Talking to infants: how culture is instantiated in early mother-infant interactions. The case of Cameroonian farming Nso and North German middle-class families

Dissertation

zur Erlangung des Grades eines Doktors der Philosophie
eingereicht am Fachbereich Humanwissenschaften
der Universität Osnabrück
Fachgebiet Entwicklung & Kultur

vorgelegt von

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Osnabrück, Mai 2008

ACKNOWLEDGEMENTS

I wish to acknowledge the importance of the various contributions that the following people have made in the creation of this thesis. The completion of this thesis would have been impossible without them. To them all I extend my sincerest thanks.

Foremost to my supervisor, Prof. Dr. Heidi Keller, University of Osnabrueck, for providing essential academic guidance and assistance throughout the whole project and for graciously reading several drafts of this thesis. Her comments and feedback helped to improve this thesis. Her academic work opened my eyes for the interplay between culture and biology and broadened my understanding of child development. I also wish to thank her for allowing me to re-analyze the video material which was originally part of a larger research project (Keller, Otto, Lamm, Yovsi, & Kaertner, in press; Yovsi, R. D., & Keller, H., submitted).

To Prof. Dr. Jürgen Kriz, University of Osnabrueck, for his willingness to be the second advisor of this thesis.

To Prof. Dr. Arnold Lohaus, University of Bielefeld (University of Muenster at the time of data collection) for organizing the data collection in Muenster and for allowing me to re-analyze the data.

To Dr. Relindis Dzeaye Yovsi for organizing and supervising the data collection in Cameroon and for sharing precious insights into the Nso culture from an indigenous perspective with me. Thanks also for providing helpful feedback on translation and interpretation of the data.Your help has been invaluable!

To Eunice Yovsi, Sister Emma Fai, and Yvonne Yee for collecting the Nso data, and to Kelen Ernesta Fonyuy for translating and transcribing the Nso interactions and discussing sections of the transcripts with me.

To Prof. Dr. Iris Nentwig-Gesemann, Alice Salomon Hochschule (University for Applied Science) Berlin, for feedback and helpful suggestions regarding the methodological procedure.

To my colleagues of the research group Culture & Development at the University of Osnabrueck, as well as the doctoral fellows of the graduate school, for providing valuable feedback during the various stages of my research project and for their encouragement in crucial times. In particular, I am thankful to Hille Otto for reading and critically discussing previous versions of individual chapters of this thesis with me and sharing helpful references and insights from her own research, as well as to Katja Makowsky for reading parts of this thesis and discussing methodological aspects of this study with me.

To all the families who participated in this research project and made this study possible.

To the German Research Council (DFG) for funding the original research project (project number KE 263/26-1 and KE 263/49-1-2) and for granting me a scholarship within the graduate school “Integrative competencies and Wellbeing” (GRK 772 - List of Projects) that provided the funding for this dissertation project.

Finally, to my husband, Rainer Stepczynski, not only for his assistance to produce a well-formatted final product but most of all for his enduring love and practical support, and his willingness to sacrifice a large amount of time in which the production of this thesis had to take precedence over family time!

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Abstract

This study wants to contribute to a better understanding of child development by considering the broader cultural context in which it is embedded in. It takes a socio-cultural approach and considers child care practices as adaptive to the specific requirements of a given cultural context. Particularly, it is interested in investigating discursive practices in early mother-infant interactions in diverse cultural settings and relating them to prevalent cultural models of child care. A survey of research literature suggests that infant-directed communication varies greatly across cultures. It is suggested that protoconversation as described in the literature might be a cultural manifestation of an underlying innate parenting system prevalent in Western white middle-class context and that there might be other phenotypical forms of protoconversation in non-Western agrarian societies. Moreover, the study takes a practice approach to language and is interested in investigating how the construction of specific versions of the social world is achieved in the process of the ongoing interactions, particularly with regard to the dimensions autonomy and interpersonal relatedness.

The study therefore examines mother-infant interactions from two cultural contexts previously described as prototypically independent (German white middle class families in the city of Muenster) and interdependent (farming Nso families in the Western Grassfields of Cameroon). The data corpus originates from an earlier longitudinal study and consists of video material and transcriptions of 20 Nso and 20 Muenster mother-infant dyads at the infant's age of 12 weeks.

The data are analyzed following the principles of qualitative social research using strategies from discourse analysis, conversation analysis and documentary method. Different patterns of co-constructing mother-infant interactions were found and are discussed in chapters 4.1, 4.2 and 4.3. Chapter 4.1 presents findings of a pattern of co-operative vs. hierarchical discourse; chapter 4.2 discusses findings of narrative-biographical vs. rhythmic-synchronous structuring; and chapter 4.3 surveys examples of individual-centered vs. socially oriented discursive strategies. The results point to the possibility of innate characteristics of protoconversation as well as culture-specific manifestations of their phenotype. The results are discussed with regard to the specificities of the relevant local socio-cultural contexts and possible implications for the development of culture-specific world views and self-construals.

The thesis concludes by arguing that infants' 'narrative envelope' is a powerful medium to transmit cultural knowledge, even in interactions with pre-verbal infants. Maternal discursive practices are both constituted by culture and constitute culture.

Finally, some of the main implications of the study's findings for theory and practice are discussed. It is suggested that what is healthy and pathological development needs to be (re-)defined for each specific cultural context. Curricula for training pediatricians, psychologists, teachers and other social workers accordingly need to take a socio- or eco-cultural approach in order to ensure culture-sensitive counseling and teaching. Further studies from socio-cultural contexts that have so far been neglected in academic research are needed that systematically relate infant-care practices with cultural models of child care. The study of discursive practices is suggested to be a particularly promising avenue to this line of research.

1. Theoretical background and rationale for this study

> Scientific psychology […] will achieve a more effective stance toward the culture at large when it comes to recognize that the folk psychology of ordinary people is not just a set of self-assuaging illusions, but the culture's beliefs and working hypotheses about what makes it possible and fulfilling for people to live together […] It is where psychology starts and wherein it is inseparable from anthropology. (Bruner 1990, p. 32)

> "culture shapes the mind... it provides us with the toolkit by which we construct not only our worlds but our very conception of our selves and our powers" (Bruner, 1996, p. x).

1.1. *Introduction*

Over the past decades, there has been an increasing recognition of culture as an essential and immanent part of human nature and that it plays an intrinsic and systematic role for child development (e.g., Greenfield, Keller, Fuligni, & Maynard, 2003; Hatano & Wertsch, 2001; Hildebrand-Nilshon, 2002; Kagitçibasi, 2000; Kanner, 2002; Keller, 2007; LeVine, 1988, 1990b; Nsamenang, 1992, 1999; Richman et al., 1988; Saraswathi, 2003; Shweder, 1990; Shweder et al., 1998; Super & Harkness, 1986, 1997; Valsiner, 2000a, 2007; Weisner, 1997, 2002). Theoretical frameworks that capture the extent to which child development is constrained and shaped by the physical, cultural, social, and economic opportunities and restrictions have been suggested long ago, for example by Whiting (1977; 1981), LeVine (1977; 1982; 1988), Bronfenbrenner (1979), or Super & Harkness (1986) but find renewed interest in current psychological theorizing (cf. also Dasen, 2003 for an overview; Grusec & Kuczynski, 1997; Kagitçibasi, 1996b, 2005; Keller, 2002b, 2007; Super & Harkness, 1997; Valsiner, 1997; Weisner, 2002).

There has recently been a growing interest among developmental psychologists to systematically relate socio-cultural context, cultural models, parental ethnotheories, and child care practices in infancy to the development of culture-specific self-construals (e.g., Abels, 2007; Harkness et al., 2007; Kärtner, 2008; Kärtner et al., 2007; Keller, 2007; Keller et al., 2007; Keller, Abels et al., 2005; Keller & Demuth, 2007; Keller, Hentschel et al., 2004; Keller et al., 2006; Keller, Yovsi et al., 2004; Lamm, 2008; Otto, 2008).

This thesis wants to contribute to this body of research by analyzing infant-directed communication within two distinct cultural contexts and relating it to the broader cultural models of the respective context. It hopes to enhance the understanding of how culture mediates child rearing practices and ultimately self-development. It draws on diverse theoretical approaches such as psychological anthropology, cultural psychology, ethnomethodology, and discursive psychology.

1.2. *Human Development: cultural solutions to universal tasks*

The co-design of parenting and infant development

Parenting and child development represent universal tasks to the human species to which there exists a variety of cultural solutions (Keller, 2007; Quinn, 2005b). Caregivers' task all over the world can generally be defined as to raise their children to competent members of their respective society (Brim, 1966). However, ever since the path breaking research by Margaret Mead and the Culture and Personality school in the early twentieth century, a large range of cross-cultural studies have shown that parents in different cultural contexts adopt some similar, as well as some tremendously different care giving styles with infants:(e.g., Bornstein, 1991b; 2002; Hewlett, Lamb, Leyendecker, & Schölmerich, 2000; Keller, 2007; Keller, Abels et al., 2005; Keller et al., 2006; Papoušek & Papoušek, 1991; Quinn, 2005b; Richman et al., 1988; Rogoff, Mistry, Goncu, & Mosier, 1993; Tronick, Winn, & Morelli, 1985; Weisner, 2002; Whiting & Whiting, 1975; Winn, Tronick, & Morelli, 1989). For summaries see also (Greenfield & Suzuki, 1998; Keller, Harwood, & Carlson, submitted).

Parents use, for example, diverse strategies to teach their children to behave well: Inuit parents, for instance, use teasing but would never use shaming or threatening strategies or beat the child (Briggs, 1982, 1998), while frightening and beating are common among the Mfantse in Ghana. However, they would never use shaming strategies publicly (Quinn, 2005b). Shaming is, however, common in Taiwanese mothers' socialization strategies (Fung, 1999; Fung & Chian-Hui Chen, 2001; Miller, Fung, & Mintz, 1996; Miller, Sandel, Liang, & Fung, 2001; Miller, Wiley, Fung, Hoogstra, & Liang, 1997) and both, teasing and shaming is common among Kaluli (Papua New Guinea) (Schieffelin, 1986). Teasing was also found to be typically used by Euro-American white working class mothers but not by Euro-American higher educated white middle-class mothers (Kusserow, 1999; Miller, 1986). Micronesian Ifaluk use anticipative strategies to avoid misbehavior of the child by teaching him to be fearful of certain types of ghosts (Lutz, 1988 quoted in Quinn 2005a).

Parents also use very different strategies and draw on different beliefs when it comes to socializing children towards self-regulation and individual functioning in the larger social group: German middle class families were found to leave their infants relatively often alone in their bedrooms (LeVine & Norman, 2001) while this would not be thinkable in some Japanese or African (e.g., Goldberg, 1972) cultural communities. Soothing and calming rather than engaging and exciting has been the common pattern in infant care among the Gusii, an agricultural people in Western Kenya (LeVine et al., 1994), while Euro-American middle-class mothers tend to pay more attention to socializing their children into being active conversational partners (Blum-Kulka, 1990; Blum-Kulka & Sheffer, 1993; Junefelt & Tulviste, 1997; Tulviste, 2000), and to praise their children, fostering assertiveness, cognitive development, and stressing the child’s individuality (e.g., Chao, 1995; Harkness et al., 2007; Junefelt & Tulviste, 1997; Keller & Demuth, 2005; Kusserow, 1999; Kusserow, 2004; Wierzbicka, 2004). Childrearing beliefs of Chinese immigrant mothers in Los Angeles emphasize the harmonious relations between mother and child, as well as a balance between obedience, respect, and ‘having good morals’ on the one hand and personal choice and freedom and a sense of self-reliance on the other hand (Chao, 1995). French mothers have been found to organize conversational exchanges with their infants in a dyadic form, using mirroring devices, and addressing questions to the child, whereas Senegalese Wolof immigrant mothers were found to include third persons in interactions with their infants and to use more singing and rhyming as well as more imperatives (Rabain-Jamin, 1989; Rabain-Jamin & Sabeau-Jouannet, 1997). Parisian parents in a study by Suizzo (2002) find it important to stimulate infants both cognitively but also socially and on the sensory level. They also highly value proper demeanor and conformity to the group alongside with more individualistic socialization goals like individual pleasure and personality development. Dutch mothers favor the development of self-regulation through a regular and restful environment of daily life, while Italian mothers find it important to support infant development through emotional closeness, Spanish mothers focus on the infant’s health and well-being through attention to the baby’s physical and emotional needs, and Korean mothers are mainly concerned about protecting and educating the infant (Harkness et al., 2007).

From a cultural evolutionary perspective, these differences can be explained as *adaptive process* to the requirements of specific sociocultural environments (Greenfield, 2002; Keller, 2000, 2002b, 2003b, 2007; LeVine, 1974, 1988, 1990a; Tronick et al., 1985). Caregivers follow innate parenting mechanisms, such as the intuitive parenting program (Papoušek & Papoušek, 1987, 2002), contingent response to infant's signals (Kärtner et al., under review; Keller, Lohaus, Völker, Cappenberg, & Chasiotis, 1999; Keller, Schölmerich, & Eibl-Eibesfeldt, 1988), and parental (maternal) sensitivity (Ainsworth, Bell, & Stayton, 1974; Ainsworth, Blehar, Waters, & Wall, 1978) that insure the survival of the offspring and activate and support consequent developmental achievements. These mechanisms, do, however, not follow universal patterns but are adaptive to the specific eco-cultural pressures and requirements of a given sociocultural environment (Keller, 2003b, 2007).

Sociocultural environments vary with regard to population parameters such as birth and death rates, infant mortality, health and nutrition practices, advances in medical technology, access to mass media and literacy (Slunecko, 2001), as well as forms of government and religious beliefs (Dasen, 2003). The universal aspect of parenting is that good parenting is ultimately related to fostering the child's well-being. Well-being can be defined as "the ability of a child to engage and participate in the activities deemed desirable by a cultural community, and the psychological experiences that go along with that participation" (Weisner, 2000, p. 1699). Good parenting therefore means to foster the development of culturally appropriate ways of thinking, feeling and behaving to enhance the infant's success as an adult member of the community (Bornstein, 1991a). Cultural solutions of "good parenting" therefore needs to be understood in terms of what has proven to be functional to reach this goal within a specific sociocultural context. LeVine (1977) suggests that parents' socialization goals in all human populations comprise the following three categories: (1) survival and health of the child, (2) development of the child's behavioral capacity for economic self-maintenance, (3) development of capacities for maximizing symbolic cultural values. He also suggest that there is a natural hierarchy among these goals depending on the prevailing eco-cultural conditions that define to what degree the survival of the child is at issue or not.

Intuitive parenting repertoires can be seen as complementary to the infant's need to be cared for and it's innate motivation to engage in social relationships: infants in any culture have to master certain universal developmental tasks such as establishing physiological and emotional regulation, developing motor and physical capacities and skills, and to acquire a social matrix and developing a sense of self and self in relation to others in order to become able to participate in society (Keller, 2002b, 2007; Mistry, Deshmukh, & Easterbrooks, 2006; Stern, 1985). The biological component of acquiring a social matrix is expressed in infants' innate motivation to comprehend the world (Shonkoff & Phillips, 2000; Trevarthen, 1998a) and to communicate and develop relationships with other persons (Reddy, Hay, Murray, & Trevarthen, 1997; Trevarthen & Aitken, 2001; Trevarthen & Reddy, 2007; cf. also Keller, 2007, p. 10 for an overview). The immaturity of the human infant makes extensive care-giving necessary for their survival. Infants have innate morphological features described as '*Kindchenschema'* (e.g., Lorenz, 1969) that help them to attract and maintain the attention and the motivation of their social environment to care for them. However, what *kind* of social matrix and sense of self and self in relation to others is acquired by the child, crucially depends on the concrete *experiences* the infant makes. This is due to the plasticity of the human brain (e.g., Chisholm, 1980, 1992; LeDoux, 2002; Nelson, 1999, 2006), i.e. the ability of connections among neurons to be altered through new learning, i.e. through concrete experience and habituation. There is meanwhile sufficient empirical evidence, for example, that implicit and explicit memory necessary for learning are present and functioning already in human neonates (Rovee-Collier, 1997, cf. Keller, 2007) although information processing is still slow which makes repetition and pervasiveness of stimulation important for learning (Rovee-Collier & Shye, 1992 cf. Keller, 2007, p. 11). The repeated and consistent experience an infant makes, especially within interpersonal relationships, thus shape the genetically programmed maturation of the nervous system (Schore, 1994; Siegel, 1999) and provide the infant with a knowledge structure that help him to interpret and store incoming information. These first mental representation of social experiences can be assumed to be processed as perceptual and motor schemas that form the earliest memory structure of the self (Keller, 2002b, p. 216; 2007, p. 12). Similarly, drawing on LeDoux's notion of the 'synaptic self', Quinn (2005b; 2006) argues that constancy of experiential patterns, paired with (moderate) emotional arousal conveying approval or disapproval translates in the child's brain, into synaptic patterns which can also be conceived of as cognitive schemas. The repeated, consistent nature of this experience ensures the durability of these representations and eventually leads to a culturally distinctive self: "Not only are you your synapses, as Joseph LeDoux (2002:324) puts it, but you are the cultural shape of these synaptic connections. Most profoundly, you are who your synaptic connections have been engineered to be, from infancy onward" (Quinn, 2005a, p. 506).

She argues that constancy of experience, emotional arousal, approval and disapproval of the child's desires and a predispositional priming are universal features used by parents in any culture to instill norms and values to the child, however, *what* norms and values are conveyed for molding the child into a culturally desirable adult varies immensely across cultures (Quinn, 2005b). Patterns established in early infancy are especially effective since the child has not yet undergone other experiences that might hold contradictory lessons . Perceptual, social, and affective experiences can thus be said to play a primacy role in the structuring of the pre-symbolic self already during the first months of life (Kopp & Brownell, 1991; Neisser, 1993).

Since the world into which an infant is born is socially prestructured, that is, caregivers' behavioral and communicative practices are organized by culture, infants in different cultural contexts will consequently make different experiences and develop synaptic connections that are culturally shaped. Infant development can therefore be conceived of as the "interplay between emerging "wetware" and the socially mediated experiential world that this wetware underwrites"[1] (Lock, 2001 p. 397). We can assume that these cultural variations will have crucial consequences for the developmental outcome of the child later in life (Keller, 2007; Mistry et al., 2006; Quinn, 2005b; Rogoff, 2003). Social and cultural experience is hence playing a far more formative role than previously thought (Lewis & Watson-Gegeo, 2004; Mistry et al., 2006). Both parenting practices and infant development are adaptive to and dialogically and integrally related to the cultural context they are embedded in (Keller, 2007; Rogoff, 2003). Culture is hence not a bounded, discrete and coherent entity purely outside of the individual, that is, not a collection of antecedent variables, but a complex interactive and dynamic system (e.g., Fogel, 1993; Greenfield, 1997; Holland, Lachicotte, Skinner, & Cain, 1998; Valsiner, 2000b; 2007) comprising different levels that stand in bidirectional, reciprocal relation. Cultural mediation is not a dyadic or dualistic "mind acquires culture" process but a triadic process based on social interaction (Carpendale & Lewis, 2004). Echoing Bruner (1993), to enter culture is not to *add* some element to one's "natural" repertory,

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1 The term wetware is used to describe the embodiment of the concepts of the physical construct known as the central nervous system (CNS) and the mental construct known as the human mind. It is a two-part abstraction drawn from the computer-related idea of hardware or software.

but to be *transformed*. Culture is not ‘covering’ a universal self but is “the birthing site for psychological processes”(Gergen & Gergen, 1997 p. 31) shaping the self in profound ways (Holland et al., 1998, p. 21). Both parenting and child development are “biologically cultural” (Rogoff, 2003) or, in Bruner’s words, “biological in origin and cultural in the means by which it finds expression” (Bruner, 1983, p. 23). The developing subjectivities therefore are not universal but always correspond to a particular socio-cultural and socio-historical formation (Slunecko & Hengl, 2007).

Cultural models of child care

A number of researchers base their studies on the “Whiting model for psycho-cultural research” (Whiting, 1973, 1981) developed from the seminal work of Beatrice and John Whiting and their colleagues (Whiting & Whiting, 1975). The model defines the physical environmental structure (such as climate, history, geography), population parameters (such as population density, fertility, morality), and socioeconomic structure (such as economy, nutrition, social structure, access to health care, settlement pattern, household type, family structure) as framework for specific care-giving strategies that are functional in a specific cultural context and that will ultimately influence children’s psychological self-development. Although the focus of data collection may be childhood, the focus of theoretical interest is apt to be adulthood (Harkness & Super, 1983). In a similar vein, Super & Harkness (1986) defined three components of a “developmental niche”: the physical and social setting in which the child lives, the customs of child care and childrearing, and the psychology of the child’s caretaker.

