results. The Nso children did not at all talk about the narrative envelope. However, there were only two German children, who referred to vocal interaction with the baby and another two, who recommended talking to a crying baby in order to soothe him or her.

The fact that the narrative envelope was hardly ever mentioned by the children of both cultural communities may be based on the interview method. Vocal interaction is heavily observable in a picture. Therefore, there was no separate picture card representing this parenting system. Nevertheless, vocal interaction can accompany all other parenting behaviors, but the mere visual nature of the picture stimuli obviously did not encourage a focus on a parenting system that operates in the auditory channel. Anyhow, picture card interviews with mothers had revealed the expected cultural differences between German and rural Nso mothers (Keller, 2007a).

An alternative explanation for the absence of references to the narrative envelope may result from the fact that the role of language is difficult to access consciously. Although even 2- to 3-year-old children adjusted their speech when talking to their infant siblings (Dunn & Kendrick, 1982), the children in the present study did not express any ideas about the way to talk to an infant, the amount of talking they regarded as appropriate, or the meaning of talking to an infant in general. Hence, the assumption that baby-talk represents an intuitive behavior that is not consciously controlled (cf. Papoušek & Papoušek, 1987) is supported by these results.

5.1.2.7 Playing

Playing with a baby cannot be classified into a single parenting system. It can include characteristics of all parenting systems with the exception of primary care. Thus, body stimulation as well as object stimulation, facial, and vocal communication can be

involved in playing, but the respective proportions can vary greatly according to situational and environmental conditions. However, in general, playing is associated with the pedagogical model of early child care that is aimed at social exchange and active engagement by means of stimulation and protoconversation (LeVine et al., 1994). Accordingly, playing would be expected to play a major role in Western ideas about infant care, but not in the rural, traditional, non-Western model. Furthermore, rural Indian mothers did not integrate playing with the baby in their normal daily routine, because they could not afford, but also did not consider, playing as necessary (Rogoff et al., 1993; Abels, 2007).

Against this background it seems surprising that the great majority of the Nso children (74%) named playing as the leading facet of childcare, as the seven-year-old boy in the following interview excerpt illustrates:

I: When you care for your baby like that, what is the most important thing that you do with him?

C: I normally play with him.

I: Is that the most important thing? Playing with him?

C: Yes.

I: Why? Mmh? Why do you play with him? Mmh?

C: So that he won't cry.

In contrast, only 23% of the German children mentioned playing as especially important.

Since the children did not further elaborate on how to play with a baby or what playing exactly meant to them, the only chance to understand that seeming contradiction is to analyze their explanatory statements as to why they thought playing was important. The Nso children presented an impressive consensus about the reason: *"We usually play so that he won't cry."* All Nso children, without exception, understood playing as a means to prevent infant crying. This argument exactly reflects the Nso conception of

playing as explained by a Nso woman in an expert interview: *“Playing with the baby is to keep the baby in a happy mode (i.e. making any activities that would distract the baby from crying).”*

Some of the German children, who mentioned playing, also saw a connection between playing and negative infant signals, as the following excerpt from the interview with an eight-year-old boy illustrates:

I: What is important, if you are together with a baby?

C: That you play with him.

I: Well. And why is it important?

C: So that he has fun in doing so and does not call “mommy, mommy, mommy” any more. So that he does not cry then.

However, the German children also talked about encouragement of development in the context of playing, as the eight-year-old girl in the following excerpt exemplifies:

I: In general, when you care for a baby, what is important then?

C: Uhm, having something to eat

I: Yes.

C: And that he can sleep and play.

I: And why is this important?

C: So that he can learn and grow up!

Thus, the connotation of playing definitely differs between the two samples. With regard to the Nso conception of playing, the frequent reference to playing in the Nso interviews is comprehensible. And, again, there is a close connection to the daily experiences of the Nso children, because they are usually required to play with the baby and prevent crying in the mother’s absence. Nearly 40% of the Nso children said that their mother explicitly taught them to play with the baby in order to avoid crying.