In line with these approaches, child development can best be studied by paying attention to the various levels of the model and systematically relating them to self-development: at the most general level, there are overarching cultural beliefs that are usually shared by large segments of a society and that are shaped by the prevailing cosmologies or religions, sociopolitical, geographical and ecological constraints. These cultural beliefs carry with them norms and values implying, on a slightly lower level of generality, rules and standards of what is considered to be good or bad, appropriate or inappropriate behavior in a given society (Dasen, 2003). From an eco-cultural perspective, these norms and values serve to ensure the successful functioning of a given society and vary across cultures because ecological constraints, and historical development are not the same. These cultural meaning systems have also been referred to as ‘folk theories’ (D'Andrade, 1984; 1987), ‘consensual frames’ (Fogel, 1993), ‘frames of orientation’(Mannheim, 1952), ‘cognitive scripts’ (Strauss & Quinn, 1997) or ‘cultural models’ (D'Andrade, 1987; D'Andrade & Strauss, 1992; Holland & Quinn, 1987; Shore, 1996). They provide an interpretative frame for one’s experience as well as culture-appropriate goals for action and define the appropriate, normative way to engage in social interaction and conduct (Weisner, 2002). Cultural models are acquired from cumulated and shared experience or “conjunctive realms of experience” (Mannheim, 1952) of a social group. An individual’s cultural model may thus be seen as nested in more general cultural models of a society. To the degree that people share experiences, they will end up sharing the same cultural model or the same culture (or subculture) (Quinn, 2005a). Cultural models constitute habitualized tacit cultural knowledge[2] and as such is it pre-reflexive, i.e. it is not directly accessible by the acting person (Bohnsack, 2003; Mannheim, 1952). While remaining mostly non conscious and intuitive to the individual, however, it is ‘action-guiding’ (“*handlungsleitend*”) and hence will bring about concrete behavior that feels “natural” rather than “cultural” to the individual of a given culture (Mannheim, 1952). D’Andrade (1984, p. 98) argues that “through the process of socialization individuals come to find achieving culturally prescribed goals and following cultural directives to be *motivationally satisfying*, and to find not achieving culturally prescribed goals and not following cultural directives to be *anxiety producing*” (my emphasis). Cultural models therefore have a powerful directive force in organizing real every day child rearing practices because of this shared, implicit, everyday understanding put into action (D'Andrade & Strauss, 1992; Harkness & Super, 1992; Holland & Quinn, 1987; Ochs, Solomon, & Sterponi, 2005; Quinn & Holland, 1987; Super & Harkness, 1986, 1997).

Cultural models of child care have been referred to as *parental ethnotheories*, that is, parents’ beliefs about the nature of a child, the developmental goals, and how they can be achieved, and of what is accordingly considered to be appropriate child care (e.g., Harkness & Super, 1996; Harkness et al., 2007; Harkness, Super, & van Tijen, 2000; Sigel, McGillicuddy-DeLisi, & Goodnow, 1992). Parental ethnotheories are socio-culturally organized insofar as caregivers project a probable future for the child by “reaching into” the cultural past, projecting it into the future and then “carrying” that conceptual future “back” into the present to create an appropriate socialization environment for the infant (Cole, 1996, p. 186).

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[2] Mannheim (1952) uses the term ‘atheoretical knowledge’. In a similar sense, Bourdieu (1977) talks of ‘incorporated knowledge”

Ethnotheories organize every day caregiver *practices*. It is through the repeated exposure to culturally organized every day routine practices that the child learns implicit as well as explicit lessons on social norms and values which will be internalized as tacit cultural knowledge and shape the development of self. The child develops more or less conscious conceptions of him- or herself as actor in socially and culturally constructed worlds, including a sense of agency and a sense of self-related-to-others that profoundly affects the ways in which interpersonal relations are experienced (LeVine, 1990a). Culturally distinct developmental pathways may hence result in culture-specific conceptions of the self (Greenfield et al., 2003; Keller, 2002a; Marvakis & Papadopoulos, 2002; Quinn, 2005b; Weisner, 2002) that vary with respect to relative emphasis of how one’s individuality and relation of self-to-others is perceived. Since the development of a culture-specific sense of self can be considered to be adaptive to the relevant socio-cultural environment, it follows that there are multiple pathways to healthy development. While there is obviously a large variety of possible developmental outcomes just like there is a large variety of cultural environments, cultural beliefs and caregiver practices which are expressed in the colorful diversity of cultures worldwide, there are also similarities between different socio-cultural contexts, cultural beliefs and caregiver practices.

For example, it has been argued that interpersonal distance/autonomy on the one hand, and interpersonal communion on the other hand are universal human needs (Bakan, 1966), that are, however, given different priority in diverse eco-cultural contexts (Keller, 2007). Similar cultural environments can hence endorse similar priorities (cf. also Harkness et al., 2000; Keller & Demuth, 2005). Kagitçibasi (1996a, 2005), for example, suggests to distinguish three prototypes of family models that each negotiate the dimensions agency (with the two end poles autonomy and heteronomy) and interpersonal distance (with the two end poles relatedness and separateness) differently: (1) the *traditional family model* is characterized by a strong emphasis on interdependence between generations in both material and emotional realms. This model is assumed to be prevalent in rural agrarian societies with low levels of affluence, as well as in urban low-socioeconomic status contexts since in these socio-cultural settings, the family depends on the children to provide economic and utilitarian support. Independence is not functional in such a context and would actually represent a threat to the family. An obedience orientation is therefore dominant in parenting. The type of self construal that is likely to develop in this context is described as *heteronomous-related* self. (2) the *individualistic family* model of independence prevalent in Western industrial urban societies, particularly the Euro-American middle-class. In this sociocultural context dependence on adult offspring is not necessary. Children are therefore brought up to be independent and self-reliant. The type of self construal that is likely to develop in this context is described as the *autonomous-separate* self. (3) the third family model is a dialectical synthesis of the previous two involving material independence but psychological interdependence between generations. This model is assumed to be prevalent in formerly traditional societies that experience changing lifestyles through growing urbanization and economic development. Parents do not need any longer to depend on the economic support of their offspring, however, the psychological interdependence continues. Even though autonomy is valued, separation is not the goal but relatedness continues to be valued. The type of self construal that is likely to develop in this context is described as the *autonomous-related* self. Similarly, Greenfield and colleagues postulate:

> In an independent developmental pathway, social obligations are individually negotiated; opportunities to select social relationships (personal choice) and to act freely in those relationships (individual rights) are maximized (Raeff et al. 2000). In an interdependent developmental pathway, in contrast, social obligations and responsibilities are given greater priority, while individual choice is much less important. An independent pathway prioritizes individuation as a developmental goal; an interdependent pathway, by contrast, prioritizes conforming to established social norms as a developmental goal. (2003, p. 464)

While there is of course more to culture than the two dimensions agency and interpersonal distance (or independence and interdependence), and various authors have cautioned against a reductionist understanding of these concepts (e.g., Ewing, 1990; Holland et al., 1998; Keller, 2003a, 2007; Neff, 2003; Raeff, 2006a, 2006b; Ratner, 2006; Ratner & Hui, 2003; Slunecko, 2001), these two dimensions can be considered useful initial heuristic devices representing multifaceted and co-existing orientations in human functioning that may be defined and enacted differently in different cultural practices (e.g., Chao, 1995; Edwards, Knoche, Aukrust, Kumru, & Kim, 2006; Harkness et al., 2000; Holland & Kipnis, 1994; Keller, 2007; Keller, Demuth, & Yovsi, 2008; Killen & Wainryb, 2000; Kusserow, 1999; New & Richman, 1995; Paradise, 1994; Realo, 2003; Sirota, 2004; Suizzo, 2007; Wainryb & Turiel, 1994; Weisner, 2001).

The study of Mother-infant interactions

Individuals, their social partners, and sociocultural contexts are all interrelated by means of social interaction. Infants don't develop by themselves but are usually engaged in constant interactions with caregivers (Bornstein & Tamis-LeMonda, 2001). Child development is hence intrinsically involved with the infant's participation with others in culturally organized activities (Rogoff, 1998). For research on child development this means that the appropriate *unit of analysis* must be the *sociocultural activity* and the task of this research is to examine the relations between people, culture, and community (Rogoff, 1995, 1997, 1998). In practical terms, this means that while analysis involves focusing on the concrete behavior on the personal level, it uses background information from the interpersonal and community/institutional levels as if with different lenses (Rogoff, 1998). In most cultures, mothers are the primary caregivers of young infants. Studying mother-infant interactions therefore can be considered an excellent avenue for studying cultural models.

Keller's component model of parenting (e.g., Keller, 2002a; Keller, 2002b, 2007) draws on this approach by making concrete mother-infant interactions the unit of analysis and systematically relating maternal behavior to cultural models and parental ethnotheories. It distinguishes 6 different *parenting systems* (primary care, body contact, body stimulation, object stimulation, face-to-face contact, and narrative envelope) which are modulated by *interactional mechanisms*, such as attention (exclusive or shared), contingency (in terms of prompt reactivity), and emotional warmth. While the parenting systems are assumed to represent universal features of infant care, the expression of these behaviors may differ substantially because the interactional mechanisms modulate the style of interaction based on the prevailing cultural models and ethnotheories of a given cultural context.

It could be shown, for example, that cross-cultural differences in parental behavior in free play interactions with their 3-months old (and in some cases even younger) infants correspond to the prevailing ethnotheories of the relevant cultural context (cf. Keller, 2007 for an overview). Roughly, these differences can be summarized as a pattern of ‘*distal parenting*’ with an emphasis on face-to-face context and object stimulation prevailing in Western urban middle class societies as opposed to a ‘*proximal parenting’* style emphasizing body contact and body stimulation prevailing in rural agrarian societies (Keller et al., under review; Keller, Borke, Yovsi, Lohaus, & Jensen, 2005; Keller, Yovsi et al., 2004; Keller, Yovsi, Borke, Lohaus, & Lamm, submitted). Distal parenting is assumed to support the development of the self as a separate and autonomous agent while proximal parenting is assumed to support the development of social cohesion and feelings of relatedness and belonging. There is also empirical evidence that the differences in parenting styles have consequences for later self-development (Kärtner, 2008; Keller, Kärtner, Borke, Yovsi, & Kleis, 2005; Keller, Yovsi et al., 2004). Ethnotheories in rural traditional agrarian societies like the Cameroonian Nso and the Indian Gujarati have been found to focus on aspects that can be related to the concept of interdependence in that “the cultural ideal is the mother-child symbiosis embedded in the close-knit social network of the group for the early phase of life, rooted in spiritual and religious prescriptions. Infants are gifts from the gods and guarantee the immortality of their parents” (Keller, 2007 p. 111). Ethnotheories in Western (e.g. German, Greek, Euro-American) urban white middle class societies have been found to focus on aspects that can be related to the concept of independence in that “the healthy model of parent-infant relationships consists of separated individuals interacting with each other” (p. 111).

There has, however, so far been very little research on infant-directed discourse, the “narrative envelope”, that relates maternal discursive practices with cultural models and ethnotheories. Discourse, in a way, takes a special role compared to other caregiver behaviors in that it serves to regulate the child’s behavior and in so doing is the primary tool to mediate cultural meaning (Schieffelin & Ochs, 1998). As such discourse is “the best available window into cultural understandings and the way that these are negotiated by individuals” (Quinn, 2005c, p. 3). In the following section, I will outline the role of infant-directed discourse for the study of child development in cultural context.

1.3. *The role of the ‘narrative envelope’ for the infant’s developing sense of self*

Protoconversation in early infancy

The existing research on language use in interactions with young infants has so far mainly been concerned with the way adults adjust their multimodal communicative repertoire to take into account the developmental stage of the child (Brown, 1977; Snow, 1977a, 1977b, 1979) and its role for language acquisition (e.g., Gallaway & Richards, 1994; Rice, 1984; Snow, 1986, 1995). Infant-directed speech is assumed to have a biological component and to be part of the intuitive parenting program (Papoušek & Papoušek, 1987, 2002) and therefore has many of the same characteristics in many different languages, such as high pitch, rhythmicity, repetitiveness, vowel elongation (e.g., Papoušek, 1992). It has also been argued that baby talk register is an expression of the caregiver’s desire to engage him or her in conversational dialogue (Bullowa, 1979; Trevarthen, 1979).

Research in this area revealed that beginning with about 6 weeks, infants appear much more obviously social: smiling to a partner readily occurs and eye-to-eye contact is reliably maintained during interaction and around 2-3 months interaction between infants and caregivers becomes intensely dialogical: Mothers typically treat the child as an active conversational partner whose gestures and vocalizations were interpreted as meaningful and purposeful communicative act. “Mothers evidently interpret baby behavior as not only intended to be communicative, but as verbal and meaningful” (Trevarthen, 1979, p. 339). By filling pauses between bursts of vocalization and by taking both the part of the speaker and of the hearer, mothers initiate a dyadic turn-taking pattern and thus create the impression of an adult-like conversation taking place between her and the infant. This so-called *protoconversation* where dyadic turn-taking is learned was first described by Mary C. Bateson (1979). Caregivers typically treat the infant as social being and an addressee in social interaction from birth on. This is expressed, for example, by interpreting the infant’s vocalization and physical movements as meaningful and responding to it accordingly, e.g., by mirroring assumed inner thoughts, taking the perspective of the child, or by “echoing” an infant’s gesture, e.g. by exclamations of pleasure and surprise and initiating a dyadic turn-taking pattern similar to adult conversation. Moreover, situations and the language used in them are adapted to the child rather than the reverse.

The child is the focus of attention, in that the child's actions and vocalizations are often taken up by the caregiver as a starting point of a sequence in the interaction. The narrative like structure of proto-conversation in Western mother-infant interactions has lead Stern (1992) to talk about a 'proto-narrative envelope' or "lived stories" (2004).

Protoconversation has been assumed to be a universal feature of mother-infant interactions (e.g., Ferguson, 1977; Fernald, 1992; Papoušek, 1992; Snow, 1972; Stern, Beebe, Jaffe, & Bennet, 1977; Stern, Speiker, & Mackain, 1982). Several authors have, however, pointed out that the large majority of studies on infant-directed speech/protoconversation was conducted in white, middle-class North American or northern European contexts, that is, within the same socio-cultural context of the researchers, and hence might have lead to a methodological artifact that largely ignored culture (Kulick & Schieffelin, 2004; Ochs & Schieffelin, 1984; Schieffelin & Ochs, 1998). While it is certainly true that mothers all over the world communicate in some way with their infants, a number of psychological and anthropological studies have found that these communicative patterns are not characteristic for many non-western cultures (De León, 2000; Keller, 2007; Keller, Abels et al., 2005; for an overview see Ochs & Schieffelin, 1984; Richman et al., 1988; Schieffelin & Ochs, 1986). In cultural societies such as the Gusii in Kenya (LeVine et al., 1994), Kaluli in Papua New Guinea and Western Samoans (Ochs, 1982; Ochs & Schieffelin, 1984; Schieffelin & Ochs, 1986), South Indian (Landers, 1989), Indian Gujaratis (Abels, 2007), or Mayan societies (cf. De León, 2000), caregivers do not engage in conversations including dyadic turn-taking with their infants. Mayan Zinacantec babies do however have the status of "proto-addressees" (De León, 2000, p. 142), i.e. they are *addressed* with speech in a variety ways, including for instance rhetorical questions, formal address in triadic interaction, speech activities to control the child's behavior. Extended mock conversations and play dialogues, typical for Western societies, is virtually absent also among the Kaluli of Papua New Guinea and the Samoans of Polynesia (Ochs & Schieffelin, 1984). Greek and German mothers were found to use vocal/verbal modes of interaction with their infants significantly more frequently than Yanomami Indians and Trobriand island mothers (Schölmerich, Leyendecker, & Keller, 1995).

Protoconversation has also often been described as rhythmic in terms of taking alternating turns in a harmonious flow and thus creating the impression of a dance (Gratier, 2001; Stern, 1999; Trevarthen, 1993). However, various studies have found cross-cultural differences of rhythmic communication with infants (Cowley, Moodley, &

Fiori-Cowley, 2004; Gratier, 1999-2000, 2003a) suggesting that while rhythm might be a universal aspect of mother-infant interactions, there is variation in the style and extend of rhythmicity. Similarly, Gratier (1999-2000) argues that rhythm is a universal vehicle to transmit meaning while the meanings conveyed vary across cultures.

While there might be a biological component to infant-directed speech, the empirical evidence across cultures suggests that mother-infant communication is inherently organized by cultural parental beliefs (Schieffelin & Ochs, 1998, p. 49). Schieffelin & Ochs (1998) have argued, for instance, that the accommodations to the child reflect a discomfort of Western middle class mothers with the competence differential between adult and the child and that caregivers use self-lowering (e.g., simplified speech) as well as child-raising strategies (e.g., acting as if the child were more competent than his behavior more strictly would indicate) to reduce this competence gap. In some societies age and status differences can, for example, affect the rights to turns in a conversation (Keating & Egbert, 2004). Among the Gusii, verbal exchange is largely restricted to persons whose kin relationship defines them as social equals. Parents and children, however, are considered inherently *unequal* even in adulthood and ideally distant as communicative partners (LeVine, 1990a, p. 109).

Clancy's (1986) study with Japanese families could show how children are sensitized to subtle interactional expectations which in adult interactions are not expressed explicitly and how children acquire culture-specific anxieties and fears that are implicit part of Japanese communicative style. In another study Clancy and colleagues (1997) have observed that Japanese and Korean caregivers construct instructions, prohibition, permissions, promises and threats to children by evaluating a specific behavior as good or bad (like in "if you do it, it's good") whereas English caregivers use modal forms (such as 'can', 'should', 'may' etc) thus conveying the speaker's attitude rather than a non-negotiable truth. The English caregivers also, in contrast to the Japanese and Koreans, added explanations of what will happen if the child would not comply. These different styles can be conceived of as different socialization strategies towards desirable behavior: a more hierarchical structured one in the Japanese and Korean case, and a more egalitarian in the English case.

In most European and Euro-American contexts (Keller, 2003c; LeVine et al., 1994; Mistry et al., 2006; cf. also Rogoff et al., 1993), the development of verbal and analytical competencies are highly valued and therefore child-directed communication will promote the infant's alertness, curiosity, interest in surroundings, exploration, and dyadic turn-taking communication with the caregiver. Learning takes place in an environment in which children are instructed verbally and treated as peers in conversation. It seems logical therefore, that protoconversation prepares the child for similar later learning contexts. In many Sub-Saharan African contexts, in contrast, social competencies are more highly valued than analytical ones. The emphasis is on obedience and social responsibility rather than on proficiency in verbal expression and individuality (Nsamenang & Lamb, 1998). Learning takes place through active observation and participation. There is therefore less emphasis on verbal means of communication and a belief that infants do not need to be directly addressed (Nsamenang & Lamb, 1993, 1998). Some authors have claimed that in sub-Saharan Africa, mothers do not talk to their babies because they believe that babies do not "hear" baby talk (Ellis, 1978 quoted in Nsamenang & Lamb, 1998), or because they are more concerned with the survival, health and physical growth of infants than with cognitive stimulation (LeVine et al., 1994). Nsamenang & Lamb (1998, p.255), however, state that West-Africans "freely tell babies whom they resemble, what their names should be, what they signify, and what sort of adults they are expected to become". This points to the possibility that infant-directed communication may serve various purposes: stimulation of cognitive and verbal abilities in European and North-American contexts, and conveying norms and expectations that go along with the formation of a social identity in West-African contexts.

Moreover, non-verbal and physical features of communication are equally important, especially in nonliterate cultures (Nsamenang & Lamb, 1994). In this line of argumentation, Gratier (2003b) has suggested to broaden the definition of protoconversation to include kinesthetic and tactile modes of interaction and conversational styles that are not centered on the turn-taking format. She states that a proto-conversation may also simply consist of conversation without words. Similarly, Ochs & Schieffelin (1984) have proposed that caregiver-infant interactions do not follow a "biologically designed choreography" (Stern, 1977) but that there are many different choreographies within and across societies.

Cowley and colleagues (2004), for example, found that in KwaZulu communities in South Africa the „caregiver's actions chime with those of the infant creating an impression of behaving in unison. Often this is highly rhythmic and characterized by frequent vocal overlap or chorusing" (p. 118) rather than dyadically following a turn-taking pattern. They suggest to speak of “protosong” rather than of “protoconversation” to describe this cultural communicative pattern with infants.

Another noteworthy point is that the majority of studies on infant-directed-communication aim to relate the domain of characteristics of the social interaction to the mastering of preverbal aspects of communication by the baby, attempting to explain the *acquisition* of language. However, as some authors have pointed out (de Lyra & Rossetti-Ferreira, 1995; Forrester, 1999, 2001), there is still little research that makes explicit how social interaction participates in the *constructions of the baby as subject* in mother-infant interactions. Differences in social circumstances in which the child grows up, particularly patterns of communication, give rise to differences in the patterns of how the infant is discursively constructed (Amorim & Rossetti-Ferreira, 2004; Ochs et al., 2005).

While studies within the language acquisition paradigm could show how culture is acquired through language *learning* (e.g., Ochs & Schieffelin, 1984; Schieffelin & Ochs, 1986; Clancy, 1986; Akatsuka, 1991), the present study’s focus is not on language acquisition but on cultural models as they become explicit in the discursive constructions of mother-infant interactions.

The dialogical relation between self, language and culture

The “narrative turn” in psychology in the early 1990’s has lead to an increasing recognition of language as an important vehicle of cultural transmission (e.g., Bruner, 1990). Discursive theory and discursive psychology (e.g., Edwards & Potter, 1992; Potter, 1996, 2007; Potter & Wetherell, 1987; Potter, Wetherell, Gill, & Edwards, 1990) have made valuable contributions to the understanding of how social order is produced through discursive interaction. They emphasize the *constitutive* role of language rather then its referential aspects. Discourse as practice is both shaped by and helps to shape cultural versions of social reality. Meaning is created through *communicative relationships with others* (Gergen & Gergen, 2002, p. 51). In interpersonal communication, for example, people not only convey messages but always make implicit or explicit claims about who we are relative to one another and the nature of our relationships (Holland et al., 1998). In other words: people afford subject positions to one another (Davies & Harré, 1990, 1999). In the same vein, Branco and Valsiner (2004) point to the relational messages that are conveyed in metacommunication with children and its functions regarding meaning construction. Metamessages such as positioning

(Harré & van Langenhove, 1999), are however culturally mediated and have an effect on the formation of senses of self and identity (Holland & Leander, 2004). The self is not conceived as a durable mental entity or representation but as being dialectically co-constructed in social interaction through discourse (e.g., Forrester, 1999; Gergen, 1990; Harré & Gillett, 1994). This has obviously consequences for how the relation between self and culture, the development of the self, and the acquisition of a cultural self are conceived. The 'narrative envelope' in which the infant is embedded in is organized by culture and hence varies across cultural contexts and should lead to different constructions of self-hood. While some social constructionists take a rather radical stance in arguing that identities are constantly re-constructed and vary across contexts, the present study takes a more moderate stance and conceives of the self as comprising both, more stable aspects as well as constantly re-constructing aspects of the self (cf. also Bamberg, 2008). Similarly, Harré and Gillet (1994) argue that while it is universal to human beings that they can identify themselves as individual person, how this individuality is *perceived* may vary largely:

> to have a sense of one's personal individuality is to have a sense of having a place or places in various manifolds, that is, systems of locations. To have a sense of myself as a unique individual, I have a sense of a location in space, literally a point of view. (…) I am located in a network of mutual obligations and commitments to a manifold of other people (…) I experience myself not as an entity but as having a place from which I perceive, act, and am acted upon and where I am myself perceived. That is a sketch of the phenomenology of selfhood, how I feel myself to be. (p. 103/104)

It has also been pointed out that social constructions are never arbitrary and that the degrees of freedom for constructing social reality are not countless (Edley, 2001; Slunecko & Hengl, 2007). Rather, people construct their symbolic worlds in a prestructured mold in concurrence with preexisting characteristics of a community's cultural world (Slunecko & Hengl, 2007, p. 58).

The dialogical nature of self-construals have also been pointed out by cultural anthropologists (e.g., Holland et al., 1998) who conceive of the self as "developing at an interface, with the interplay between the social and embodied sources of the self, in what might be called the *self-in-practice*" (p.32, my emphasis). This is in line with Stern (1985) who talks of the infant's emergent sense of self on the level of direct *experience,* not *concept*, that will finally move to the stage of a verbal sense of self (p. 7). Drawing on a Lacanian psychoanalytical perspective, Forrester (1999; 2001) suggests that the subject can only conceptualize him/herself through reflected image directed back from the position of desire (primarily the mother's) and that the discourses the child is provided hence inform, and possibly form the basis of, the development of a self-construal. Similarly Bakhtin (1979) argues that we can only conceive of ourselves through the eyes of the other, and Fogel (1993) argues that the self develops through co-regulation in communicative interactions.

By the way the mother speaks and contributes to the ongoing development of the conversation, she 'frames' (Fogel, 1993; Goffman, 1974; Kaye, 1991) the situation in a specific way, e.g. as 'play', 'scolding', 'hierarchical', 'egalitarian' or whatever. By organizing the interaction with her infant in a specific way, the caregiver affords subject positions to the infant and creates a microcosm or social reality that exposes the infant to certain versions of the self. Slunecko and Hengl (2007) bring this to the point by stating that symbol systems such as language preexist the individual who grows into them and is transformed by them

> into a member, a reflection, and an embodiment of that culture. Hence, language 'owns' or 'has us; it structures thinking and feeling; it even provides us with formats of subjectivity. We are in this sense always the results of processes, which lie above and beyond us, since we, as individuals, do not choose our cultural and linguistic formats and imprints. (p. 47)

Infant's awareness of reality and learning of culture is built through *communication* with the motives and emotions of other persons (Trevarthen, 1998a). As Forrester states: "The desire of any parent for his/her child to be a self expresses itself through culturally specific discourses: language as social action presupposed on the beliefs, narratives and everyday understandings of what is appropriate in context" (1999, p. 42). Through repeated exposure to these 'frames' and ways in which the infant is positioned in the interaction, a relatively stable self-construal, i.e. perception of oneself and of oneself in relation to others in the society, is developed. The way the child constructs him/herself discursively later on in childhood will reflect these relatively stable patterns. A case study on caregiver-infant interactions when the infant was 18-28 months old (Forrester, 2001), for example, could show that the child began to understand

and locate herself in the membership categories provided and deemed appropriate within the specific cultural context's and provides insight on how the caregivers' discursive practices facilitated or constrained her emerging conception of what it is to be a self. The sense of self a child acquires hence is in large part determined by the models, metaphors and constructs of self made available to the child in the discourse surrounding him or her (Forrester, 1999).

These newer approaches are close to the cultural historical line of reasoning as expressed by Vygostky, Leontiev and Bakhtin. Together, they provide a fruitful approach to explain the mechanisms by which infants acquire cultural knowledge and understanding of self and self in relation to others through the narratives they are embedded in.

From a cultural historical perspective, adaptation to the cultural environment is not only related to the physical world but comprises the acquisition of specifically human, socio-historical experiences through psychological tools such as semiotic sign systems embedded in every day practices (e.g., Daniels, 2005; Valsiner, 2001, 2003, 2007; Vygotsky, 1962, 1978; Wertsch, 1985b). Through social interactions with significant people in a child's life, particularly parents, but also other adults a child comes to learn the habits of mind of her/his culture, including speech patterns and other symbolic knowledge through which the child derives meaning and constructs social knowledge. It is through this process of *semiotic mediation* that the child learns the “knowing how” of cultural practices and meanings: While cultural artifacts or ‘tools’ are initially outside and beyond the child, the mastery of these tools is mediated through incorporation of the tool in the activity of the child (Cole, 2005). Cultural artifacts are thus internalized[3], however, not as a direct one-to-one transmission, but by appropriating it by making it one's own (cf. also Wertsch, 2000). A fundamental premise of Vygotsky's therefore, is that tools and signs are first and foremost shared between individuals in society and only then can they be internalized by individuals developing in the society as is reflected in this famous proposition of the ‘general genetic law of cultural development’:

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[3] Vygotsky actually refers to this process as ‘interiorisation’ to distinguish the process of mediaton from a simple one-to-one transmission

> Every function in the child's cultural development appears twice, or on two planes. First it appears, on the social plane, and then on the individual plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This is equally true with regard to voluntary attention, logical memory, the formation of concepts, and the development of volition. We may consider this position as a law in the full sense of the work, but it goes without saying that internalization transforms the process itself and changes its structure and functions. Social relations or relations among people genetically underlie all higher functions and their relationships. (Vygotsky, 1981, p. 163)

The intramental functionings thus derive from participation in dialogic encounters on the intermental plane (e.g., Wertsch, 1985a; 2000). The essential site for the operation of semiotic mediation is participation in social/cultural activity. Vygotsky distinguished 3 types of mediational means (Daniels, 2005): signs and symbols; individual activities; and interpersonal relationships[4]. He considered speech to be the most powerful and pervasive of semiotic means that functions as a psychological tool in the construction of individual consciousness. Qualitatively different mediational means, i.e. different discursive practices in mother-infant interaction, may hence result in qualitatively different forms of higher mental functioning[5]. Mental processes are inherently social not only in the sense that they are mediated through social interactions but also in the sense that these social interactions are *socio-culturally situated* (Wertsch, 1985a, 2000). Cultural models can therefore be conceived of as secondary artifacts (Cole, 2005; Holland & Valsiner, 1988) that *dialectically* mediate higher mental functionings through *communication* in every day activities (Fogel, 1993; Valsiner, 2000b, 2003; Wertsch, 2000). Accordingly, the ‘cultural model’ that the child acquires results from the internalization of dialectically co-constructed social *experience* in *communicative practice*[6] in a specific sociocultural and socio-historical context (Quinn, 2005b). Enactments of cultural understanding in mother-infant interactions can therefore be said to form the fabric of self-conception and self-

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4 Activity Theory as developed by Leontiev stresses the practical activity rather than the semiotic means.

5 Vygotsky related the construction of higher mental functioning mainly to the control of one’s cognition and affect, the idea of mediating devices is, however, appropriate far beyond.

[6] The focus on the child-in-practice has lead some authors (Cole, 2005; Holland et al., 1998; Holland & Leander, 2004; Ochs et al., 2005; Strauss & Quinn, 1997) to point to the similarity of socio-historical theorizing with Bourdieu’s Theory of Practice (Bourdieu, 1977), both stressing the role of social action as mediating between environment and the person. Bourdieu’s conception of ‘habitus’ differs, however, e.g., in that it focuses mainly on the ‘embodied’ internalization of experience and that it does not consider the continuing reorganizatin and adaptation to the environment

development (Budwig, Uzgiris, & Wertsch, 2000). Subject formation or self development is thus socioculturally contingent in the sense that it occurs out of an interplay of cultural elements, particularly language (Slunecko & Hengl, 2007).

Primary Intersubjectivity

The argumentation so far has made clear that the process of human development is inextricably bound to the process of enculturation: as the child develops, he or she needs to learn to understand social practices in accordance with established cultural meaning systems in order to be able to participate in the society (Habermas, 1984; Schütz & Luckmann, 1974). A general prerequisite for gaining access to social or cultural meaning is *intersubjectivity* (Hundeide, 1993; Miller, Hengst, & Wang, 2003; Trevarthen, 1998a), that is, finding a shared background with another person against which experience can be understood (Hasan, 2002; Hundeide, 1993).

By matching infant behaviors, caregivers enter a shared, that is, intersubjective world with the infant (Uzgiris, 1989). This is possible, because infants as early as 2-3 months of age are already capable of what Trevarthen called '*primary intersubjectivity*'[7]: they are able to share experiences and purposes with other minds and to make evaluations of reality (e.g., Trevarthen, 1977, 1979, 1998a, 1998b). There is sufficient empirical evidence that the infant is an active subject with communicative intentions and. the capability of reading emotions in the face or voice of their caregivers with surprising precision (e.g., Reddy et al., 1997; Trevarthen, 1998a). Both child and adult influence each other and have expectations about the reactions of his partner by mutual subject-to-subject orientation. Moreover, infants in that developmental period show communicative signs of "self-consciousness" monitored through others' reactions, metacommunicatively by "emotional referencing" with respect to the self as "referent object" (Reddy, 1991). Similarly, Cowley argues that babies have a neural system that allows them to use maternal movements and gaze to recognize and orient to what the mother is doing and intending to do (Cowley, 2003; Cowley et al., 2004). Trevarthen considers this communicative intelligence as the "necessary motor of cultural learning" (1998a, p. 90).

Intersubjectivity is never 'pure' in the sense of absolute consensus of shared experience, but is *negotiated* in joint activity (Wertsch, 2000). Caregiver's actions might for example jar with the child’s needs and interests. Caregivers’ interactions with infants obviously imply initial basic asymmetries and polar discrepancies so that negotiation largely depends on how the caregiver guides and controls the infant’s attention and behavior. By coordinating the mother’s intentions with the child’s needs and intentions, and interpreting and evaluating the infant’s behaviors, both verbally or nonverbally, cultural meaning is dialogically constructed in that mother and infant tacitly negotiate ‘contracts’ (Hundeide, 1993) of what is acceptable and permissible. Through this perceptual attunement along the dynamics of the interindividual activity the infant learns to hear and see what caregivers expect. Hundeide (1993) argues that through sharing common experience of what is ‘normal’ the infant is ‘contractually’ committed to present (or to position) himself in a certain way as part of the silent agreement of participation. Drawing on micro-analysis of a South-African mother-infant interaction, Cowley and colleagues could demonstrate how a three-month infant comes to grasp that his mother wants him to fall silent and thus learns to adjust to the expectations of his encultured caregiver (Cowley et al., 2004). There is also empirical evidence that children at a very young age (Schieffelin & Ochs, 1986) display culturally characteristics of conversational patterns and that even as early as at two (Gratier, 2003a) and three (Cowley, 2003; Cowley et al., 2004) months of age, infants already display communicative practices that are conform with the prevailing cultural models of how to relate with their caregivers.

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[7] As opposed to secondary intersubjectivity which describes the stage (around nine months of age) when the infant is motivated to join the other in a shared object-recognition inviting co-operation in object-oriented task performance

These findings suggest that infants are very well capable of ‘understanding’ tacit non-verbal meaning long before their linguistic capacities, however, not on a mental, conceptual level, but on a preconceptual, prerepresentational level that forms the basis for later more mediate and representational forms of communication and for sharing cultural knowledge.

We can conclude that infant caregivers function as mediators of the outside world, dragging elements of the larger social world into the intersubjective sphere and thus emphasizing meaningful aspects of the world that exists beyond the interacting dyad (Gratier, 1999-2000, p. 97). Through participation in care-giving systems infants gradually learn and integrate intersubjective experience about themselves, the parent, their interrelatedness as well as about the social environment and the role they play in this environment. That is, the infant acquires a specific consciousness of self and of self in relation to others. As novices they will readily internalize the concrete experiences they make as the given norm about ‘the world’ (Papoušek, 2007, p. 258/259). On the basis of intersubjectivity, semiotic mediation allows the infant to build expectations that are transferable to other new contexts and hence are generalized (Valsiner, 2001). These generalizations are then concretized again in new situations that the child encounters and that the child interprets based on the cultural meaning that has been mediated to him or her. The tacit knowledge that is acquired in this way is inherently cultural but is perceived as natural to the developing child. Primary intersubjectivity in mother-infant interactions can thus be considered as ‘birthing place’ of culture and a principal tool used by the caregiver in the cultural shaping of the infant’s mind (Rochat & Striano, 1999 quoted in Bornstein & Tamis-LeMonda, 2001; cf. also Gratier, 1999-2000; Newson & Newson, 1975; Trevarthen, 1994).

Cultural models in maternal talk

While (primary) intersubjectivity and semiotic mediation are crucial theoretical concepts to understand the mediation of culture through language, the empirical focus of the present study is not on these mechanisms but on how cultural models can be inferred from maternal discourse.

From the argumentation so far, it has become clear that talk is one of the most important ways in which people negotiate understanding and accomplish social ends and that maternal talk to infants varies largely across cultures. Cultural models not only organize how humans behave in a broader sense but also in a narrower sense how people talk in socially appropriate ways (Holland & Quinn, 1987; Quinn, 2005a). Prevalent discursive practices are intimately related to socio-historical circumstances, i.e., to the overall condition of their culture (e.g., Foucault, 1972; Slunecko & Hengl, 2007). To answer the question how culture organizes ways of talking, the work of Bakhtin (Bakhtin, 1981; for a discussion see Holland et al., 1998; Maybin, 2001) is a fruitful approach and can be seen as complementary to the work of Vygotsky. While Vygotsky’s focus was on the developing child, Bakhtin’s interest was with how (cultural) ideologies shape the use of language: in constructing a meaning of the world, an individual always draws upon the languages, the words of others to which he or she has been exposed. Language thus is never neutral but “tastes of the context and contexts in which it has lived its socially charged life” (Bakhtin, 1981, p. 293). On the one hand, there are cultural canons which have a normative impetus on the language use of a person within a specific cultural group (‘centripetal forces’); on the other hand ‘centrifugal forces’ allow for individual choice of language use and result in diversity of speech genres use associated with individual evaluations of the social world. Utterances of an individual are therefore neither entirely shaped by cultural conventions nor an entirely individual position. Ideas, expressed in language, are, however, always located outcomes of social and historical processes. Language determines and is determined by cultural formations, it is a material production of a particular socio-historical context and it has the world-view of the speaker embedded in it.

Linguistic anthropologists have long recognized that cultural and social values as well as cultural notions of self and modes of interpreting social reality are inscribed in everyday caregiver discourse, making it possible to discern and investigate the relationship between everyday discursive practices and broader cultural models (Duranti, 1988; Keating & Egbert, 2004; Kulick & Schieffelin, 2004; Ochs, 1988, 1990, 1993; Ochs & Schieffelin, 1984; Ochs et al., 2005; Schieffelin, 1990; Schieffelin & Ochs, 1986; for an overview see also Garrett & Baquedano-López, 2002; Schieffelin, 1990). Ochs (1982) has shown, for example in her work in Samoa, that the organization of turn-taking procedures in conversations with children is linked to beliefs and expectations regarding the nature of children.

A number of cultural developmental psychologists and psychological anthropologists have taken up on this work and could show how cultural knowledge is communicated and negotiated in caregiver's interaction with their children (e.g., Amorim & Rossetti-Ferreira, 2004; Bonaiuto & Fasulo, 1997; Budwig et al., 2000; Chaudhary, 1999, 2004; Fatigante, submitted; Fatigante, Fasulo, & Pontecorvo, 2004; Fung, 1999; Fung & Chian-Hui Chen, 2001; Lyra, 1998; Matsumoto, 2006; Miller, 1996; Miller et al., 1996; Miller & Hoogstra, 1992; Ochs, Pontecorvo, & Fasulo, 1997; Pontecorvo & Fasulo, 1999).

Analyses of caregiver-child interactions have, for example, demonstrated how children gain access to a cultural understanding of norms and transgressions (Pontecorvo, Fasulo, & Sterponi, 2001), of one's role as participant in interactions (Fatigante, Fasulo, & Pontecorvo, 1998), as well as to a cultural appropriate sense of self and identity (Forrester, 2001, 2002; Miller et al., 1996; Miller, Potts, Fung, & Hoogstra, 1990; Miller et al., 1997) based on parent's discursive strategies. Miller and colleagues (2001) could demonstrate how Taiwanese Taipei mothers use narrative patterns that index a high asymmetry between parents and children whereas Euro-American use narrative patterns that foster the child's self-esteem and strengthen the connection between parents and children. Euro-American parents in Los Angeles have been found to socialize their children into cleaning practices by drawing on a discourse fostering independence and autonomy while Italian parents in Rome use discursive strategies that emphasize interdependence among family members (Fasulo, Loyd, & Padiglione, 2007). Euro-American middle-class dual-earner families in Los Angeles have been found to use a variety of discursive strategies to insure both intimacy (relatedness) and the child's autonomy in bedtime routine practices (Sirota, 2004, 2006). Japanese mothers have been found to narrate with their infant's voice to promote their baby's behavior (Okamoto et al., 2006). North-German mothers have been found to refer significantly more often to the child's mental states and needs, and to evaluate and praise the child more often than Cameroonian Nso mothers do while Nso mothers refer significantly more often to social context, authorities than North-German mothers do (Keller et al., submitted).

To my knowledge, however, there have not yet been any studies with very young infants drawing on a discursive psychology approach. Also, there exist hardly any studies from traditional agrarian African societies. Considering the fact that most developmental theories, such as the development of 'protoconversation' are based on studies that were carried out in Western industrialized middle-class contexts, it seems necessary to draw our attention more to societies that have so far be underrepresented in the literature. Since cultural knowledge is tacit and therefore feels natural to members of a given culture, a researcher may risk to be blind to the cultural features when studying behavior of members of his own cultural background. A cross-cultural design can therefore be helpful to make cultural patterns more explicit.

1.4. Research Question

In line with the theoretical approach outlined above the present study conceives of infant-directed communication as cultural practice that has evolved out of an adaptive process to the eco-cultural requirement of a specific context. While biologically rooted in the intuitive parenting program, it can therefore be assumed that its phenotypical manifestation varies systematically across cultural contexts and according to the broader cultural models a society subscribes to. This implies that protoconversation as described in the literature may be a Western manifestation of an underlying 'genotype'. So far, there exist only a small number of studies on child-directed communication from non-western rural societies. While these studies provide evidence that the Western protoconversational pattern is not universal, they do not systematically relate these differences to the prevailing cultural model from an eco-cultural perspective (but see Keller, 2007; Keller et al., 2007).

In order to examine how infant-directed communication relates to the broader cultural context from an eco-cultural perspective, studies are needed that

1. assess infant directed communication in natural context
2. provide a thorough description of the socio-cultural context that allow to systematically relate patterns of infant-directed communication to the relevant requirements of a given context as well as to the cultural models of infant care that are prevalent in that context.

Since previous studies were able to link differences in infant care practices to whether cultural contexts subscribe more to the autonomy/independence model or to the relatedness/interdependence model, one might infer that differences in infant-directed communication likewise can be related to these dimensions. According to Keller's argumentation (e.g., Keller, 2007), rural, agrarian, non-Western societies can be considered to prototypically represent a cultural model that stresses interdependence/relatedness while urban Western middle and upper class societies can be considered to prototypically represent a cultural model that stresses independence/autonomy. In line with this argumentation, previous research could show that infant care practices among the farming Nso in Western Cameroon can be related to broader cultural models that emphasize interdependence while infant care practices in North German urban contexts can be related to broader cultural models that emphasize independence. To investigate if protoconversation as described in the literature is a cultural manifestation of an underlying system that can be found in urban Western white middle class societies, it seems reasonable to compare infant directed communication from such a context with that of a rural, non-Western society.

Previous studies that have systematically related infant care practices to the eco-cultural requirements of a given context have mainly examined *non-verbal* parental behavior (cf. Keller, 2007 for an overview). Those studies which tried to infer orientations towards independence and interdependence from *verbal* data on the other hand, have so far mainly relied on interview data (e.g., Keller, 2007; Keller & Demuth, 2005; Keller et al., 2008; Keller, Hentschel et al., 2004) or have analyzed mother-infant interactions by means of content analysis (Keller, 2007; Keller et al., 2007). While these studies could show *that* discursive practices in mother-infant interactions differ across cultures, the present study investigates *how* cultural orientations are discursively achieved by a moment-to-moment development of the interactions. The aim is to lay open the *process* of cultural transmission through semiotic mediation. That is, to investigate *how* and *what kind of* 'contracts' (of what is acceptable and permissible, or even desirable) are tacitly negotiated (Hundeide, 1993) between mother and infant. This approach is based on an understanding that (cultural) meaning *develops* in the course of the interaction in a process of negotiating intersubjectivity. According to this view, the meaning of an utterance is not a straightforward matter of external reference but depends on how an utterance relates to previous utterances and what is accomplished by it (Wetherell & Potter, 1988). Language is considered not primarily as referential but as *constitutive*, i.e. the focus is on the action that is performed through talk-in-interaction. Communication efforts are always goal-oriented (e.g., Valsiner, 2001) and serve specific functions. In order to infer the goal and the function of maternal communication, analysis therefore needs to take into account subtle features of discourse and examine the *dynamics* of the interaction (Miller, Fung, & Koven, 2007). Such a practice approach to the study of discourse requires methodological procedures that are able to investigate how the co-construction of social reality in interaction is accomplished (e.g., Antaki, Billig, Edwards, & Potter, 2003; Potter, 2004a; 2007). Since what is being talked about only gradually develops in the course of the interaction (Garfinkel, 1967; Shotter, 1993), methodological procedures of analysis must be *reconstructive* and address the subtle features of talk on a turn-by-turn basis and hence go beyond the mere content of what has been said.