5.1.2.8 Sensitivity to negative infant signals

As expected, the Nso children paid significantly more attention to infant crying and distress prevention or regulation than the German children. *“That the baby won’t cry”* constitutes the central goal of the Nso children’s caregiving concept. All caregiving activities are adapted to that intention. Playing and back-carrying are the means to prevent crying, and body contact as well as body stimulation form the strategies to soothe a crying baby.

This infant care strategy of reducing crying to a minimum keeps the baby’s caloric expenditure down and therefore contributes to the survival of the baby during the first months (LeVine et al., 1994). LeVine and colleagues (1994) have described this strategy of soothing as essential for the pediatric model of protection, which they observed in a Gusii community in Kenya. Furthermore, these authors argue that the rapid response to infant distress produces quiet, easily calmed infants that the Gusii mothers regard as the first step in becoming docile toddlers, who acquire obedience and respect easily and naturally (LeVine et al., 1994).

According to this, the extreme focus on negative infant signals serves as the primary goal of caregivers, which is to secure the life and health of the baby; it also serves as the secondary socialization goal of the Nso people, which is the initiation of the child as a community member who displays social competence in terms of obedience and filial piety (Yovsi, 2003; Nsamenang & Lamb, 1993). Nso mothers also recommended this sensitivity to distress signals of the baby and they even propagandized anticipatory breastfeeding as favored strategy (Keller, Völker, & Yovsi, 2005). Correspondingly, the Nso children reported in the interviews that their mothers had explicitly taught them what to do when the baby is crying, and, for 13% of the Nso children, knowing how to soothe a baby was the all-dominant criterion that defines the best babysitter. For the Nso, crying signalizes that the baby’s wellbeing is threatened, as the most prominent reason for crying mentioned by the Nso children was that the baby suffers from pains or an illness. Therefore, the Nso people have no tolerance for letting a

baby cry and expect rapid and effective response to infant crying (Keller, Völker, & Yovsi, 2005).

In contrast, in Germany, there is not such a clear opinion against letting a baby cry. Rather, it is controversially discussed among parents whether immediate reaction towards crying is spoiling or adequate caregiving. However, the German children were little tolerant against crying, but they argued more in terms of their own needs. They regarded infant crying as annoying and loud or causing earache. This attitude may again reflect the fact that German children are usually not assigned sole responsibility for an infant. In their everyday life they do not have to manage a crying baby. Therefore, they did not get explicit instruction on how to soothe a baby, as a six-year-old girl expressed: *“My mother did not explain that to me.”* If they experience infant crying, they are usually in the role of a casual bystander, who is not directly involved and can therefore afford to keep their own perspective and not to put oneself in the position of the baby or the caregiver.

5.2 Effects of age

As reported in previous empirical work (Melson, Fogel, & Toda, 1986) it was expected that knowledge about infant care increases with age. This assumption was confirmed by the results of this study. The children who were older than six years, expressed more elaborated ideas about infant care and talked less often off-topic. These older children were able to generate more different ideas about caregiving and to adapt their ideas to the respective situational specification. This age effect may reflect the 5-to-7 shift (Rogoff et al., 1975). Around the age period between 5 and 7 years many cultural communities (Western and non-Western) assign new tasks to the children and expect more responsible behavior (Weisner, 1996; Rogoff, 1996). Mothers across cultures seem also to be aware of an increase in knowledge and responsibility, because they prefer 7- or 8-year-old child nurses to younger caregivers (Whiting & Edwards, 1988).

Nevertheless, there was no support for the expected stronger adoption of the typical cultural values by the older children. The cultural differences between the German and the Nso children did not increase with age. This result suggests the assumption that even the 4- and 5-year-olds largely had taken over the respective cultural model of caregiving, which is unsurprising for the Nso children, who actually participate in the care of a baby in everyday life. Given the long time periods babies stay with their babysitters, it is necessary that those pursue the Nso strategy of caregiving in order to achieve the socialization goals. However, the German children are neither involved in the care of babies nor explicitly instructed how to care for infants. Nonetheless, they embody the German model of caregiving. Thus, the parenting models seem to be learned independent of practical experiences and at a very young age. This supports Houlden and Zambarano's (1992) conclusion that children learn about child rearing predominantly through their own experiences with their parents. For Nso children, this learning is supplemented by practical experiences and the observation of numerous caregiving models, whereas German children learn a lot about infant care through doll play or, in case they have siblings, observation of their parents with them.