The infant's age of 3 months is of specific interest in the present study because for one, it is the developmental period in which protoconversation develops. Moreover, a first developmental transition becomes observable with respect to the formation of primary relationships (Keller, 2002b, 2007), which includes experiencing oneself in relation to others and hence can be considered a foundation for the development of a self-construal.

The objective of the present study is to deepen our understanding of the role of cultural models in early mother-infant communication. More specifically, it is interested in

(1) analyzing discursive practices used by the mothers to co-construct the interactions with the infant. In particular, it is interested in analyzing how orientations towards autonomy and relatedness are negotiated in the interactions and how this relates the broader socio-cultural context.

(2) examining whether protoconversation as described in the literature might be a cultural manifestation of an innate parenting system that is prevailing in societies that subscribe to an independent orientation.

For this purpose it compares mother-infant interactions when the child is 3 months of age in two cultural contexts that have previously described as ‘prototypical’ independent and interdependent. German middle class families in the North German City of Muenster and agrarian Nso families in the Bamenda Grassfields of Cameroon. Since cultural psychology does not conceive of culture as independent variable but as being inextricably part of human’s psyche, the aim is not to recruit matching (paralleling) samples but to first understand one cultural context from within and then compare two cultural groups (Shweder et al., 2006).

In order to make valid claims on relationships between parenting practices and the cultural models of the specific socio-cultural environment, it starts out by describing the relevant ethnographic background and prevailing ethnotheories of the two groups to be compared.

While the infant is considered an active partner in the interaction, due to the asymmetric power distribution at this early age, we can say that it is primarily the mother who structures the social world around the infant. The study therefore mainly focuses on the mother’s communication towards the infant. The infant’s contributions to the interaction are, however, considered as necessary background information to be able to analyze how the mother’s utterance refers to specific infant’s behaviors.

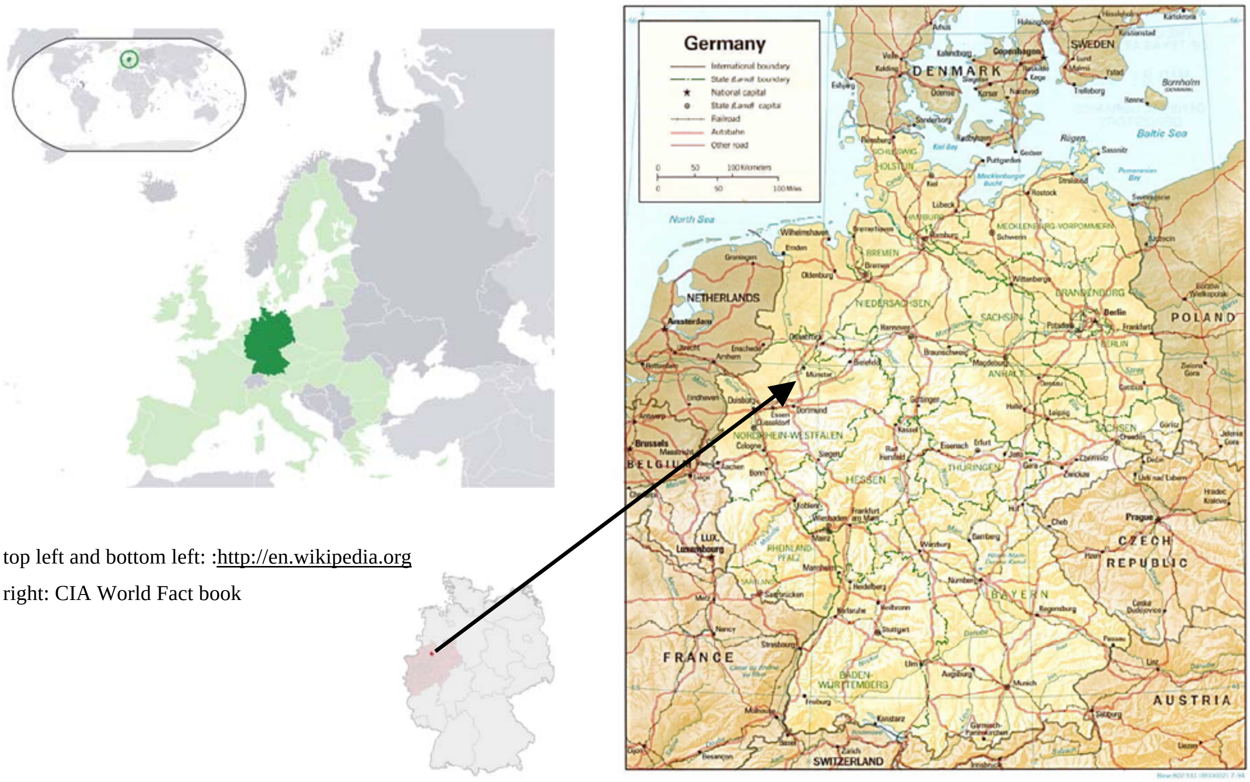
The study subscribes to the principles of qualitative research. Accordingly, theoretical assumptions and previous empirical findings are conceived of as requisite for analysis and for enhancing ‘theoretical sensitivity’ (Glaser, 1978; Strauss, 1987). The aim, however, is not to formulate and test ex ante formulated hypotheses. Rather, hypotheses about the purposes and consequences of language use are developed in the course of the analysis (e.g., Wetherell & Potter, 1988). Theoretical knowledge is used as heuristic-analytical framework and as "sensitizing concepts" (Blumer, 1954, p.7) which are further developed in the continued analysis and reinforced with empirically grounded hypotheses from the data material. Moreover, according to the "principle of openness" (Kleining, 1982) the understanding of the object of research is regarded as preliminary until the end of the research, because the object will present itself in its true colors only at the end (p. 233). This flexible procedure aims to insure that the theory is not simply superimposed upon the collected data (Witzel, 2000).

The researcher's preconceptions before starting the analysis will be disclosed in the following, in order to provide a basis to evaluate to what degree analysis has really discovered new aspects or merely tried to confirm existing expectations about the data (Steinke, 2004): the two groups were expected to differ in line with the respective cultural models described in the introductory chapter, more precisely, I expected the Nso mothers to display discursive practices that foster a sense of interrelatedness and that stress obedience, social responsibility and social harmony. I expected the Muenster mothers to display discursive practices that foster a sense of independence and that stress the child's individuality. While I expected *that* discursive practices in the two groups would differ in the described directions, I had no preconceptions of *how* these orientations would be discursively achieved by a moment-to-moment development of the interactions and what specific discursive practices mothers would draw on. Nevertheless, based on previous findings, I expected the Nso mothers to use little verbal communication, to not primarily focus on the child as an individual. I expected the Muenster mothers to use rich verbal communication and to focus on the child as an individual.

2. Ethnographic Background

The present study conceives of ‘cultural models’ as tacit knowledge that has been acquired through accumulated experience in social interactions. Social groups who share similar experiences, based on their geographical, generational, educational, and socio-economic background can be assumed to share similar cultural models and thus living in the same ‘cultural context’. In the following I will describe the ethnographic background of the two cultural contexts of the participants of this study.

2.1. *The Muenster context*


Germany
SWEDEN
DENMARK
North Sea
Baltic Sea
NETHERLANDS
POLAND
Münster
BELGIUM
LUX.
CZECH REPUBLIC
FRANCE
AUSTRIA
SWITZERLAND

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right: CIA World Fact book

Population parameters of Germany

The average life expectancy in Germany is 75.8 years for men and 82.0 years for women with a fertility rate of 1.4 children born per woman and an infant mortality rate of 4.1 per 1000 births (CIA World Fact book, 2008). Infant and maternal mortality rates are lower than the European average (World Health Organization Regional Office for Europe, 2008). Along with its very low birth rate and relatively high life expectation, Germany finds itself at a steady population decline and consists of more and more aged persons.

The German social security system is one of the most comprehensive in the world (Kindersley, 2008). Health care is for the most part provided by the state based on a nationwide compulsory social insurance system that also includes old age pension scheme and unemployment insurance. The mean age of a mother at the birth of the first child is about 29 years. On average, Germans receive high levels of education. In 2006 for example, 1,125 schools operated in Berlin with various areas of specialization (Statistisches Landesamt Berlin, 2007). Children have access to free, state-run schools. As Europe’s largest economy and second most populous nation, Germany belongs to the leading industrial nations in the world and has a strong gross national product. Despite a very high unemployment rate, a great part of the population can afford a very high living standard compared to the rest of the world. A large percentage of children thus grow up s in an eco-cultural environment where the survival of the child is normally not an issue.

Socio-political background

Germany has a history of more than 50 years of democratic government. After having been defeated in World War II, the country was occupied by the victorious Allied powers of the US, UK, France, and the Soviet Union and divided into four zones of occupation. With the advent of the Cold War, two German states were formed in 1949: the western Federal Republic of Germany (FRG) and the eastern German Democratic Republic (GDR). Although the country was largely destroyed after World War II, West Germany experienced strong economic growth in the years that followed. After the fall of the communist regime in East Germany, the two parts were reunited again in 1990. While there are many local accents and dialects, the official language is German. The Federal Republic today is governed by a multiparty democracy and divided in 16 administrative states (*Bundeslaender*, singular *Bundesland*).

Social structure

The German society can be characterized as being demographically structured and strongly influenced by postmodern thinking. With a total of 18,6% migrants (of which 8,9% are foreigners)[8] (Konsortium Bildungsberichterstattung, 2006) many of which have lived here for several generations already, society becomes increasingly intercultural. Status is achieved by personal achievement, education and material wealth rather than inherited.

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[8] 9,7% are Germans, i.e. repatriates, naturalized persons and persons of which only one parent is migrant

A 'typical' or 'ideal' middle class household in Germany consists of a married couple with one to two children living in an own condominium or house. With the increasing secularization of society within the recent years and an increased acceptance of alternative life styles, there has, however, been an increasing tendency to live together outside wedlock or as a single parent (Kindersley, 2008). The social security system allows older people to be financially relatively independent of their offspring. It is also quite common for older people to move to an old people's home rather than to live with family members. Only 9% of elderly people between 70 and 85 years of age live together with their child in the same household (Kohli, 1999; Kohli, Kuenemund, Motel, & Szydlik, 1997). Young people therefore have less responsibility to care for their old parents as it was still the case several decades ago. They have an increasing freedom to invest in their own live and career without obligations to others.

Women have 14 weeks maternity leave and are paid 100% of their salaries. Three years of parental childrearing leave is compensated with an income-corrected flat rate for 2 years and is unpaid for the third year. Most mothers stay home after child birth at least for several months and often even several years until the child enters school. While meanwhile also fathers have the possibility to take paternal leave, only 1.6 % of fathers actually use this possibility (Keller, 2007), so that the mother can still be seen as the primary caregiver during early infancy. Public as well as private kindergarten and day-care centers provide the possibility for many parents to pursue dual-careers. However, mothers reduce their labor time to a larger extend and over a longer period of time than mothers in other European countries, like Sweden, France and Italy (Blome & Keck, 2007). Compared to these countries, there are very few possibilities for day care for infants younger than three. Also, due to geographical distances, family networks are not as closely knit as for example in Italy where 13 % of all grandmothers take care of their grandchildren compared to only 3 % in Germany. Grandparents are therefore seldom an alternative for day care. In particular in the states which formerly belonged to West Germany, mothers often decide to stay home after birth, especially mothers who are married, whose husband have a high education and higher income than themselves (ibid).

Infants thus usually spend a large amount of time at home with the mother. Later on, mother's may join weekly organized toddler's group meetings with other mothers and their infants. To a far lesser extend, grandparents take care of the child. The ‘macro habitat’ (Ochs et al., 2005) in which children grow up consists of houses with exterior and interior walls and doors, demarcating relatively sharp boundaries of children’s access to the broader social environment and can therefore be described as ‘social isolate’ families (LeVine, 1990a). While parents don’t depend on their children to be cared for in old age because of the social security system, children still have a strong psychological value and are still viewed by most people as ‘fulfillment of one’s life’. Despite a general desire for children (90%) (McKinsey & Company, 2006) the birth rate is one of the lowest in the world. Reasons why people opt to have no or only 1 or 2 children are being "satisfied without children.", “high costs”, “lack of childcare options”, and “professional disadvantages” (ibid).

Ideologies and world views

Germany has a long tradition in the Judeo-Christian worldview. The role of religion has, however, decreased significantly over the past decades and today, only 65 % of the population belong to any Christian church. Through an increased migration of mainly Turkish people, Islam represents presently the third largest religious group nowadays (Gaede, 2006). It should be noted here, however, that there has been an increasing trend towards secularization in Germany over the past decades. While religious affiliations might still exist on paper, religious beliefs hardly play any role in every day life.

Germany was heavily influenced by Enlightenment which advocated reason as the primary basis of authority and which led to a decline in the influence of traditional authoritarian institutions such as the nobility and Church. Northern Germany has historically been strongly influenced by Prussian thinking which stressed discipline, punctuality, and obedience toward public authority (Ahnert, Meischner, & Schmidt, 1995), and by Protestantism stressing individual responsibility, freedom and introspection (Ahnert, Kraetzig, Meischner, & Schmidt, 1994). However, within the past century, there has been an increasing trend towards more postmodern thinking and liberal lifestyles, as expressed for example in the women's movement in the 70’s, and later on in the gay and lesbian movement. Changes in society are also marked by a more egalitarian and informal organization of interpersonal relations. Management styles and working environments are increasingly characterized by flat hierarchies and team work. There has also been a dramatic spread of the use of the ‘familiar’ form of address (*du*, as opposed to

Sie), and the decline in the use of titles (e.g. *Herr Müller* instead of *Prof. Müller*) (Wierzbicka, 1998, p. 241). Some traditional values, such as social discipline and order (*Ordnung*) based on legitimate authority are claimed to be still very important (ibid).

The value of individual responsibility and self-reliance becomes evident in various German proverbs such as "Every man forges his own destiny." (*Jeder ist seines Glückes Schmied),* "Help yourself, otherwise no one is going to help you" (*Hilf Dir selbst, sonst hilft Dir keiner*) which is a modification from the former proverb "Help yourself, then God is helping you" (*Hilf Dir selbst, dann hilft Dir Gott*), or "Man does it on his own!" (*Selbst ist der Mann*!).

Muenster

Muenster is a city in the northern part of the (former West) state of North Rhine-Westphalia which belonged to the British zone during the Cold War. It is has a high administrative and educational infrastructure and is marked by a very strong economy and a relatively low unemployment rate compared to other parts of Germany (Jahresstatistik der Stadt Muenster, 2006). The citizens are characterized by a high level of formal education and high level of standards of life. With about 265,000 citizens in 1995/1996 when the data were assessed (272,000 in 2008), it constitutes a relative big city in German comparison with mainly middle to upper middle-class inhabitants. 80 % of wage earners work in the service sector, 17 % in the industries and only 1 % in agriculture (Jahresstatistik der Stadt Muenster, 2006). Many people working in Muenster commute from other places. A large proportion of the population consists of students, however, and therefore are no permanent residents. Moreover, almost the half of the peripheral area is actually farm land which explains the relatively low population density of 900 persons/km² (Regionalstatistischer Online Atlas NRW, 2007). Muenster has one of the highest living expectations within German cities (76.3 years for men, 83.1 years for women) and a slightly lower median age (40 years) than Germany in general (Jahresstatistik der Stadt Muenster, 2006). People live mainly in single-family houses and villas, as well as in apartment buildings with a maximum of 2 or 3 floors. About 91% of the population is native German. In Muenster, 78,5% of the population are affiliated with the Christian churches (55 % Catholic, 20.5 % Protestant, 3 % Free Evangelical) compared to 34% for Germany in general. 3% are Muslim (3.7% in Germany) (Jahresstatistik der Stadt Muenster, 2006), the rest is unaffiliated or belongs to "other" religious affiliations not further specified.

Cultural models of infant care and parental ethnotheories

This eco-cultural context fosters a strong sense of individuality that is characterized by educational and economic achievement. North-German urban middle class families have for example been described as valuing independence and autonomy expressed in self-realization, self-confidence and the ability to judge and to assert oneself (Pross, 1982). Parent's value children's individuality, expressed, for example by choosing unique first names (Keller, Kuensemueller et al., 2005), as well as fostering autonomous self-regulation and self-reliance (*Selbständigkeit*), expressed for example by encouraging the child to sleep alone already at a very early age (Keller, 2007; LeVine & Norman, 2001; Norman, 1991), or to play by him/herself and not get too upset when the mother is not available (Grossmann, Grossmann, Spangler, Suess, & Unzner, 1985). Spending time on their own is considered as helping the child develop a relationship with him- or herself (Keller, Hentschel et al., 2004). These parental ethnotheories are also widely expressed in the popular literature and various parenting guides. Infants have been shown to spent a considerable amount of time (average 40%) without a person in viewing distance, and when not alone, being nearly always exclusively within their mother's reach (Keller, Abels et al., 2005) compared to non-western agrarian societies. Conceptions of good parenting center around the child's autonomy and uniqueness, fostering the child's psychological independence and supporting the development of individual competencies (Keller, 2007; Keller, Abels et al., 2005; Keller, Voelker, & Yovsi, 2005). North-German mothers were also found to value socialization goals like 'learning to be different from others', 'expressing own ideas', or 'being assertive' significantly higher than goals like 'learning to share with others, obeying the parents', or 'maintaining social harmony' (Kärtner et al., 2007; Keller et al., 2006).

A study conducted in a small town near Frankfurt by Levine and Norman (2001) revealed that children are also expected to acquire "love of order" (*Ordnungsliebe*) which means both "self-control and learning to comply with the demands of existing regimes of schedule first in the family and then in other institutions as the child grows older" (p. 91). They found, for example, that while caring for the infant's needs is considered of primary importance, it should not disturb family routines too much. Too much accommodation to the infant's needs is considered to risk "spoiling" the child and to collide with parental logistics, especially the mother's time and energy. Accommodation to the parent's needs and routines is explicitly considered to be good for the child.

Another focus of child care lies on cognitive skills and psychological development by exposing and oriented the child to objects (toys) from early on and providing an extensive language input (Keller & Greenfield, 2000; Keller, Loewer, & Runde, 1990).

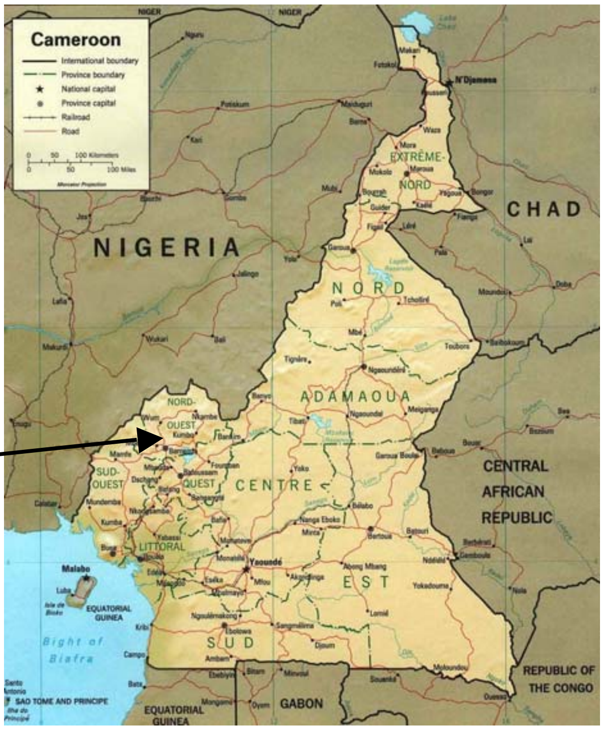
When commenting on videotaped interactions with 3-months old infants (Keller, 2007; Keller, Voelker et al., 2005; Keller, Yovsi, & Voelker, 2002) as well as when being asked to comment on pictures of such interactions , North-German middle class mothers were found to highly value exclusive dyadic attention and eye contact (cf. also Keller, 2007) which corresponds to a *distal* parenting style. Observational studies of playful interaction of North-German mothers with their infants revealed similar findings: infants experience predominantly object stimulation and face-to-face positions and less body contact and vestibular stimulation than infants in Cameroonian Nso interactions (Keller, 2007; Keller, Abels et al., 2005; Keller, Borke et al., 2005; Keller et al., submitted; Yovsi & Keller, submitted). Mothers promptly react towards the infant’s positive communicative signals and are responsive to the child’s personal wishes and preferences. These contingent responses support the perception of causality and an early manifestation of an independent agency (Keller, 1998). This parenting style corresponds to the general Western conception of sensitivity that has been defined as awareness of infant’s signals, accurate interpretation, appropriate and prompt response by showing empathy and insight into the baby’s wishes and moods (Ainsworth et al., 1978).

In sum, it can be said that the cultural model of child care prevalent among (North-) German parents strongly adheres to what has been described as the “independent model of parenting” (Keller, 2007).