The only significant interaction effect between age group and cultural community that was observed was concerning body contact. Whereas the stronger emphasis on body contact expected in the ideas of the Nso children was only found in the older group, the younger children showed the reverse pattern with the German children focusing more on body contact. This unexpected strong focus on body contact shown by the younger German children could reflect an age appropriate need of the children of six years or younger. However, the younger Nso children do not put so much emphasis on body contact, because their need for body contact is possibly satisfied. There is empirical evidence that children growing up in non-Western cultural communities that foster a related self concept experience more body contact during infancy as well as during toddlerhood than German children who are trained towards independence from

early on (Keller, Kärtner et al., 2005; Keller, Künsemüller et al., 2005; Keller, Borke, Chaudhary, & Lamm, under review).

5.3 Gender differences

The assumption that boys and girls do not differ concerning their knowledge about infants and their care was confirmed. Children of both genders expressed equally elaborated ideas about caregiving. Thus, the results support previous studies that reported gender differences in the knowledge about infants for adolescents and young adults (Gullo & Paludi, 1989), but not for children (Melson, Fogel, & Toda, 1986). These results also indicate that differences in nurturing behavior of boys and girls (Melson & Fogel, 1988b; Berman & Goodman, 1984) reflect differences in their motivation rather than in their knowledge. The fact that females are more interested in babies than males has been confirmed in many studies and for different age groups (Frodi & Lamb, 1978; Melson & Fogel, 1988b; Berman, 1980, 1986, 1987).

This motivational difference seems to cause the parents' preference for female babysitters, which was confirmed by the present results. Many German parents explicitly argued that the ability to care for an infant *"is not a question of the gender but rather one of the individual interests of the child."* This individualization often resulted in the answer that children of both genders are equally able to give care. However, those parents, who preferred girls, also described them as having more interest in babies. Although the Nso parents did not use the terms interest or motivation, these constructs could explain the gap between equal knowledge of boys and girls and their behavioral differences that the parents described.

Even though the boys and girls had the same amount of knowledge available, they differed with respect to the content of their ideas about infant care. These gender differences are absolutely in line with previous empirical evidence. Boys focused more on object stimulation than girls, although this difference was only observed in the

German sample. Presumably, this reflects the fact that object stimulation is of much more significance in the German model of early infant care and is overall rarely mentioned by the Nso children. Western middle-class fathers also used objects in play interactions with infants or toddlers more frequently than mothers (Parke, 1979). Object stimulation has been shown to be closely related with exploratory activities of the child (Keller, 1992), and the attachment theory proposed that fathers, in contrast to mothers, play a major role in the development of explorative behavior (Grossmann, Grossmann, & Kindler, 2004).

Concerning behavioral differences between mothers and fathers, it has also repeatedly been reported that fathers stimulate their young children more intensely and wildly than mothers (e.g., Lamb, 1977; Yogman, 1982), and mothers spend a greater proportion of time with their babies in care activities (Lamb, 1997; Yogman, 1982). However, a comparison of parenting ethnotheories of mothers and fathers did neither approve a stronger paternal focus on body stimulation nor a stronger maternal focus on primary care (Borke, 2002). In the present study there were also no differences between girls and boys concerning body stimulation or primary care.

Nevertheless, boys and girls differed with respect to the emphasis placed on emotions. Girls talked more than boys about positive as well as negative emotionality. This result just seems to confirm gender stereotypes that females are more emotional than males. Anyhow, in early parent-child conversations about past events, girls also talked more about emotional aspects of their experiences than boys (Fivush, Brotman, Buckner, & Goodman, 2000). And, this female focus on emotions seems to be encouraged by the parents, since both mothers and fathers used more emotional utterances when discussing sad events with their daughters than with their sons (Fivush, Brotman, Buckner, & Goodman, 2000). But, these results do not only reflect gender differences in conversational style. Behavior observations revealed that female preschoolers reacted more responsively to the distress of their infant siblings at separation from the mother than boys (Stewart & Marvin, 1984; Garner, Jones, &

Palmer, 1994). However, girls and boys did not differ in their knowledge about emotions or their cognitive or emotional perspective taking (Garner, Jones, & Palmer, 1994). Thus, behavior differences again seem to be a result of different interests or motivations and not differences in knowledge.