2.2. *The rural Nso context*

picture left: http://.wikipedia.org
picture right: CIA World Fact book

Nsoland


Cameroon
International boundary
Province boundary
National capital
Province capital
Railroad
Road
NIGERIA
CHAD
EXTRÊME-NORD
NORD
ADAMAOUA
NORD-OUEST
SUD-OUEST
OUEST
CENTRE
LITTORAL
EST
SUD
CENTRAL AFRICAN REPUBLIC
Yaoundé
Malabo
EQUATORIAL GUINEA
Bight of Biafra
SAO TOME AND PRINCIPE
GABON
REPUBLIC OF THE CONGO
N'Djamena

Population parameters of Cameroon

The average life expectancy for Cameroon is 52.9 years, with a maternal mortality ratio of 4.3 per 1,000 live births, a fertility rate of 4.5 children born per woman and an infant mortality rate of 65.8 per 1000 births (The CIA World Fact book, 2007). The health care is generally low (DeLancey & DeLancey, 2000) especially in rural areas with poor health infrastructure (Fongwa, 2002). There are no welfare state health benefits so that people are mainly using the private health sector or traditional practitioners (Kindersley, 2008). Since the above numbers are national figures, the mortality figures in rural areas can be expected to be even less favorable. The mean age of Nso mother at the birth of the first child is 19.8 years (Yovsi, 2001). Along with its very high birth rate and relatively low life expectation, society consists to a large extend of younger persons.

Cameroon has one of the highest school attendance rates in Africa and most children have access to free, state-run schools or subsidized, private and religious facilities (Mbaku, 2005). However, a great part of the population lives below the poverty threshold (The CIA World Fact book, 2007) and most people live on subsistence farming.

Socio-political and ecological background

Cameroon, having been formerly colonized by the Germans, was divided into a French and a British section after World War II and gained independence in 1960. In 1961, the two sections were reunited as the Federal Republic of Cameroon. Today, Cameroon is a republic governed by a multiparty presidential regime and divided in 10 semi-autonomous provinces and a total of 58 subdivisions (local chiefdoms). The chiefdom (or *fondom* as it is locally called) of Nso is one of over a hundred in the central high plateau of the Western Grassfields in the North West Province of Cameroon (Chilver, 1990) and comprises a population of some 217,000 inhabitants (Goheen, 1996).

The Northwest Province falls within Anglophone Cameroon. The official language used in school and administration is therefore English. Cameroonian Pidgin English is the common lingua franca. The local language is Lamnso' which has long been an oral language, and its written form has only recently become available (Trudell, 2006). The Grassfield region is one of the most fertile and populous regions in the country, however, infrastructure is still very poor. The mountainous area is characterized by patches of natural forest and primary vegetation on the lower slopes of the mountains. The savannah climate and lack of adequate sanitation and potable water are major risk factors for diseases such as malaria, diphtheria, diarrhea, worm ailments, and jaundice (Yovsi & Keller, 2003). Most rural families live in Kikaikelaki village, located about eight kilometers from Kumbo town. Health care in this area is very poor and health centers often geographically difficult to reach. Most people therefore prefer traditional medicine and folk pediatrics (ibid).

Because the region lacks unique resources and strategic location, the Nso were able to establish regional hegemony despite European colonization and the Nso chiefdom actually constitutes one of the most powerful chiefdoms in the area (Goheen, 1996; Nsamenang & Lamb, 1995). There are practically two systems of authority within the Nso society: the Cameroonian postcolonial state on the one hand and the local chiefdom (*fondom*) of the Nso on the other. The chiefdom is locally ruled by the *Fon*, who is both the head of the traditional government and the chief religious authority in charge of keeping the ancestors happy. The palace of the Fon is situated in the Kumbo, the capital of Nso. His political power is regulated by comparatively, lower and upper chambers of parliament, e.g. men's secret societies and military associations in combination with the Fon's primary counselors and various lineage heads.

Social structure

The Nso society is highly hierarchically structured and characterized by the centrality of chieftaincy and an emphasis on title and rank as significant political attributes. Titles and offices are important as symbolic capital. Most important titles are hereditary and obtained according to lineage. However, ambitious men can obtain titles and membership in title societies also by outstanding service to the Fon and making payments and prestations to the palace. The lineage head ("*faay*") is the economic, political, and spiritual leader of a large lineage. Several lineage groups are grouped together under a "*shufaay*". The title "*sheey*" is given to sublineage heads as well as to princes and a number of other prominent men (Goheen, 1996). Social interaction is therefore structured by highly institutionalized modes of behavior according to age, gender and social title. These include terms and forms of address as well as behavioral signs of respect such as bending down, averting one's eyes, talking through one's hands (Goheen, 1996). Given the finely tuned system of deference by which titleholders are given public recognition, it is crucial in everyday life that people know what individuals belong to which ranks.

Men, especially men of title have a privileged position in the local power hierarchy. Women can attain a formal title if they are married to or the daughters of the Fon. Residence is usually also patrilocal: houses are clustered around leaders of lineages and houses are built such that they merge into each other separated by orchards (Nsamenang, 1992; Yovsi & Keller, 2003). A compound is composed of the lineage head, his wife or wives, his adult sons and their families, children, and other dependents. Women assume basically the entire responsibility for food production (farming), provisioning the household, and child care, whereas men work in the wage-labor sector, grow coffee, and engage in a variety of entrepreneurial activities (Goheen, 1996). 85% of all Nso households are classified as "rural" and virtually all households have farms and are self-sufficient in food production (cf. also Keller, 2007; Nsamenang & Lamb, 1993). A variety of government- and church-run schools offer primary and some secondary education, so that most children receive 7 years of primary schooling (Keller, Borke et al., 2005).

The hierarchical structure also applies within the family (Tchombe, 1997): generally, fathers are the head of the family; in polygamous families, however, sometimes the mother takes on this role. The 'household' of a Nso family is not a bounded unit but rather a complex collectivity with people moving between households depending on season, schooling, and opportunities for access to employment. Children are especially mobile and may within any given year live with several different kin. Nevertheless, the primary unit of production and consumption can be located in the household, defined as a household head, his wife or wives, and their dependent children. Several houses (in some cases up to over 100) form a compound of a lineage head. Most households are monogamous. Traditional title holders like the Fon and Muslim households also practice polygamy. The mean household size was 6.8 persons in 1981 and 8.2 persons in 1991 (Goheen, 1996, p. 80). Husband and wife usually have separate sleeping quarters and seldom eat together. Children are supposed to perform a variety of household tasks from early on, including child care of younger siblings, carrying water, fetching firewood, and running errands, and later on helping on the farm (cf. also Mbaku, 2005; Nsamenang & Lamb, 1995). Children form the basis of symbolic and material wealth and are hence regarded as ‘gift from god’(Nsamenang, 1995; Verhoef, 2005). The number of dependents living in a lineage head’s compound, for example, is a measure as well as a symbol of his rank, status, and prestige (Goheen, 1996). Child rearing is the responsibility of the entire community (Mbaku, 2005; Verhoef, 2005; Yovsi & Keller, 2003) and infants are exposed to a dense social network of caregivers including parents, sibling, relatives, grandparents and neighbors (Keller, Abels et al., 2005). It has been demonstrated, however, that the mother is the primary caregiver during the first six months of life (Keller, Abels et al., 2005; Keller et al., 2002; Yovsi & Keller, 2003). Fathers are rarely at home and therefore play a minor role in the daily communication with their children when these are young.

Women usually leave for the farm early in the morning and only return back to the compound late in the afternoon or at dusk. Babies are taken to the farm on the mother’s back. Preschoolers may accompany their mothers and help care for the babies while older children are sent to school. Once a child is weaned women try to leave all the children in the compound in order to be able to get the work on the field done. In the evening, women prepare food, nurse their babies and exchange news with visitors and with their husbands if they are around. They are expected to extend hospitality of the compound at all times to guests (Goheen, 1996). Social live is characterized by reciprocal obligations and mutual aid between kin which form a safety net for all Nso people. Sharing is institutionalized and expected, and believed to follow a law of reciprocity. Music and dance are an integral part of Cameroonian ceremonies, festivals, social gatherings, and storytelling (Mbaku, 2005). Traditional dances are highly choreographed.

In a typical performance, a chorus of singers echoes a soloist. Children sleep in the same bed as their mothers until they are weaned, older siblings usually sleep in the same room as well (Keller, 2007; Yovsi & Keller, 2007). Small infants thus are in close body contact with their mothers and other caregivers day and night (Keller, Voelker et al., 2005; Nsamenang, 1992; Yovsi, 2001; Yovsi & Keller, 2003). Infants have been shown to hardly ever being out of their caregiver's view (Keller, Abels et al., 2005). Maternal attention is, however, often divided or co-occurring when monitoring the infant while doing household chores or farm work (Keller, 2000).

Ideologies and worldviews

In the West-African world view, the individual gains significance from and through his relationships with others (Nsamenang & Lamb, 1994, 1998). Similarly, the concept of *ubuntu* prevailing in Sub-Saharan African philosophy stresses collective responsibility: "I am because we are and therefore we are because I am" (e.g., Mbiti, 1990; Zimba, 2001). Active membership in an extensive supportive social network ensures security at the expense of individuality and personal freedom (Nsamenang & Lamb, 1994, 1998). This subordination of individual interests to those of the group is rationalized by the reasoning that "individuals come and go but the group persists" (Nsamenang & Lamb, 1994, p. 136). A person's abilities are considered useless unless they are applied for the good and well-being of the social group (Dasen, 1984). The strong emphasis of sharing and communal social harmony is also expressed in proverbs such as "Rain does not fall on one roof alone", "Do not step on the dog's tail, and he will not bite you". The veneer of politeness and the complex rules of etiquette in Nso society has also been related to people's believe that the actions of others can have serious effects on their own well-being, even their life. Believe in witchcraft and sorcery is widespread. Jujus, masked spirits, are an important part of Nso culture (Goheen, 1996). Some people are believed to have some innate psychic powers (e.g. *səm* or *kibay*) which can be used either in a bad way – e.g. purely for individual advancement and private ambition – or in a good way – e.g. for publicly approved purposes which involve some amount of redistribution (Banadzem, 1996; Goheen, 1996). While most Nso are Christians (Catholic or Presbyterian) and Christian religious belief is very central to every day (Nsamenang, 1995), indigenous beliefs are still practiced which has lead to a mixture of the new religion and traditional practices (Goheen, 1996; Mbaku, 2005; Nsamenang & Lamb, 1995). Islam has been adopted to a lesser degree. The traditional beliefs comprise the belief in one supreme being (*Nyuy)* as well as in divinities and divinized ancestors (*anyuy*) which intervene in every day human life (Banadzem, 1996; Chilver, 1990).

According to West African philosophy, human development consists of a recurring sequence of birth, life, death and reincarnation and conception (Nsamenang, 1992; Yovsi, 2001). Infants who are born immediately after the death of a relative, particularly one of the same sex, are commonly believed to be reborn ancestors (Yovsi, 2001). A couple's offspring ensures the continuation of this cycle and children are hence perceived as a shield against mortality and a gift from the gods (*woon-ah nyuy*) (Nsamenang, 1992). This is also reflected in the naming practice of children: besides a Christian/Muslim name, children usually have a second Nso name that shows the gratitude towards God (e.g., *Burinyuy* = Praise God, *Berinyuy* = Thank God, *Nyuyfoni* = God has given) (Yovsi, personal communication). By naming the child also enters from the spiritual phase to the social phase and receives social integrity and recognition as a community member (Nsamenang, 1992; Yovsi, 2001). Children are often given various names by different family members and can be addressed by different names accordingly. Ancestors are believed to significantly influence or intrude into the daily lives of the people (Goheen, 1996). Infants therefore are often respectfully addressed as "grandmother", "grandfather" (Yovsi, personal communication). Although the high appreciation of children is often referred to in spiritual terms, mundanely they are regarded in utilitarian terms, e.g. by performing domestic chores and running errands (Nsamenang & Lamb, 1994) but also because they constitute their parent's social security system, especially in old age (Nsamenang, 1992, 1995).

Cultural models of infant care and parental ethnotheories

This socio-cultural context fosters a strong sense of community that is characterized by norms of collective responsibility, sharing and exchange (Goheen, 1996; Nsamenang & Lamb, 1994) as well as harmonious and hierarchically organized relationships between family members and the wider social reference group (Mbaku, 2005; Nsamenang & Lamb, 1993; Verhoef, 2005). Due to the high infant mortality and poor environmental parental care primarily serves to secure the live and health of the infant (LeVine, 1974; LeVine et al., 1994; Yovsi, 2001). The secondary parental goals serve to socialize children to competent members according to the local values of the community. Ontogeny is conceived in terms of cumulative process of integration into the community by being progressively assigned different roles depending on a child's social competencies rather than on their biological maturation (Nsamenang, 1992, 2006; Nsamenang & Lamb, 1993, 1994). Without functional integration into the hierarchically structured community, individuals are not considered to fully be a 'person', i.e., a sense of self cannot be obtained without reference to the broader community (Nsamenang & Lamb, 1994, 1998). Socialization accordingly focuses on the acquisition of pro-social skills such as honesty, cooperation and compliance to rules, deference and obedience to elders and superiors, including older siblings, social responsibility and commitment within the family system and ethnic community and subordinating individual interests to those of the group in favor of a strong community spirit (Nsamenang & Lamb, 1994, 1995, 1998; Yovsi, 2001, 2003; Yovsi & Keller, 2003).

The goal is to socialize children towards acquiring a 'good character' (Nsamenang, 1992; Nsamenang & Lamb, 1994). It is to this end that punishment and (from a Western perspective) 'lack' of praise is used in child care. It serves to prevent the child from developing a sense of pride about his own achievement which would be regarded as "showing off" and a 'bad character' (Nsamenang & Lamb, 1994; Tchombe, 1997). Punitive values have, however, been found to be more prevalent among urban-dwelling Christians and Moslems, whereas parents in more traditional agrarian contexts adopt more tolerant and less judgmental positions (Nsamenang & Lamb, 1995). This might be related to the fact that African religions condemn the harsh treatment of children who are considered a divine gift, and cruelty to them is punishable by the ancestors (ibid, p. 622). Despite historical change within Cameroon towards somewhat more individualistic socialization goals related to education and socio-economic factors and hence more prevalent in urban areas (Keller et al., 2008; Nsamenang & Lamb, 1991, 1995; Tchombe, 1997), life style in the Nso villages has not changed very much and socialization values are still deeply rooted in their ancestral traditions (Keller, Borke et al., 2005; Nsamenang & Lamb, 1998).

Studies in rural settlements of the Nso found that parental beliefs and practices foster early manifestations of interdependence by emphasizing heteronomy and social relatedness: Mothers from farming Nso communities were, for example, found to value socialization goals like 'obeying the parents', 'learning to share with others, or 'maintaining social harmony' significantly higher than goals like 'learning to be different from others', 'expressing own ideas', or 'being assertive' (Kärtner et al., 2007; Keller et al., 2006). They also place more emphasis on obedience, proper demeanor, and respect towards elders than higher educated, urban Nso mothers do (Keller et al., 2008). When commenting on videotaped interactions with 3-months old infants (Keller, 2007; Keller, Voelker et al., 2005; Keller et al., 2002) as well as when being asked to comment on pictures of such interactions , rural Nso mothers were found to highly value physical and emotional closeness, rhythmic motor stimulation. As special sensitivity exists towards the child's negative signals which are attended to immediately, mainly with breastfeeding (cf. also Keller, 2007). Anticipative nursing to prevent negative affect corresponds to the cultural belief that a calm child is a healthy child. The desire for quiet and easily managed babies and the disapproval of negative emotional expressiveness has also been observed in other sub-Saharan African communities such as the Gusii in Kenya (LeVine & LeVine, 1966; LeVine & LeVine, 1988; Richman et al., 1988). This parenting style is also assumed to promote closeness and interpersonal fusion and to support the infant's perception of being part of a larger social community (e.g., Keller, Voelker et al., 2005; Yovsi, 2001).

Observational studies of Nso mothers' play interaction with their infants as well as spot observations at the home of the families revealed that Cameroonian Nso mothers use a *proximal* style of parenting: infants predominantly experience close body contact and vestibular stimulation, and less object stimulation and face-to-face positions than infants in North-German interactions (Keller, 2007; Keller, Abels et al., 2005; Keller, Borke et al., 2005; Keller et al., submitted; Yovsi & Keller, submitted). Body stimulation mainly consists of moving the infant up and down in a vertical position (Keller, Abels et al., 2005). It serves to accelerate motor development which is important since children need to help in the household from early on but is also constitutes a major experience in developing Nsoness (Keller et al., 2002). It also allows the caregiver to check on possible physical health problems (Yovsi, Keller, & Kärtner, under review). Sign or symbolic language and terse proverbs are more widely used and considered more effective in child socialization than extensive verbal instructions and children often spontaneously respond to nonverbal cues by their parents (Nsamenang & Lamb, 1993, 1994). This parenting style corresponds to the Nso conception of sensitivity that defines the mother's responsibility primarily as insuring the infant's health and survival and to keep the infant in a stable emotional state. Good parenting is further defined as taking the lead by monitoring, instructing, training, directing and controlling the infant's activities (Keller et al., 2008; Yovsi, 2004; Yovsi et al., under review).

In sum, it can be said that the cultural model of child care among the rural Nso strongly adheres to what has been described as the "interdependent model of parenting" (Keller, 2007).

3. Methodology and Methods

3.1. *Choice of methodology*

The primary aim of this study was to infer cultural models from the way mothers communicate with their infants in every day play interactions. For this purpose, discourse analysis was chosen as appropriate methodological approach. The term ‘discourse analysis’ does in fact not stand for one specific method but comprises a series of interdisciplinary traditions each drawing on distinctive philosophical and theoretical premises and following particular aims (for an overview cf. e.g., Antaki, 2008; Coyle, 2000; Georgakopoulou & Goutsos, 1997; Mills, 1997; Phillips & Jorgensen, 2002; Potter, 2004b; Wetherell, Taylor, & Yates, 2001). What the different approaches have in common is a post-structural social constructionist understanding of social reality that implies “a rejection of the idea that language is simply a neutral means of reflecting and describing the world and a conviction of the central importance of discourse in constructing social life” (Gill, 1996, p. 141).

Accordingly, they subscribe to the following principles:

(1) The talk or text is to be *naturally found*

(2) The words are to be understood in their *context*, that is to say, in their *situated* use, within the process of an ongoing interaction.

(3) Access to the social world is not direct but mediated/constructed. The analyst therefore is to be sensitive to the words’ *non-literal* meaning or rhetoric force, that is, analysis goes beyond the mere content of what is being said by analyzing also the more subtle aspects of communication. The focus is on the meaning that derives as an *interactional accomplishment* on a turn-by-turn basis.

(4) Talk and texts are considered as *social practices*. The analyst is to reveal the social actions and consequences that are achieved through specific communicative resources, specifically, how the speaker positions himself and the addressee within the interaction or within the broader social environment.

The present study draws on a combination of procedures of the following three traditions: *ethnomethodology*, *sociology of knowledge*, and *discursive psychology*. Each of these approaches has a slightly different analytical focus but all are based on a constructivist understanding of discourse and agree on the above principles of discourse analysis. In the following, I will give a brief outline of the key tenets of the individual approaches and the respective analytical procedures that they suggest. I will then lay out the steps of analysis as they were used in the present study.

Key tenets of Ethnomethodology and Conversation Analysis

Ethnomethodology (Garfinkel, 1967) attempts to understand 'folk' (*ethno*) methods (*methodology*) for organizing the world. It views the social world as actively accomplished and mediated through actual ongoing conversational practices by means of a continuous process of intersubjective adjustment. Garfinkel, the founder of ethnomethodology, drew upon Schütz's (1962) view of intersubjectivity. According to this view, people draw on their biographical, historical and hence socio-cultural experience in order to give meaning to social reality. Communication therefore does not happen accidentally without any order but follows specific formal rules that are, however, not necessarily reflectively accessible to the speaker himself. Interlocutors follow orderly practices and tacit cultural rules as they construct the flow of interaction.

The major methodological procedure developed in this theoretical tradition is *Conversation Analysis* (Sacks, 1992; Sacks, Schegloff, & Jefferson, 1974) (henceforth, CA). It attempts to describe people's methods for producing orderly social interaction and how participants reflect on and interpret other persons' behavior. It hereby follows three fundamental assumptions (Heritage, 1984, p. 241-4):

(1) *The structural organization of talk*: Talk exhibits stable, organized patterns, demonstrably oriented to by the participants (p.241). CA relates these patterns not to the psychological (personality) features of a person but to implicit cultural rules.

(2) *Sequential organization:* A speaker's action is context-shaped in that its contribution to an on-going sequence of actions cannot adequately be understood except by reference to the context – including, especially, the immediately preceding configuration of actions – in which it participates (p. 242).

(3) *The empirical grounding of analysis:* The first two properties need to be identified in precise microanalysis of detailed transcripts, including features like pauses and emphasis. The aim is to identify recurring sequential patterns of conversational practices which elucidate the organization of the social world.

CA arguments that each sequence within a conversation ties up with the previous sequence. From the way a conversation develops, one can therefore derive the interpretative framework or orientation of the participants. The intricacies of the interactions only become clear when looking analytically at how an interaction dynamically and gradually unfolds. This has certain implications for the approach to analysis of talk: analysis proceeds sequentially, asking what is accomplished through talk rather than counting how often a certain word or category of word is used[9]. The researcher tries to reconstruct the participants' orientations by turn-by-turn analysis. This implies looking for particular outcomes in the talk and working backwards to trace the trajectory through which a particular outcome was produced (Silverman, 2001). Analysis is concerned with fundamental mechanisms of conversation such as *turn-taking*, *repair,* and the use of *adjacency pairs* (cf. e.g., Forrester, 1996; Silverman, 2001):

Turn-taking: the focus is on how a turn relates to a previous and succeeding turn and what it accomplishes (e.g., an invitation, a question, an answer). Where turn-taking errors and violations occur, '*repair mechanisms*' will be used, e.g. by repeating a question if the other person fails to answer. Length of pauses, as well as glances or gestures are treated as indicators that people pass the floor onto another person.