5.4 Summary

The present study revealed that the ideas of the children that are described above are part of larger cultural models of child rearing. Whereas the age of the children affected an increase of knowledge about infant care and the gender of the child primarily influenced the interest in babies, the cultural context had an impact on the comprehensive model of child care, which the children developed. Despite the evidence that the Nso and German children focused on different parenting systems, this study unveiled that the ideas of children in different cultural communities are related to different models of cultural functioning and family organization. Socio-economic factors as well as culture-specific socialization goals shape the practical experiences of the children and thereby their discourse.

The heavy workload of the mothers in the subsistence based rural Nso community coerces the children to take part in the caregiving of younger siblings and to assume responsibility. This sense of responsibility becomes apparent in the argument of the Nso children as they are geared toward the well-being of the babies. Furthermore, this practical experience brings a more functional perspective to the Nso children. They describe certain body contact positions with respect to the security of the baby, propose body contact and body stimulation as means of soothing a baby, relate the acceleration of motor development to the accomplishment of household chores, and play with the baby in order to avoid a disturbance of the mother. The German children, in contrast, are lacking these experiences and the responsibility. Their perspective on caregiving is therefore rather playful and egocentric. They argue on the basis of their own needs

when talking about caring for a baby and more frequently evade a question by saying: “*I don’t know.*” Although this might also result from different interview styles (as discussed in the following paragraph), it indicates that the German children were not in charge. For the German children, the questions of the interviewers remained on the theoretical or pretend level whereas the Nso children were really confronted with those care situations in their daily life.

Concerning the question of what the children can teach the baby, Nso as well as German children focused more on their own perspective than on the baby’s. Children of both samples equally and frequently mentioned that they could teach the baby such cognitive skills as counting or writing, but these school skills are not age-appropriate for babies and rather reflect skills that the children themselves are learning at present. One could argue that this reflects lacking perspective taking skills and is more often shown by the younger children. However, there was no general age trend and in the German subsample there was an age effect in the opposite direction. Thus, the older German children talked more often about teaching the baby those school skills. Hence, the interpretation that they are proud to be able to recite the alphabet, for example, and therefore would like to teach it to the baby irrespective of the baby’s capability or need seems more appropriate.

Another general difference between the German and the Nso children concerns the relation between baby and child that is constructed in the discourse. The German children see the baby as an equal partner with whom they “*have a lot of fun together*” and towards whom they “*have to act with fairness.*” They feel alike with the baby and infer the baby’s feelings or needs from their own sensation, as the eight-year-old girl in the following example illustrates:

I: Why do you think that the baby stops crying when you play with him?

C: Because it is the same with me too: When I cry a whole lot and then somebody says: "Come, let's play together," then I don't cry and I just have fun.

Furthermore, the German children compare themselves to the baby and tell stories about themselves as babies, as this six-year-old girl states:

C: [...] namely with me, it was that way. It was at night that I spat out my pacifier again and again and then I did not know how to put the pacifier back in. Then, mum and dad had to put it in again, but then I spat it off again. Then mum had to put it in again and so on through the whole night.

These episodes are not actively remembered by the children, but rather memories that were narrated by the parents. The fact that the Nso children never reported such stories about themselves confirms the findings from the autobiographical memory research that Western children provide more elaborated memories and give more descriptives, more references to internal states, and more comments about themselves (e.g., Han, Leichtman, & Wang, 1998). This supports the assumption that the German children develop an independent socio-cultural orientation. Their equal partnership model of caregiving and teaching is in line with this orientation and their own experiences with their parents. German mothers have repeatedly been described as establishing dialogical communications with their children from the beginning and to warrant a quasi-equal status with their children (Keller, 2007a).

In contrast, the Nso children create a hierarchical relationship with the baby. They carry over the age hierarchy they experience with their parents or other caregivers to the relationship with their siblings, as illustrated in the below excerpt from the interview with a seven-year-old Nso boy:

C: I cannot allow the baby to put something bad in the mouth and I cannot allow him to fall.

Caregiving siblings are legitimized by the parents to reprimand their younger siblings (Nsamenang & Lamb, 1994), which is necessary to enable the children to cope with the responsibility for the safety and well-being of the baby. However, this authority seems to prevent rivalry between the siblings, because open conflict is banned. Furthermore, a lifelong hierarchical relationship between the siblings is founded and thus interdependence within the sibling group is fostered.

5.5 Methodological issues

Cross-cultural research is an irreplaceable contribution to our understanding of development. Nevertheless, working with communities that differ as widely as the German middle class and the rural Nso community in Cameroon forms a great challenge for the development of adequate research methods. A trade-off between respect for cultural idiosyncrasies and comparability of procedures and assessments must be found. The present study tried to combine qualitative and quantitative approaches in order to meet the challenge successfully. However, there remain some methodological problems that need to be discussed and will be addressed in the following paragraphs.

First, the interview situation was culture-specific to a substantial degree. Western researchers attach great importance to the arrangement of the interview situation. They recommend that the interviewer's tenor towards the child should be friendly, supporting, encouraging, patient, and respectful (Mey, 2003). Interviewer and child typically belong to different generations and this generation gap usually implies different assignments of competence. Although the age and status difference remains, the interview situation requires a role reversal (Krüger & Grunert, 2001). The child should be addressed as informant and expert and the adult should take the role of the listener and learner. The German interviewers followed these suggestions and tried to adapt themselves to the respective child and establish an atmosphere that avoided achievement pressure. The following encouragement was often used by the German interviewers to reduce the fear

of wrong answers: *“Just say what you have in mind, there are no right or wrong answers. We are just interested in your opinion.”*

In contrast, the Nso interviewer did not engage in a role reversal. She demanded disciplined responding from the children and her instructions were rather strict commands, as the following example illustrates: *“Say it now. Don’t only look outside.”* Furthermore, she held a normative conception of the interview situation: *“Mmh. That is how you should have been responding. When you know something, don’t be ashamed to say it. Do you hear? Because it is good when you say it.”* Although this Nso interview situation was entirely different from the German situation, it reflected the typical communication between children and adults. It would have been absolutely inappropriate to assign the expert role to the children. Both conversational partners would have reacted with embarrassment because the strict age hierarchy is a supporting pillar of the Nso community and respect and obedience towards the older are major socialization goals.

The question of translation forms the second methodological problem of this study. Of course the children were interviewed in their respective native languages. However, this brought forth the necessity of translation. It was infeasible to code the interviews from both samples in the same language or in their respective original language. Furthermore, Lamnso, the native language of the Nso children, is an oral language; therefore transcription and translation were completed at once. Although the interviews were translated by bilinguals and the codes in the content analysis and their interpretations were all verified by a native Nso, the language problem cannot be argued away.

The third methodological issue that needs to be discussed is the picture card interview method. Although the use of pictures was recommended to stimulate the narration of children (Krüger & Grunert, 2001) and the picture card interview has proved as appropriate in the assessment of parental ethnotheories (e.g. Lamm, Keller, Yovsi, & Chaudhary, 2008), this method also bears disadvantages. Not all components of the

component model of parenting (Keller, 2002, 2007a) are presentable in pictures. Thus, the narrative envelope cannot directly be shown visually. Even though an open mouth may indicate vocal interaction or stimulation, it is not independent of interpretation and could also represent yawning or a facial expression. Similar problems appear with contingency, since pictures cannot reproduce the temporal element. They are rather snap-shots that show simultaneous activities. Therefore, the picture card method results in an underestimation of the significance of those components, because they are not stimulated in the same manner as other components. Anyhow, this is true for all pictures and hence should not influence group differences.

Nevertheless, cultural differences could arise from the application of different sets of picture cards. The claim to use pictures that displayed culture-typical care situations interfered with the comparability of the pictures as addressed beforehand (cf. chapter 5.1.2). However, Abels and Kärtner (2004) carried out a validation study concerning the picture card method. They reported that German undergraduate students of psychology assigned the five picture cards correctly to the parenting systems beyond chance level. Furthermore, the recognition of the parenting systems was not influenced by the cultural background of the pictures. The students identified the parenting systems in pictures showing German, Euro-American, and rural Cameroonian Nso mother–infant situations equally well. Thus, there seems to exist a general understanding of the parenting systems displayed in the pictures.