Adjacency pairs: adjacency pairs are utterances that consist of a first pair part that makes the production of the second pair part relevant and expectable (Sacks, 1987;Schegloff, 1968 quoted in Keating & Egbert, 2004), e.g., the exchange of a greeting, question-answer, invitation-acceptance/refusal, request-granting/declining. The first pair part indicates that it is the other person's turn. "When speakers produce the first pair part of an adjacency pair, they create an interpretative frame within which what happens next is bound to be not only an "answer" or "second move" but also a display of how the recipient has interpreted the first pair part. Adjacency pairs are thus important mechanisms for establishing intersubjectivity, that is, mutual understanding and coordination around a common activity" (Duranti, 1997, p. 255).

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[9] In a similar sense, the documentary method argues that the verbal ratification of a previous utterance confirms the frame of orientation, while opposition documents deviant frames of orientation of the participants.

CA also draws on other general features of talk such as speech acts, backchannelling, tag-questions, and footing (cf. Nofsinger, 1991 for an overview), as well as nonverbal communication (cf. Silverman, 2001). By analyzing these discursive features, CA aims at inferring how speakers take on certain roles or identities through their talk and hence produce social order. Linguistic anthropologists, have, however cautioned against applying the rules of the turn-taking system unreflectively to other cultural contexts: for example, appropriate length of silence between turn transitions varies across cultures (Keating & Egbert, 2004), and age and status differences can affect the rights to take turns in a conversation in some societies. There is therefore a growing consensus that the larger cultural context needs to be considered for appropriately interpreting conversational data (e.g., Moerman, 1988) while classic CA considers context only insofar as it is produced within the interaction.

Key tenets of Sociology of Knowledge and the Documentary Method

Similar to ethnomethodology, sociology of knowledge (Mannheim, 1952) conceives of social behavior and communication practices as 'pointing to', 'standing on behalf of', or 'documenting' a presupposed underlying cultural pattern of social reality or cultural meaning systems that has been acquired through socialization. These cultural patterns or 'frames of orientation' are the result of habitualization through milieu-, or culture-specific collectively shared experiences and constitute the 'conjunctive realm of experience'. This internalized tacit knowledge is not directly accessible but can be made explicit by reconstructing the logic from the person's perspective that lies behind social behavior. The question about the sense of an activity or of an utterance is the question about the structure, the generic pattern, the 'modus operandi' of the process of activity. Garfinkel, (1967), also refers to Mannheim's sociology of knowledge, however, did not systematically include it in his methodology. Mannheim (1964, cf. Nohl, 2006) developed a method which was resumed and updated by the German sociologist Ralf Bohnsack (Bohnsack, 2003; Bohnsack, Nentwig-Gesemann, & Nohl, 2001) and termed the "*documentary method*" (henceforth, DM). It aims at identifying homologous patterns in a whole sequence of observed communicative behaviors that point to shared cultural knowledge by 'looking through' (Slunecko & Hengl, 2007) the speaker's intended contents and reconstructing ('*verstehen*' sensu Weber) the behavior from the participant's point of view. Analysis comprises the following basic steps (cf. Bohnsack, 2003; and Bohnsack et al., 2001 for detailed description):

(1) '*Formulating interpretation'*: Identifying the thematic structure of the interaction by segmenting the interaction according to *topics* and sub-topics

(2) '*Reflecting Interpretation'*: Reconstructing *how* theses topics are treated i.e. explicating the frame of orientation (Bohnsack et al., 2001), or the "practical accomplishment" of social reality (Garfinkel, 1967 p. VII). This is done by identifying formal aspects of discourse organization, such as statement of orientations (*proposition*), their confirmation (*validation*) or rejection (*opposition*), *elaboration* and *conclusion*, as well as the interpretation of the *content* of what was said.

(3) *Comparative analysis:* Comparative analysis is a research style rather than a specific methodological step. Similar to the "constant comparison method" proposed in Grounded Theory methodology (Glaser & Strauss, 1967, p. 101ff), it looks for similarities and variation within and across cases during all steps and on any level of the analysis. The findings how a certain topic is treated, i.e. how the development of the interaction is constructed, is systematically contrasted with possible (theoretical and empirical) alternatives. To compare sequences, an external point of reference is first identified that may serve as '*tertium comparationis'* (Bohnsack, 2001; 2003, p. 137). That is, rather than comparing two cases directly to each other, the researcher asks what is the topic that both cases have in common and that might be treated either in a similar or different way (see page 66ff for an example derived from the present study). This procedures aims at minimizing the bias to take one case or one pattern as normative (most likely the one the researcher is familiar with) and the other as 'deviant'. The method claims that this procedure is a suitable way to gain access to unfamiliar cultural frames of orientation (i.e. cultural models).

(4) Finally, the documentary method aims at developing a *typology*. Bohnsack distinguishes between a first step of describing similarities and differences between groups ('*sinngenetische'* typology) and a second step that goes even further by systematically relating these differences to socio-cultural dimensions ('*socio-genetische*' typology). This is based on the understanding of culture as shared experience: to the degree that people have shared experiences (e.g. as

> mothers, as farmers, as housewives, as inhabitants of a specific geographical region, as members of a specific religious group etc.), they will share similar cultural knowledge. Since two persons will never have shared exactly the same experiences, they will never dispose of exactly the same ‘culture’. However, two persons may, for example follow similar cultural models based on their shared experience of being a farming mother in rural Nsoland, but have diverging cultural models based on their religious background. The ‘socio-genetic’ typology, then would not only identify different types and sub-types, but also try to relate specific patterns to specific socio-cultural or socio-demographic dimensions by comparing groups of different socio-cultural backgrounds.

Key tenets of Discursive Psychology and Discourse Analysis

The discursive psychology (Edwards & Potter, 1992; Potter, 2003, 2007; Potter & Wetherell, 1987) approach has been developed in British social psychology starting with the methodological devices of conversation analysis and based on the epistemological premises of post-structural social constructionism (e.g., Gergen, 1985). It treats talk as much more than the expression of views, thoughts and opinions and focuses on the action orientation and constitutive function of language. Analysis of language, then, is analysis of what people *do*. It explores how a certain version of social reality is constructed through the use of specific rhetoric features. It investigates how people use the available discourses in a society in creating and negotiating representations of the world and how identities are constructed in discourse, for instance, how issues of stake and accountability, blame and responsibility are socially constructed through discourse. Individuals are considered to be both producers and products of discourse in specific contexts of interaction.

The methodological approach derived from these premises is *discourse analysis* (henceforth, DA). It tries to identify the functions or activities of talk and to explore how they are performed. The notion of discourse is conceived not only as verbal action but also encompasses different symbolic actions such as gesture, mimic, ways of moving. Like in CA, this requires a very detailed transcript that goes beyond the mere content of what was being said. DA examines how speakers are using shared patterns of understanding or interpretation, i.e. discursive resources that speakers may share. Potter and Wetherell (1987; Potter, 1996) refer to this as shared '*interpretative repertoires*'[10] : "Interpretative repertoires are systematically related sets of terms that are often used with stylistic and grammatical coherence and often organized around one or more central metaphors" (Potter, 1996 p. 131). The aim of the analysis then is to collect "a corpus of examples of when and how people use certain expressions and examine what kinds of work such expressions perform, what kind of contingencies they handle, what kinds of contrasts they occur in, and so on" (Antaki et al., 2003).

Doing DA has often been compared to a 'craft skill' that needs to be learned by doing (Coyle, 2000; Gill, 1996; Potter, 1996, 2004b, 2007) and as requiring the development of an 'analytic mentality' (Potter, 2004b). This makes it hard to formally describe the analytic procedure. In order to carry out discourse analysis, a basic practical understanding of conversation analysis[11] is, however, a prerequisite for producing high class DA work (Potter, 1996). Analog to the process that anthropologists often describe as 'rendering the familiar strange', Gill (1996) suggests as a starting point the "suspension of belief in what is normally taken for granted in language use" (p. 144; see also Potter & Wetherell, 1987). The focus of analysis lies on the ways in which accounts are constructed and on the functions that they perform. The way the analysis of discourse is approached depends, of course also upon the concrete research question. Some authors have, however, suggested the following broad guidelines (Coyle, 2000; Gill, 1996; Potter, 2007; Potter & Wetherell, 1987) for systematic analysis:

(1) Starting by *reading and re-reading* the transcripts in order to get familiar with and immerse oneself in the data. This stage of the work often starts during transcription.

(2) *Coding* should be done as inclusively as possible. The understanding what should be coded, i.e. which aspects are relevant to the research question, might change/develop as the analysis proceeds.

(3) Rather than reading for gist and producing a summary, the analysis is concerned with looking for *details* such as nuances, contradictions and areas of vagueness. In the fist phase, the search is for *recurrent discursive patterns*

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[10] This notion is similar to Billig's notion of "ideologies" (1988; 1991, cf.Antaki et al., 2003) and Parker's (1992, ibid) notion of 'discourses' which are rooted, however, in different theoretical and analytic assumptions.

[11] As best and most accessible current introduction to CA Potter suggests Nofsinger (1991).

in the data, in the second phase, the focus of the analysis lies on the *functions* of particular features of the discourse, formulating tentative hypotheses and checking these against the data. Analysis also examines what subject positions are afforded by using specific rhetoric devices. During the formulation of interpretations, the researcher is encouraged to stay open to alternative readings of the text and to also be sensitive to what is *not* said.

(4) Making *analytic notes* and formulating tentative hypotheses about emerging patterns that need to be tested against the data.

Synopsis

The following table summarizes a number of key perspectives associated with these three approaches:

Key perspective	**Conversation Analysis**	**Documentary Method**	**Discourse Analysis**
View of social reality	Orderly constituted through talk	Result of internalization of habitualized collectively shared experiences	Interactively constituted through discourse
Analytical focus	Sequential organization	Frames of orientation	Interpretative repertoires; Subject positions
What analysis can reveal	How members of social group manage their interactions	Tacit cultural knowledge shared by members of a social group	How members of a social group construct a certain version of the world

Table 1 : Key perspectives of the three methodological approaches

While each of the above approaches focuses on somewhat different key notions, they share an analytic approach of extracting this social reality by analysis of mundane every day interaction and hence are especially promising to cultural psychology's research endeavor (Slunecko & Hengl, 2007) such as the study of cultural models in mother-infant interactions. They share the fundamental view of language as being constitutive of social reality and that in communications, the interlocutors not merely exchange utterances but, more importantly, they exchange social or communicative actions (Nofsinger, 1991). These 'moves' of interaction are embedded in and informed by tacit cultural knowledge of what is considered to be appropriate behavior in a given situation. Moreover, all of the approaches subscribe to the qualitative paradigm and the general principles of qualitative research (e.g., Bohnsack, 2003; Camic, Rhodes, & Yardley, 2003; Denzin & Lincoln, 2000; Flick, 2006; Flick, von Kardoff, & Steinke, 2004). Each of the methods carries out micro-analysis of discourse with detailed transcripts and usually work with relatively small samples. They follow inductive strategies, that is, categories used in analysis are not predetermined but are developed through a continual process of iterative division, classification, and evaluations (Heritage, 1984; Miller, Hengst, & Wang, 2007; Silverman, 2001; Strauss, 1987). In light of the fact that these methods were originally developed to analyze adult-adult interactions, applying them to mother-infant interactions requires certain adaptations. Moreover, a conjunctive use of the various analytical procedures from these three methodologies is considered to best suit the present research question. Other authors have similarly argued that a combination of discourse analytical methods (cf. e.g., Antaki, 2008 for combination of DA and ethnomethodology; Forrester, 1999; Keogh, 1999) or invention of own methods (Quinn, 2005a) will provide a more thorough and complex analysis of cultural models in talk than any of the methods alone. The procedures were adapted as follows:

First, analysis needs to take into account the asymmetric constellation of mother-infant interactions, as well as the preverbal state and still limited attention span of the infant: for instance, certain discursive features commonly analyzed by CA and DA can obviously not be found in preverbal infant's communication. How the interaction is structured depends to a large extend on the mother's part. However, the infant does contribute to the ongoing interaction by a variety of communicative features like vocalization, utterances of discomfort, smiling, body movement, gaze or gaze aversion etc. The focus of the analysis therefore lies on maternal talk but at the same time takes into account how the infant's communicative signals contribute to the development of the ongoing interaction.

Second, the documentary method was originally developed to identify shared frames of orientations by means of group discussions. By analyzing how participants validate, ratify or reject each other's utterances, it tries to lay open tacit cultural knowledge shared by a specific cultural group or sub-group. Since an infant has not fully acquired cultural tacit knowledge yet but can be assumed to acquire cultural knowledge exactly through social interactions with primary caregivers, the analytical focus is on the mother's frame of orientation and its transmission to the infant. Analysis therefore concentrates on identifying what kind of infant behavior the mother validates, ratifies or rejects. Shared frames of orientations are then derived through systematic comparison of interactional patterns within and across the two cultural groups.

3.2. Procedure

Participants

20 mother-infant pairs from a middle class community in Muenster, and 20 mother-infant pairs from Nso' farmer communities in Kikaikelaki participated in this study. Table 2 shows the sociodemographic profile of the two groups. Since in both cultural contexts, the main caregiver for the child during early infancy can be considered to be the mother, the focus of this study was on mothers' interactions with their infants. Since this study follows an eco-cultural approach, the study follows a 'case-based' rather than a 'variable-based' design and logic (Ragin, 1987 quoted in De Vaus, 2008), i.e. it seeks to understand each group's cultural model as a coherent whole rather than to study specific variables across the two groups. The aim was not to build parallel (matching) samples but to compare two groups of distinct cultural contexts. Therefore the two groups also vary greatly, for example, with regard to their level of education.

The Muenster mothers were between 26 and 40 years old (M = 30.7; SD = 3.7) at the time of the infant's birth. The mean education of the mothers was 14.4 years of formal schooling (SD = 3.2). All mothers were living in stable relationships with the child's father (16 married, 4 living together unmarried). 9 infants were female, 11 male; all infants were firstborns. The Nso mothers were between 17 and 47 years old (M = 27.8; SD = 7.7) at the time of the infant's birth. In two cases, the age was not known. The mean education of the mothers was 8.5 years of formal schooling (SD = 2.2). In one case, the number of school years was not known. 75 % of the mothers lived in marriage relationships with the child's father, 25 % were single mothers living with their parents or relatives. 11 infants were female, 9 male; 4 were firstborns, 16 were later borns (see also table 2). The relatively high number of later borns is related to the fairly high fertility rate among the Nso. 70 % of the Nso mothers were Christians, 30% were Muslims. Religious affiliation was not assessed in the Muenster group. It can be assumed, however, that most if not all participants were either catholic or protestant Christians. In both groups, the infants were delivered without any birth complications and did not have any health problems at the time of data collection.

Table 2: Socio-demographic features of the participants:

	Muenster (N =*20*)		*Nso* (N = *20*)	
Infants				
Girls	45%		55%	
Firstborn	100%		20%	
Mothers	M	(SD)	M	(SD)
Age at birth of child	30.7	(3.7)	27.8[a]	(7.7)
Years of schooling	14.4	(3.2)	8.5[b]	(2.2)
Married/living with partner	100%		75%	
single	0%		25%	
Religious affiliation				
Christian	(unknown)		70%	
Moslem			30%	

[a] N=18, [b] N=19

Data collection

The data corpus is part of a larger video-archive collected from September 2002 to August 2003 in Kikaikelaki, and from May 1995 to June 1996 in Muenster within a project on interactional regulations between mothers and their infants during the first 3 (4) months of life. In that study, mother-infant interactions were video recorded for 10 minutes on a weekly basis over a total period of 12 weeks (16 weeks in Kikaikelaki). The present account draws on a re-analysis of the recordings from the 12th recording session, when infants were 3 months of age. Three of the Muenster interactions (Muenster04, Muenster06 and Muenster10) are, however, taken from the 11th recording (i.e. when the infant was 11 weeks old) since there was no data assessment carried out in the 12th week.

In Muenster, mothers were recruited through birth preparation classes during the last trimester of pregnancy. Mothers were informed about the procedures and asked to sign a consent form. Appointments were made for home visits when the child was 12 weeks old, plus or minus two days and at a time of day that was convenient for the mother. In the rural Nso' community, mothers were recruited by a native field researcher through prenatal clinics after contacting the Fon who held official positions with respect to community life. Before interested women could register, their addresses were recorded in order to contact the family head (husband, grandparent, or lineage head) who had to consent first.

Mothers were visited at home by trained native female research assistants. The procedure and aim of the study was explained to the mothers (Muenster group) and families (Nso group), respectively. The mothers were told that we would like to learn more about childcare in different cultures. For this purpose, we would like to videotape mother-infant free-play interactions. In order to ensure comparability as well as sufficient attentiveness by the child, the interactions were filmed when the child was awake and fed. Mothers in both samples were instructed to play with their infants and behave as they would normally do in similar every day situations. The interactions were filmed with a video camera for about 10 minutes. Sociodemographic information such as age, years of formal schooling, parity, economic activity, age of household head, delivery, and infant's health were assessed by a questionnaire. For the Nso group, this was done by reading the questions to the mothers and check-marking the relevant answer. The mothers in both groups were paid for their participation in the study. In the Muenster group, written permission has been given by most mothers to use the video-recordings for research and teaching purposes.

In order to enhance comparability, similar settings were chosen in each group while trying to maintain a natural setting as much as possible. While it is possible (and becomes obvious in some video recordings) that the filming situation might have provoked some 'visitor behavior' making the mothers perform in a way that might not entirely correspond to 'natural' every day behavior, it is also true that it is not possible to lay aside one's habitus that has been acquired in the course of a life time. No person has conscious mastery of the modus operandi that integrates symbolic schemes and practices. Rather, the unfolding of one's actions "always outruns his conscious intentions" (Bourdieu, 1977, p. 79; cf. Csordas, 1993). It can further be assumed that mothers act in accordance with their intuitive parenting system (Papoušek & Papoušek, 1987) independently of situational factors. What is more, it can be assumed that the mothers will have tried to perform as what they consider to be a ‘good mother’. Hence, it may also be assumed that mothers will produce speech and comportment that they associate with good mothering according to the prevalent cultural model.

Videotapes were digitized and stored electronically in order to keep a record and to preserve the quality. In three interactions of the Muenster group (Muenster11, Muenster18, and Muenster19), the sound quality was partially very poor so that some parts of the interactions could not be analyzed. In one case of the Nso group (Nso29), we learned later on that the child was conceived through incest and that meanwhile, both the mother and the child had become severely ill and died. Also, one mother in the Nso group (Nso07) had a heavy flue and in one case the infant was ill (Nso06). These special circumstances were considered in the analysis.

Transcription notation

The transcription procedure followed closely the conventions now common in much conversation and discourse analysis, developed by Jefferson (1984). Some additional notations were added to include specific features of infant communication and to mark code-switching to another language (see appendix for a detailed illustration).

Since gaze, facial expressions, gesture, posture, body movement, and spatial distance as well as the arrangement of participants and objects in space are important semiotic codes in conversation and influence how participants organize and make sense of their activities (e.g., Keating & Egbert, 2004), nonverbal aspects were also included in the analysis. While working with a software program that allowed for parallel display of video material and transcript this is obviously not possibly when presenting excerpts on paper. The findings are therefore presented in a format suggested by Ochs (1979):

line	**BABY NONVERBAL**	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
233	turns head > mother	((WN))	straightens up	And now you still want to cry? No, no, no!
234			moves B’s legs	((in playful tone)) NO, NO, NO, NO! NO, NO, NO NO:!
235		((GR))	briefly stops	We don’t want that at all!= >no, no, no< no:!

Illustration 1: Transcript excerpt

Ochs (1979) points out the following possible biases when transcribing interactions with preverbal infants: (1) infants' communication at such early age consists to a larger extend of nonverbal behavior. Hence, both verbal, and non-verbal behavior should be transcribed. (2) The convention by which consecutive utterances are placed below each other encourages the assumption that a particular utterance is a response to the one immediately preceding it ("top to bottom bias"). She suggests that this might not be an appropriate way of transcribing interactions with young infants as they might "'tune out the utterances of their partner, because they are otherwise absorbed or because their attention span has been exhausted, or because they are bored, confused, or uncooperative" (p. 46). She therefore suggests to transcribe the infant's and the caregiver's communication in parallel columns. (3) a Western reader might be biased by the tendency to turn to the left to locate the initiation of a verbal interaction. In order to avoid that the reader's focus is biased towards the mother as dominating interaction partner, the child's behavior is positioned to the left of the mother's behavior. Vertical lines thus indicate nonverbal behavior co-occurring with verbal/vocal utterance for mother and infant, respectively.

The Nso' interactions were directly translated from Lamnso into English by a native Lamnso speaker from Kumbo who was fluent in English and had some knowledge of socio-linguistics as well as an intimate knowledge of the Nso culture. The translation and transcription was done in Osnabrueck so that it was possible to discuss questions about transcription notation as well as conceptual issues regarding the translation directly. Myself trained the translator in the transcription notation system. Translation aimed at staying very close to a literal translation provided that 'conceptual equivalence' (Birbili, 2000; Temple, 1997; Temple & Young, 2004) could still be insured. Moreover, the translator also sometimes added comments in the transcript to explain a certain expression. Instances where the semantic meaning of an utterance was ambiguous or unclear to me, e.g. in case of idiomatic expressions, were discussed with either the translator or, after the translator had returned to Cameroon, with another native Nso colleague who has lived in Germany for many years. The German interactions were partly transcribed by a student who was trained in the transcription notation system, and partly by myself. Both, the German and the English transcriptions were double checked by myself and corrected where necessary (and as far as this was possible in the case of the Nso transcripts). Since the focus of analysis was on the mother-infant dyad, utterances by other people where usually merely transcribed as comment, e.g. ((talks to research assistant)).