Another methodological problem of the present study is that the cultural background of the children and their experience with babies are confounded. Because all Nso children in the study sample were routinely involved in the care of a baby while only very few German children reported regular contact with babies, the effects of both variables cannot be separated. However, those different experiences reflect cultural realities. In the rural Nso community, the mothers of babies rely upon the help of the sibling caregivers. Otherwise they would not be able to manage the enormous quantum of household and subsistence work. Therefore, it is not possible to find Nso children who

are not experienced in caregiving. German children, on the other hand, are usually not assigned caregiving tasks, because there live fewer children in the families and the birth interval is quite short. Even those children who have infant siblings do not care for them having sole responsibility. Thus, it is impossible to find German children with the same experiences as the Nso children, because German children are usually not left without adult care before the age of 6 or 7 years, and if a baby or toddler is around, not before 12 to 14. Experiences should therefore be interpreted as constituting cultural contexts. However, to better understand the influence of caregiving experiences on the ideas about infant care, it would be helpful to conduct studies in cultural communities where sibling caregiving is practiced, but not as a cultural norm. Furthermore, longitudinal studies could contribute to an understanding of the role of experiences on an individual level.

5.6 Outlook

This study revealed that even preschool-aged children apply complex models of caregiving when expressing their ideas about good infant care. The children possess models that are informed by the respective cultural conceptions irrespective of their own experiences as caregivers. Hence, the study strengthens the demand to study sibling caregiving in order to better understand cultural models of child rearing, particularly their ontogenetic development and generational transmission. Children should not only be seen as a receiver in the socialization processes, but also as active participants who “create culture at the same time they are acquiring culture” (Maynard, 2002, p. 979). The interviews exhibited accurate descriptions of the cultural models into which the children are growing. The children communicate these descriptions to their younger siblings regardless of whether they are assigned caregiving responsibility or not. Thus, the influence of older siblings in the socialization of children should not be underestimated. At the same time, the effect of being an older sibling, or, to speak more generally, a

more experienced member of the community, has also to be considered. A younger child always provides the older child with an opportunity to practice his or her nurturing skills and therefore constitutes an important context for socialization (Whittemore & Beverly, 1989).

The present study is unique in their focus on the ideas of the children, because previous research was limited to observations of sibling interactions or sibling caregiving. However, an assessment of both conceptions and behavior of the children would be the consequential next step in order to shed light on the relation between ideas and behavior.

Nevertheless, the existing results challenge professionals as well as parents to utilize the enormous competencies of children in the socialization process more systematically. Possibly the traditional non-Western communities with institutionalized sibling caregiving arrangements are ahead of the industrialized world where caregiving has been professionalized to a very large degree. However, the request not to waste the nurturing competencies of children does not mean to import caregiving models from a different socio-cultural environment, but rather to allow for extensive interaction between siblings and children of different ages.

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APPENDICES

Appendix 1: Sociodemographic questionnaire for the German sample

Appendix 2: Sociodemographic questionnaire for the Nso sample

Appendix 3: Interview guide for the German assessment

Appendix 4: Interview guide for the Nso assessment

Appendix 1: Elternfragebogen

Name des Kindes: _____

(Bitte Vornamen und Anfangsbuchstaben des Nachnamens angeben, damit eine Zuordnung des Bogens zum Interview möglich ist. Nach dieser Zuordnung werden die Daten zur weiteren Auswertung anonymisiert.)

1. Angaben zum Kind

- a. Geschlecht des Kindes: weiblich männlich
- b. Geburtsdatum: _____
- c. Schulbesuch? Kindergarten Schule, Klasse: _____
- d. Muttersprache: _____
- e. Religion: _____

2. Familiensituation

- a. Welche Personen leben in Ihrem Haushalt?

Alter	Geschlecht	Beziehung zum Kind (z. B. Mutter, Bruder etc.)

- b. Gibt es noch weitere Geschwister, die nicht in Ihrem Haushalt leben?