Examples drawn from the transcripts are identified in the following way: Indication of social group (Muenster or Nso respectively), identification number of the participant, indication of age of the child (t12 = 12 weeks), line of the transcript. A sample of this identification system is: Muenster17_t12 (119-138) for a sequence from a Muenster mother with the ID number 17 and her infant at the age of 12 weeks, comprising lines 119 to 138 of the transcript.

Data analysis

The data corpus consisted of a total of 40 (20 Muenster, 20 Nso) video recordings of approx. 10-minute mother-infant play interactions and the respective transcripts.

The analytical focus lies on instances where the content and the action of the talk highlights or points towards cultural discourse genres, metaphors, models and associated ideas about the child, and on reconstructing how social reality is constructed through discourse.

Each transcript was analyzed for the following broad research questions:

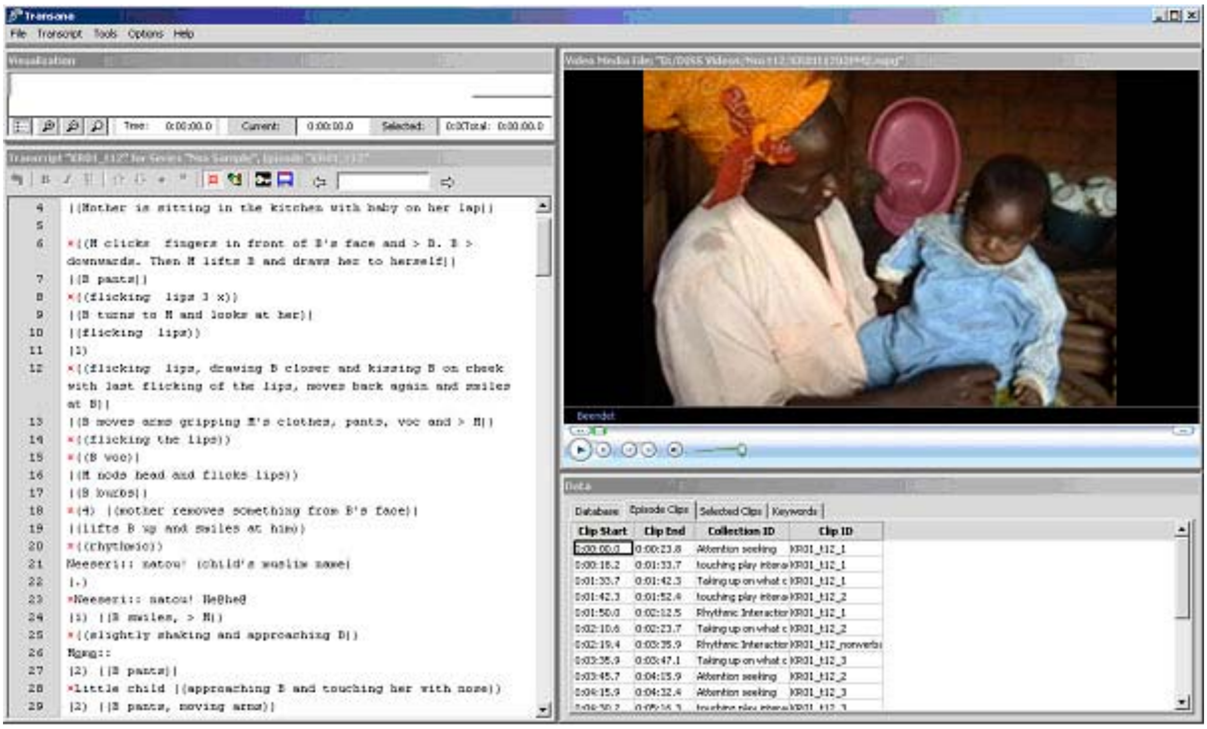
- How are the dimensions autonomy and interpersonal distance negotiated in the interactions?
- What subject positions are given or ‘afforded’(Harré & van Langenhove, 1999) to the child in relation to the mother and to the larger community?

Analysis started out with a single case, and successively added further cases thus steadily expanding the data corpus. An initial step consisted of reading and re-reading the transcript and watching the respective video recording in parallel focusing on how the interaction develops on a turn-by-turn basis.

Analysis was conducted with the help of the software program Transana[12] (version 2.21). This program has been designed specifically for on-line video analysis. This system has proven useful for discourse analysis in a number of research projects. It allows to work concurrently with transcript and video. While the program does not allow for transcripts in form of a table with both verbal and nonverbal behavior in different columns next to each other, this was also not necessary since analysis can be done by a parallel presentation of the video next to the transcription and coding scheme (see illustration below). This has also the advantage that the visual and auditory information (i.e. prosody, volume etc) next to the written transcription provides a more precise picture of the communication.

---

[12] software designed by Chris Fassnacht and David Woods at the Wisconsin Center for Education Research, Madison, USA, available at http://www.transana.org



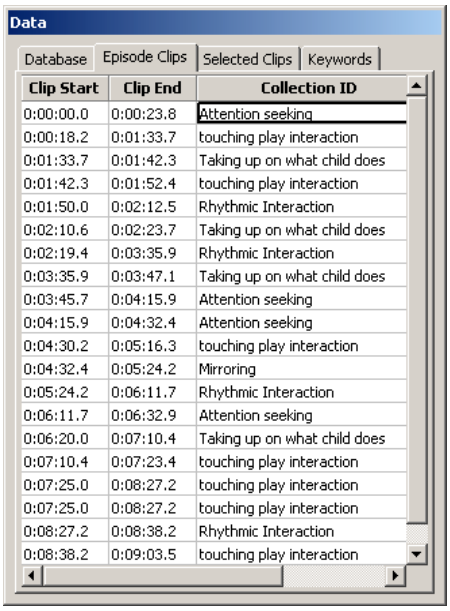
```
|(Mother is sitting in the kitchen with baby on her lap||

|(M clicks  fingers in front of B's face and > B. B >
downwards. Then M lifts B and draws her to herself||
|(B pants||
|(flicking  lips 3 x))
|(B turns to M and looks at her)|
|(flicking  lips))
|1)
|(flicking  lips, drawing B closer and kissing B on cheek
with last flicking of the lips, moves back again and smiles
at B||
|(B moves arms gripping M's clothes, pants, voc and > M||
|(flicking the lips))
|(B voc)|
|(M nods head and flicks lips))
|(B burbs||
(4) |(mother removes something from B's face)|
|(lifts B up and smiles at him))
|(rhythmic))
Neeseri:: natou! (child's muslim name)
|.)
Neeseri:: natou! He@he@
|1) |(B smiles, > M|)
|(slightly shaking and approaching B|)
Mgmg::
|2) |(B pants)|
Little child |(approaching B and touching her with nose|)
|2) |(B pants, moving arms)|
```

Clip Start	Clip End	Collection ID	Clip ID
0:00:00.0	0:00:23.8	Attention seeking	KR01_t12_1
0:00:18.2	0:01:33.7	touching play intera	KR01_t12_1
0:01:33.7	0:01:42.3	Taking up on what c	KR01_t12_1
0:01:42.3	0:01:52.4	touching play intera	KR01_t12_2
0:01:50.0	0:02:12.5	Rhythmic Interactior	KR01_t12_1
0:02:10.6	0:02:23.7	Taking up on what c	KR01_t12_2
0:02:19.4	0:03:35.9	Rhythmic Interactior	KR01_t12_nonverb
0:03:35.9	0:03:47.1	Taking up on what c	KR01_t12_3
0:03:45.7	0:04:15.9	Attention seeking	KR01_t12_2
0:04:15.9	0:04:32.4	Attention seeking	KR01_t12_3

Illustration 2: Transcript with parallel video presentation and coding scheme for analysis in Transana

The coding functions offered by the software program serves to identify text passages (‘episodes’) according to topics that will then be analyzed more closely. Episodes of the same topic were grouped to ‘collections’ which were then systematically compared.

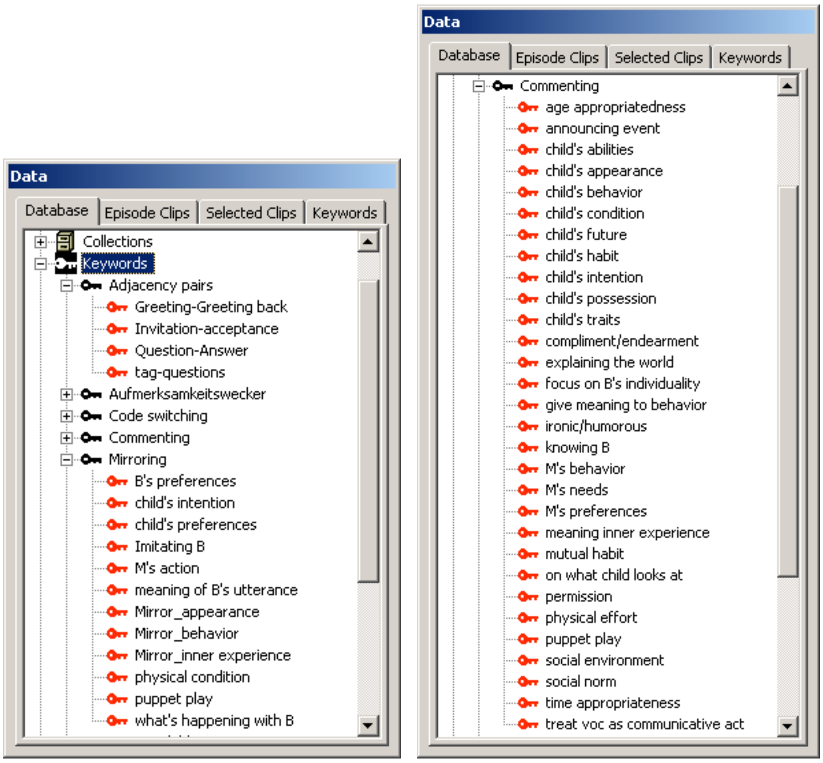
A segmentation of a transcript into topics looked for example like this:



Clip Start	Clip End	Collection ID
0:00:00.0	0:00:23.8	Attention seeking
0:00:18.2	0:01:33.7	touching play interaction
0:01:33.7	0:01:42.3	Taking up on what child does
0:01:42.3	0:01:52.4	touching play interaction
0:01:50.0	0:02:12.5	Rhythmic Interaction
0:02:10.6	0:02:23.7	Taking up on what child does
0:02:19.4	0:03:35.9	Rhythmic Interaction
0:03:35.9	0:03:47.1	Taking up on what child does
0:03:45.7	0:04:15.9	Attention seeking
0:04:15.9	0:04:32.4	Attention seeking
0:04:30.2	0:05:16.3	touching play interaction
0:04:32.4	0:05:24.2	Mirroring
0:05:24.2	0:06:11.7	Rhythmic Interaction
0:06:11.7	0:06:32.9	Attention seeking
0:06:20.0	0:07:10.4	Taking up on what child does
0:07:10.4	0:07:23.4	touching play interaction
0:07:25.0	0:08:27.2	touching play interaction
0:07:25.0	0:08:27.2	touching play interaction
0:08:27.2	0:08:38.2	Rhythmic Interaction
0:08:38.2	0:09:03.5	touching play interaction

Illustration 3: Initial broad coding of interactions

Moreover, sequences were assigned various codes and sub codes (‘keywords’) in an open and inductive way to further describe how a certain topic was treated:

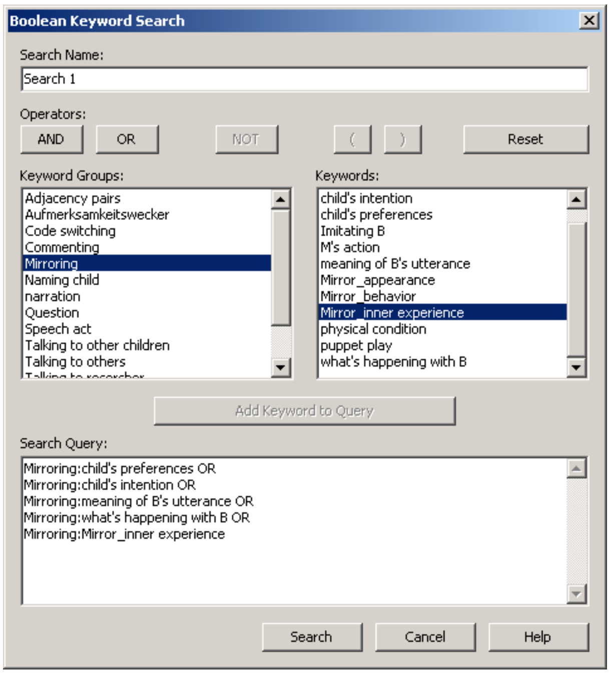


- Collections
- Keywords
  - Adjacency pairs
    - Greeting-Greeting back
    - Invitation-acceptance
    - Question-Answer
    - tag-questions
  - Aufmerksamkeitswecker
  - Code switching
  - Commenting
  - Mirroring
    - B's preferences
    - child's intention
    - child's preferences
    - Imitating B
    - M's action
    - meaning of B's utterance
    - Mirror_appearance
    - Mirror_behavior
    - Mirror_inner experience
    - physical condition
    - puppet play
    - what's happening with B

- Commenting
  - age appropriatedness
  - announcing event
  - child's abilities
  - child's appearance
  - child's behavior
  - child's condition
  - child's future
  - child's habit
  - child's intention
  - child's possession
  - child's traits
  - compliment/endearment
  - explaining the world
  - focus on B's individuality
  - give meaning to behavior
  - ironic/humorous
  - knowing B
  - M's behavior
  - M's needs
  - M's preferences
  - meaning inner experience
  - mutual habit
  - on what child looks at
  - permission
  - physical effort
  - puppet play
  - social environment
  - social norm
  - time appropriateness
  - treat voc as communicative act

Illustration 4: Examples of codes and sub codes

Sequences across interactions were also systematically retrieved and compared by means of a Boolean search function:



Search Name: Search 1

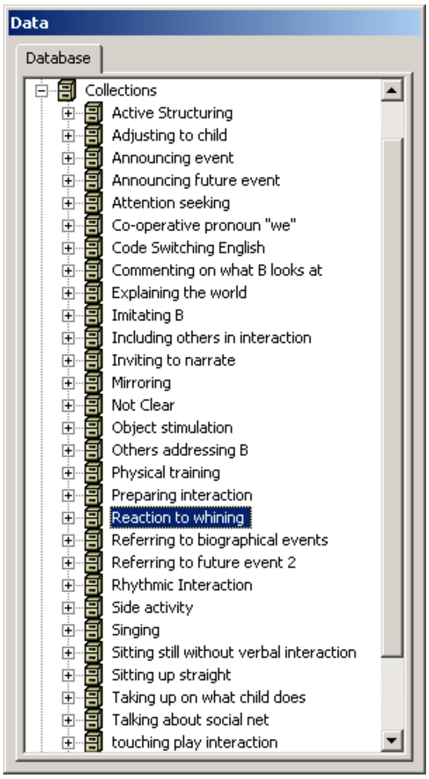
Keyword Groups:
Adjacency pairs
Aufmerksamkeitswecker
Code switching
Commenting
Mirroring
Naming child
narration
Question
Speech act
Talking to other children
Talking to others

Keywords:
child's intention
child's preferences
Imitating B
M's action
meaning of B's utterance
Mirror_appearance
Mirror_behavior
Mirror_inner experience
physical condition
puppet play
what's happening with B

Search Query:
Mirroring:child's preferences OR
Mirroring:child's intention OR
Mirroring:meaning of B's utterance OR
Mirroring:what's happening with B OR
Mirroring:Mirror_inner experience

Illustration 5: Systematic comparison by means of Boolean searching

Sequences with a specific combination of codes and sub codes could thus be grouped again to a new collection. The following collections were derived from the data:



Collections
- Active Structuring
- Adjusting to child
- Announcing event
- Announcing future event
- Attention seeking
- Co-operative pronoun "we"
- Code Switching English
- Commenting on what B looks at
- Explaining the world
- Imitating B
- Including others in interaction
- Inviting to narrate
- Mirroring
- Not Clear
- Object stimulation
- Others addressing B
- Physical training
- Preparing interaction
- Reaction to whining
- Referring to biographical events
- Referring to future event 2
- Rhythmic Interaction
- Side activity
- Singing
- Sitting still without verbal interaction
- Sitting up straight
- Taking up on what child does
- Talking about social net
- touching play interaction

Illustration 6: Collections of episodes

It should be noted here that the code-and-retrieve function of the software supports the analysis but does not substitute for fine-grained analysis and in-depth consideration of the meaning of particular utterance. It is still the researchers task to pay close attention for instance to a person's use of linguistic and rhetoric devices (Silverman, 2005, p. 197). The actual analysis consisted of finding reoccurring patterns by reconstructing the logic of an interaction in the sense of '*verstehen*'. This can obviously not be done by a software program. The software allows, however, for systematic sorting, retrieving and comparing.

All sequences that belong to one specific topic were then played one after the other along with the written transcripts:

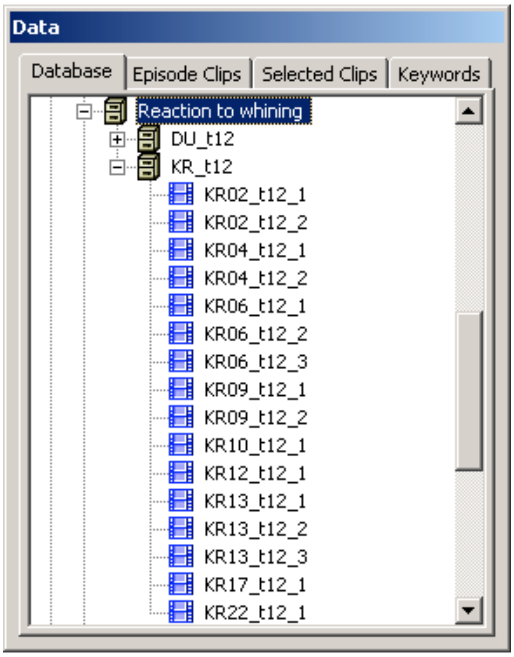
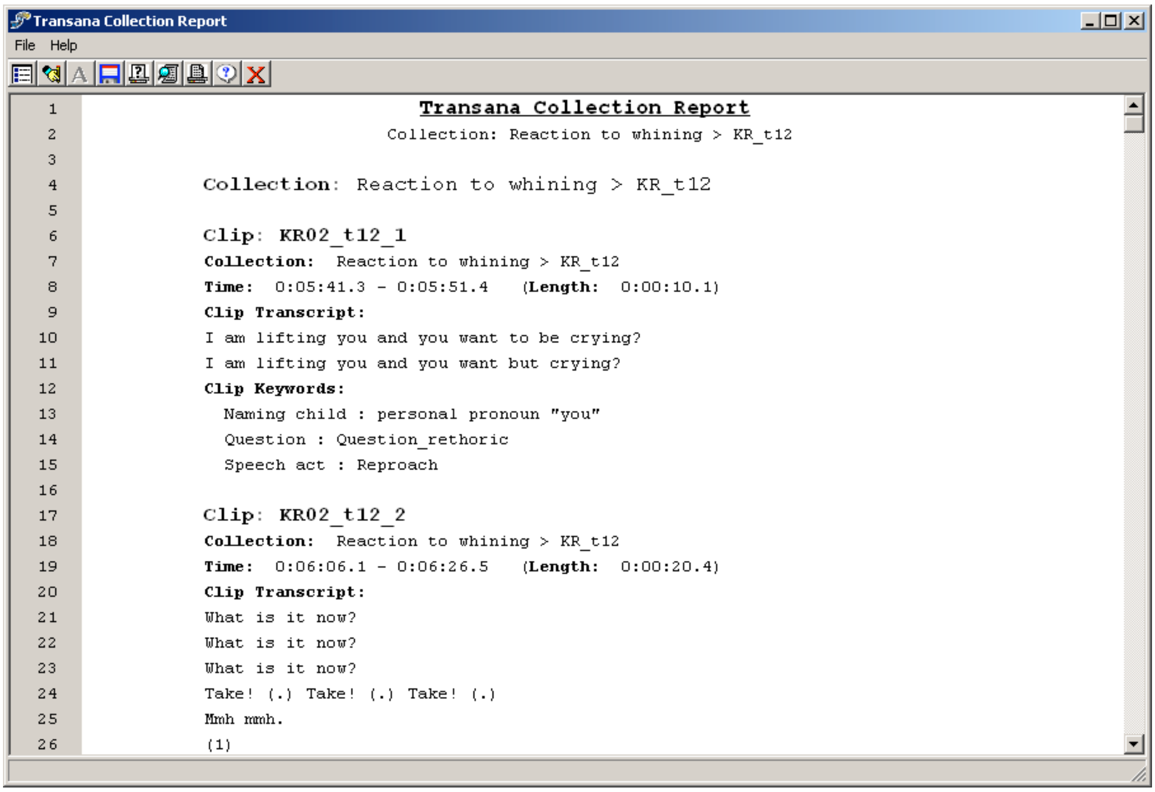

Data
Database
Episode Clips
Selected Clips
Keywords
Reaction to whining
DU_t12
KR_t12
KR02_t12_1
KR02_t12_2
KR04_t12_1
KR04_t12_2
KR06_t12_1
KR06_t12_2
KR06_t12_3
KR09_t12_1
KR09_t12_2
KR10_t12_1
KR12_t12_1
KR13_t12_1
KR13_t12_2
KR13_t12_3
KR17_t12_1
KR22_t12_1

Illustration 7: Collection of sequences belonging to one topic

The respective transcript excerpts and keywords of a collection were grouped in a 'collection report' which allowed for further systematic comparison and analysis of reoccurring patterns:



```
                        Transana Collection Report
                 Collection: Reaction to whining > KR_t12

        Collection: Reaction to whining > KR_t12

        Clip: KR02_t12_1
        Collection:  Reaction to whining > KR_t12
        Time:  0:05:41.3 - 0:05:51.4   (Length:  0:00:10.1)
        Clip Transcript:
        I am lifting you and you want to be crying?
        I am lifting you and you want but crying?
        Clip Keywords:
          Naming child : personal pronoun "you"
          Question : Question_rethoric
          Speech act : Reproach

        Clip: KR02_t12_2
        Collection:  Reaction to whining > KR_t12
        Time:  0:06:06.1 - 0:06:26.5   (Length:  0:00:20.4)
        Clip Transcript:
        What is it now?
        What is it now?
        What is it now?
        Take! (.) Take! (.) Take! (.)
        Mmh mmh.
        (1)
```

Illustration 8: Excerpt of a collection report.