Bitte geben Sie diese Geschwister mit Alter und Geschlecht an.

Alter	Geschlecht	Bis wann hat dieses Geschwisterkind in Ihrem Haushalt gelebt?

3. Eltern des Kindes

a. Familienstand?

verheiratet allein stehend geschieden/getrennt verwitwet

b. Alter der Eltern: Mutter _____ Vater _____

c. Berufe der Eltern: Mutter _____ Vater _____

d. Höchster erreichter Bildungsabschluss:

Mutter: _____ Vater: _____

4. Erfahrungen mit Babys

a. Hat Ihr Kind regelmäßigen Kontakt zu einem Baby/Kleinkind? ja nein

Wenn ja,

In welcher Beziehung steht Ihr Kind zu diesem Baby/Kleinkind? _____

Wie häufig sehen sich diese Kinder? _____

Ist Ihr Kind an der Betreuung des Babys/Kleinkindes beteiligt? ja nein

Wenn ja, mit welchen Aktivitäten? _____

b. Ab welchem Alter können sich Kinder, Ihrer Meinung nach, an der Betreuung von Babys/Kleinkindern beteiligen? _____

Warum? _____

c. Was glauben Sie, wer sich besser an der Betreuung von Babys/Kleinkindern beteiligen kann? Jungen Mädchen

Warum? _____

Vielen Dank!!

Appendix 2: Background information

(to interview the mother of the target child)

Date:

Researcher:

Subject Code:

5. General information

- a. Sex of the child: _____
- b. Birth date: _____
- c. Does the child go to school? _____ Which form? _____
- d. Health of the child since birth? _____

- e. Religion: _____

6. Family background

- a. How many children do you have? _____

Please indicate age and sex of all your children.

Age (in years and month)	Gender

- b. Who lives in your household?

Age	Gender	Relationship (to the target child)

--	--	--

7. Child's parents

a. What is your marital status? Married Divorced Widowed Single

Since when? _____

b. Birth dates Mother _____ Father _____

c. Parents' professions and occupations

Professions: Mother _____ Father _____

Highest educational achievement: Father: _____

Mother: _____

8. Routines, activities with the baby

Who does care for the baby during a normal day?

Please indicate age, sex, duration of care giving, and main activities of all caregivers.

Person/caregiver (in relation to the baby)	Age	Sex	Duration of care per day (in hours)	Activities

According to you, who is the better caregiver for a baby? boy girl

Why?

Thank you!!

Appendix 3: Vorstellungen von Kindern über den Umgang mit Säuglingen

Interviewleitfaden

1. Was ist am Wichtigsten, wenn Du Dich/ man sich um ein Baby kümmerst?
Warum?

2. Wer kann sich am besten um ein Baby kümmern?
Warum?

3. Was sind die wichtigsten Sachen, die Du lernen musst, bevor Du Dich um ein Baby kümmern kannst?
Warum?

4. Warum ist es gut, wenn sich ein älteres Kind/ älterer Bruder/ ältere Schwester um ein Baby kümmert?
 - Was kann das Baby von Dir lernen? (Was kannst Du dem Baby beibringen oder zeigen?)
 - Was kannst Du dadurch lernen, wenn Du Dich um ein Baby kümmerst?Warum?

5. Was bedeutet es, wenn ein Baby schreit?
Was kannst/ könntest Du tun, wenn ein Baby anfängt zu weinen? Warum?

6. Was machst Du, wenn Du Dich um ein Baby kümmern sollst, aber lieber etwas anderes machen möchtest (z. B. mit Deinen Freunden spielen)?
Warum?

Appendix 4:

Caregiving ideas of children

Interview guide

1. What is the most important thing you have to do when you care for your brother/sister?
Why?
2. What can you teach your brother/sister now?
Why?
3. Who is the best caregiver for a baby?
Why?
4. What are the most important things your mother taught you before you can care for a baby?
Why?
5. Why do you think a baby should be cared for by an older brother/sister?
What can the baby learn from you?
6. What does it mean when a baby cries?
What do you do when the baby starts to cry? Why?
How do you feel when the baby is crying and the mother is not there?
7. What do you do when you have to care for a baby but want to do something else (e.g. play with friends)?
Why?