Comparative Analysis and development of a typology

Comparative analysis aimed at identifying commonalities and differences in the way a certain topic was treated in order to ultimately develop a typology (e.g., Bohnsack, 2001; Glaser, 1965; Kelle & Kluge, 1999; Myhill, 2001; Nohl, 2006). It also included the method of minimum and maximum comparison (e.g., Strauss & Corbin, 1990). For example, a *minimum* comparison consisted of comparing sequences in which both, Nso and Muenster mothers showed similarities, e.g. in imitating their infant, in taking up what the child was doing, in using vocalization, and to look for differences in these similarities. Another minimum comparison consisted in comparing sequences in which both Nso and Muenster mothers actively structured the interaction and to examine where there were differences. A *maximum* comparison consisted for example in comparing sequences that seemed extremely differently structured, i.e. Nso mothers seemed to rhythmically and synchronously structure the interactions, while the Muenster mothers seemed to dyadically structure the interaction. Maximum comparison consisted in looking for possible similarities within these differences.

A first topic that was found across several interactions was how mothers dealt with the child's fussiness. Instances in which a topic was treated were compared within as well as across interactions and analyzed for similarities and differences. The following example serves as an illustration of this analytical step.

Excerpt 1: Nso09_t12 (36-48)

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
36		((WN))	shaking B	Has someone touched you?
37		((CR))		No:=no:=no:=no:=no:=no:=no:=no:
38		stops	stops	(1)
39		((CR))		voc ((flicking lips))
40				ship=ship=ship=ship=ship=ship=ship (.)
41		((WN))	picks up a green leaf,	Look! (.) Take! (.) Take Faiy! (.)
42			shaking it and showing it to B	See (.) see (.) see (.) Your grass (.) Take! Take! Take! (.) Take sheey (.)
43		((CR))	tries to put the leaf in B's hand	Take it in your hand like this
44			rhythmically shakes B on her lap, covers B's legs with her loin cloth	ship=ship=ship(.)
45			stops, puts the leaf in B's hand	Take in your hand
46	grips leaf			Hold it(.) Hold it like this(.).
47		((CR))	> B	(1)
48		((CR))	rhythmically shakes B on her lap	°chi (.) chi (.) chi (.) chi (.) ch i(.)°

The mother abruptly shakes the infant, poses a rhetoric question which indicates that the child does not have any reason to cry (If someone would have touched, i.e. hit him, he would have had reason to cry, but since this is not the case, there is no reason) and therefore he should stop it, followed by a vigorous repeated negative imperative (36-37). The mother then goes on with a rhythmic vocal and bodily stimulation and prompting the child repeatedly to look at and take an object that she presents to him (thus trying to distract him). She addresses the child in his social roles as *Faay*[13] (lineage head) and *Sheey*[14] (men's palace title) and as "little child" respectively. She also "makes" the child do what she wants him to do (43-46). She therefore documents that she does not accept whining behavior and that she expects compliance and obedience from the child.

Later on in the same interaction, the topic 'reaction to whining' was found again:

Excerpt 2: Nso09_t12 (127-139)

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
127		((CR))		(1)
128		((CR))		Terrible!
129		((CR))	> B, waves leaf	Take! Take! See! See!
130		((CR))	gives B a stern look, shakes head	No! No! No! Don't cry again! We don't cry in Mbah.
131		((CR))		Terrible:::! They don't cry in Mbah!
132		((CR))	waves with hand	((angrily)) Stop=fast!
133			shakes B	Who has told you that they cry here?
134		vo::c	smiles at B	
135				They don't cry here.
136		vo::c	smiles at B	
137				They only laugh.
138		vo::c		
139				They don't cry here.

In this passage, the mother reacts to B's crying with shaming messages (line 128, line 131). She tries to distract the child by presenting an object. She prompts the child to do something else (line 129) followed by a repeated negative imperative and commanding the child to stop crying (line 130)., She adds a moral message which she repeats (line 130-131) indicating that the child's behavior is not appropriate in this area. She adds another command to immediately stop crying (line 132). She is asking a rhetoric question (lien 133) that indicates 'you don't have any reason to cry, so don't.' She also shakes him physically. The interaction documents an orientation of the mother towards obedience and compliance. After the baby stops crying (line 134), the mother smiles at B and the tone of her voice becomes softer as she repeats the moral message that crying is not common in this area (line 135-139). By this she takes back some of the initial severity of her reaction and re-establishes social harmony in her interaction with the child.

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[13] (Goheen, 1996; Kaberry, 1952/2004)

[14] (Goheen, 1996)

Comparison of these two sequences reveals that the pattern of the first occurrence is found again in the second sequence. However, the second sequence is different in so far, as the mother softens her voice and smiles after the child complies (line 134-139). A first tentative hypothesis that was then formulated was that the cultural pattern of Nso mothers' reaction to B's fussiness is that the mother does not tolerate negative affect and expect immediate compliance. However, once the child complies, the mother re-establishes harmony. This hypothesis was then tested against further occurrences of the same topic within and across mother-infant dyads in both groups, always looking both for similarities and variations.

Cross-tabulations provided a first overview and were used as heuristic means to develop a typology. In the example shown below, the topic that was compared was 'mother's reaction to B's fussiness':

Tertium comparationis: Reaction to B's fussiness	**Münster**																**Nso**								
Participant ID	1	2	5	6	7	8	10	12	13	14	15	16	17	18	19	20	2	4	6	9	10	12	13	17	22
Cooperatively finding out what is wrong	x	x	x	x	x					x	x		x	x					x						
Time schedule orientation and self regulation		x				x				x		x													
Distracting and soothing		x					x	x	x	x				x		x									
„allowing"/teasing		x						x							x										
Requesting obedience																	x	x	x	x	x	x	x		x
Commenting to others																			x				x	x	x
Distracting																	x	x	x	x		x	x		
Asking about reason																			x						

Illustration 9: Example of cross-tabulations as tool for systematic comparison

Furthermore, throughout the analysis, any ideas on emerging saliencies and as well patterns were written down in memos and checked against the remaining data again (see illustration 10):

MEMO_similarities and variations Nso/Muenster (August 18, 2007)

- Rhythmic interactions and parallel vocalizations are found in both groups, however in very different forms. → needs further investigation
- Showing respect towards the child
    - Nso: by addressing the child as ‚grandma'/'grandpa'
    - Muenster: by granting the child individual preferences
- Active structuring is not only found in the Nso group but also in some Muenster interactions (e.g., Muenster03), however, the mother is still applying the alternating turn-taking pattern
- Prompts:
    - Muenster: mothers use prompts more in the sense of an invitation and for attracting the child's exclusive attention and to initiate dyadic turn-taking (e.g., „Come, tell me something")
    - Nso: prompts sound rather strict (loud voice, commanding tone) and are used to illicit obedience („Take that!", „Sit straight")

Illustration 10:Excerpt from an analytic memo

The inductive procedure included that parallel to the analysis, whenever specific salient discursive devices were identified, I read literature on the function of these linguistic devices. This was, for example, the case for the use of 'we- formulations', 'tag questions', or 'code switching'. Sometimes the new insights on the function of these devices required to go over the analysis of transcripts again with new ideas in mind based on what I found in the literature.

By progressively formulating hypotheses about emerging salient patterns and checking them against the remaining data corpus in a recursive process, gradually a typology for the two groups was developed. While conversation and discourse analysis are often used in study designs that do not aim at developing a typology, the documentary method explicitly aims at developing ideal types (Weber, 1968) and subtypes and at systematically relating differences to socio-cultural dimensions. The goal is to relate specific frames of orientations to their sociogenesis (Nentwig-Gesemann, 2001). In the present study, while the two groups that are compared vary greatly in their socio-cultural dimensions, within one group, there is relatively little variation. A 'socio-genetic' typology *within* each group could therefore only be developed to a limited extend.

3.3. Criteria of Rigor

A number of criteria for the evaluation of qualitative research have been developed within the past decades (e.g., Drisko, 1997; Elliot, Fischer, & Rennie, 1999; Flick, 2006, 2008; Gaskell & Bauer, 2000; Guba & Lincoln, 1982; Lincoln & Guba, 1985; Patton, 2002; Richardson, 1996; Seale & Silverman, 1997; Silverman, 2001, 2005; Steinke, 2004; Stiles, 1993). While some criteria of good practice of scientific research apply to both quantitative and qualitative research, others apply specifically for qualitative approaches (Elliot et al., 1999; Silverman, 2001). General criteria are: relationship of the study to relevant literature, clarity of research questions, methodological appropriateness (choice of method, choice of sampling strategy), informed consent and ethical research conduct, specification of methods, appropriately tentative discussion of implications of research data and understandings, clarity of writing and contribution to knowledge (Elliot et al., 1999).

Because of the heterogeneity of the field and the non-standardized proceeding in qualitative research the criteria of rigor do not consist of a single set of standardized rule, rather, different research traditions have developed a variety of procedures to ensure rigor based on the respective logic of the approach. It has also been suggested to apply a set of broadly defined criteria of rigor that generally apply to qualitative research and to further specify them for the concrete research project (Elliot et al., 1999; Steinke, 2004). Criteria for the evaluation of discourse analysis studies have been defined by Potter (1996; 2007), Coyle, (2000), Taylor (2001a) and Phillips & Jorgensen (2002). Based on the emerging canon of good practice in qualitative research and the criteria suggested for the evaluation of discourse analytical studies, the following criteria can be specified for the evaluation of the present study:

Credibility

Credibility refers to the degree to which the findings reflect the actual live situation of the participants. High credibility is therefore achieved by designing the study as little intrusive as possible and by building a trustworthy atmosphere to assure that participants act in a way that they usually would.

The present study tried to achieve credibility by assessing the data in a setting close to a natural every day situation, i.e. at the homes of the families. In the Muenster group, mothers were alone at home with their infant which mirrors the typical every-day experience of infants in this cultural context. In the Nso group, mothers were sitting either in the house or in front of their house with other people passing by and children playing in the background. This mirrors the typical every-day experience of infants in this cultural context. For the sake of comparability, however, the design was the same in both groups in that mothers were asked to interact playfully with their infants. They were, however asked to act as they usually would and were not given any further instructions. Playing with their infants is something that is common for mothers in both cultural contexts, however, among the Nso mothers it might not be common to play with their infants for a period as long as 10 minutes.

The data were assessed by local research assistants to whom the mothers had already got familiar with since the data assessment had been carried out every week for 3 months already. It can be assumed therefore, that the atmosphere was sufficiently trustful and relaxed for the mothers to act as they usually would. Mothers also should have become familiar to being filmed during that time. However, even if mothers would show ‘visitor behavior’ because of being filmed, they would be most likely to act according to what they believe to be good maternal behavior and they would still be very likely to act according to their acquired cultural habitus. In that sense, ‘visitor behavior’ would make cultural models even more explicit.

Moreover, analysis is based on video recordings, i.e. the actual behavior is recorded and does not rely on only written field notes or reports. Analysis of the transcripts was done in conjunction with the original video recordings on which they were based. This triangulation between what was said and what was done provides an important corrective to relying solely on a textual analysis of dialogue.

Transparency

Transparency refers to the degree to which the way the researcher comes to his or her conclusions is made transparent to others and hence open for evaluation. Transparency is achieved by providing a clear documentation of the sampling strategy, data collection, transcription conventions, the individual steps of analysis, as well as the documentation of changes made to the research design. Moreover, auditability must be ensured through the availability of raw data (video recordings), as well as of the transcripts and notes about the process of analysis. For discourse analytical studies, sufficiently detailed transcription of talk in interaction according to conventional transcription rules (Heritage, 1984; Jefferson, 1984) must be provided that allows to detect how speakers orient to each other, and to reconstruct latent structures of meaning (Flick, 2006; Seale & Silverman, 1997 for demonstration of enhanced reliability and validity through detailed transcripts). Transparency also includes that the investigator discloses his or her expectations and preconceptions, and assumptions for the study (based on the researchers knowledge and personal experience), before starting the analysis.

The present study tries to meet these criteria in the following way: (1) data assessment, data collection, transcription conventions, as well as the individual steps of analysis have been documented in detail in the previous sections of this chapter and in the appendix, respectively, (2) the interactions have been video-taped and electronically stored, so that the ‘raw data’ are available for anyone who wants to check on the credibility of the findings, (3) large portions of the transcriptions are presented in the result section along with the interpretations allowing readers to evaluate the adequacy of the interpretations offered, (4) My expectations and preconceptions before starting the analysis are outlined at the end of the introductory chapter.

Grounding of the interpretation

This criterion refers to the degree to which interpretations are sufficiently grounded in the data. This requires that (1) analysis is grounded in intensive engagement with the material and iterative cycling between observation (i.e. reading and re-reading transcripts, replaying audio- and video material) and interpretation, (2) sufficient text sequences as well as „thick descriptions“(Geertz, 1973) have been provided to support the interpretation. For discourse analytical studies, this means that transcripts are presented along side of its analytic interpretation to allow the reader to act as auditor and to provide evidence for and against the researcher‘s arguments (Potter, 1996, 2004b, 2007). Justification of claims is not primarily achieved by frequency of occurrence but by providing evidence for a *lawful pattern* in the way a certain structure is achieved: “Die Frage nach der Gültigkeit einer solchen Struktur beantwortet sich aus dieser Perspektive, also nicht über ihre Häufigkeit, sondern darüber, dass ihre *Reproduktionsgesetzlichkeit* nachgewiesen wird“ (Wohlrab-Sahr, quoted in Bohnsack 2001, p. 273, my emphasis). Relevance of a phenomenon is therefore established by building aggregates of single instances and finding typical patterns of interaction, showing the *how* and the *what* rather than the *how often*. Some authors suggest, however, that frequencies of occurrences of these lawful patterns can be helpful and serve as indicator of how „typical“ a pattern is compared to other patterns (Alasuutari, 1995; Silverman, 2005). Identifying typical patterns requires that sufficient attention is also given to deviant cases, i.e., occurrences which do *not* appear to fit the prototypical pattern and which contradict initial hypotheses. Grounding of the data also requires a recursive procedure, i.e. the researcher begins with a tentative description of a pattern found in relation to the research question, and then proceeds by testing this framework through successive passes through the data and revises it where necessary (e.g. Miller, Hengst et al., 2007; Strauss, 1987). Reporting of findings is based on the presentation of a large amount of data extracts on which the researcher has based his claims and which allows the reader to critically assess the analysis.

The present study tried to meet this criteria (1) by having intensively engaged with the material watching the video material and reading the transcripts on a turn-by-turn basis over and over again and testing initial hypotheses in a recursive process against the entire data corpus (2) by providing large portions of the data in the results chapter along with the analysis of these sections, as well as providing cross tabulations where appropriate indicating the frequency of specific discursive patterns.

Intersubjective consensus

Intersubjective consensus refers to the degree to which the data and interpretations have been validated by others. Two forms of intersubjective consensus are discussed in the literature: ‘*Consensus validity’* refers to the degree to which the data and interpretations have been presented to a research group in order to disclose one’s own blind spots and to discuss working hypotheses and results with them. ‘*Communicative validation’* refers to the communicative validation with members of the fields (either the participants themselves or members of a given socio-cultural group), and is therefore also referred to as ‘member checks’. Member checks with the actual participants of the study, while considered to be very fruitful, for instance in interview studies that aim at learning about people’s subjective theories, are not considered useful or appropriate, however, in discourse analysis since DA presumes that many repertoires and discursive strategies are not in the informants’ awareness (Elliot et al., 1999; Silverman, 2001; Taylor, 2001a). DA, in contrast, offers the possibility of the *reader’s evaluation*: materials are presented in a form that allows readers to make their own checks and judgments (e.g., Potter, 1996; 2007). Moreover, in CA and DA, *participants’ orientation* is a common means to evaluate a possible interpretation of an utterance: for instance, when someone provides an ‘acceptance’ as response to another person’s utterance it provides evidence that what came before was an ‘invitation’.

The present study tried to achieve intersubjective consensus in the following way: (1) data and interpretations were to some part presented and discussed at the weekly colloquium of the research group Culture & Development at the University of Osnabrueck, as well as at the colloquium of the graduate school Integrative Competence and Well Being. Corrections to suggested interpretations were made after discussion in the group. This could, however only be done with individual parts of the analysis, not with the entire data corpus, (2) With regard to the Nso data, instances that seemed ambiguous as well as some interpretations in general were discussed with native Nso people: either with the person who did the transcriptions, or with a Nso colleague who has been working in the same research department for many years, (3) Large portions of data material together with their interpretation is presented to the reader who may hence judge him/herself whether the findings are convincing.

Analytical induction

This criterion refers to the degree to which the analysis includes deviant cases and attends to inconsistency and diversity (Potter & Wetherell, 1987). Deviant cases may, however, not necessarily show that a pattern is not normative, but may be the exception that proves the rule (Potter, 1996, 2007). Since analysis follows an inductive strategy and aims at developing an argument that accounts for all data, deviant case analysis does not serve to explain for the variance but are analyzed to see if the overall argument needs to be modified (Alasuutari, 1995).

In the present study, deviant cases and inconsistencies were taken into account and are discussed in the result section.

Coherence

This criterion refers, for one, to the degree to which findings are coherent with previous studies. For another, it refers to the degree to which the interpretation is internally consistent, comprehensive, and persuasive.. Inferences must be logical, plausible, and sufficiently grounded in the data.

In the present study, coherence of findings with those of previous studies could be shown and is sufficiently discussed in the discussion section. The internal consistency of the inferences should become evident from the data and its interpretation presented in the result chapter. Evidence for lawful patterns in the way a certain structure is achieved is provided by presenting and comparing various interactions and systematically having developed a typology.

Systematic proceeding

This criterion refers to the degree to which analysis has been conducted in a systematic way and is based on accepted procedures for analysis and has correctly applied the relevant analytical steps.

The present study followed the proceedings of CA, DA and DM as documented above. In addition, the use of the software program Transana allowed for systematic comparison and development of a typology.

Reflection of researcher's subjectivity

This criterion refers to the degree to which the researcher's subjectivity has been reflected in the analysis. Gaining access to the meanings, concepts, or schemas of other people always implies human understanding as intersubjective connection (Gergen, 1990). The way the researcher interprets the data also depends on the researcher's location within the social world (Temple & Young, 2004). In qualitative research the aim is therefore not to eliminate the researchers' impact on the research process. Based on the insight that the researcher, in interacting with those being researched, inevitably influences and structures the research process and its outcome, it is rather required that the researcher's influence is laid open and systematically included in the analysis (see e.g., Mruck & Breuer, 2003 for further discussion). For one, this includes the researcher's identity and his role as part of the social setting, as well as his or her influence during *data assessment*. It also includes whether the researcher's reflections, irritations, feelings etc. during *analysis* were documented (e.g. how the researcher's way of thinking and hence the interpretation changed in traversing the 'hermeneutic circle') which is considered an important source of information as they document how earlier inaccuracies in the interpretation were corrected (e.g., Mruck & Breuer, 2003, May; Stiles, 1993) and may be treated as data in their own right (e.g., Flick, 2006; Hammersley & Atkinson, 1995; Taylor, 2001a; 2001b).

In the present study, this criterion has been met in a variety of ways: (1) since this study is a re-analysis of an existing data corpus, I myself was not involved in the data assessment and it is difficult to fully reconstruct the influence of the research assistants who collected the data. However, some influences become obvious from the video material: in the Nso data corpus, for instance, it happened more frequently that the participants engaged in conversation with the research assistant who was filming the interaction. This can be considered a valuable source of information since it reflects the importance to include the social environment rather then to exclusively concentrate on the child in the Nso context. It can also be taken as a sign that mothers felt at ease and that the filming interactions took place in a natural setting. Possible effects of 'visitor behavior' are discussed in the section *credibility*. (2) the researcher's subjective reflections in the process of data analysis were documented in form of memos and are summarized in the following: analysis was certainly influenced by my own cultural (German) background. There were, for example, several instances in the Nso data corpus that needed to be discussed with native colleagues because I could first not make sense of some utterances and behaviors. For example, I first did not understand why babies were called 'grandma' or 'grandpa' and needed to get familiar with the Nso belief that infants might be reborn ancestors and that this form of address is actually an expression of respect. Moreover, in the very early stage of analysis, the Nso interactions seemed strange and sometimes even harsh to me. The first impression was that the Nso mothers did not 'really' communicate with their infants but treat them as 'objects'. By intensively emerging in the data through repeatedly watching the videos and reading through the transcripts, along with reading ethnographic background information on this ethnic group, I became more and more familiar with this style of interaction and started to become aware of expressions of lovingness and tenderness that I did not see at first. On the other hand, I also started to conceive some of the behaviors in the Muenster interactions as somewhat more harsh than when I first watched them. This experience also demonstrates that how we conceive of the world is socially constructed and depends crucially on a person's 'conjunctive realm of experience'. While I gained an increasing understanding of the logic behind the Nso interactions through intensive emerging with ethnographic reports and discussions with Nso colleagues, there are certainly – and unavoidably - still some subtle and hidden meanings that have remained undetected in the analysis.

4. Results

The analytic focus used to examine the mother-infant interactions is on how issues of autonomy/agency and of relatedness are negotiated and co-constructed in discourse. Important to the analysis of mother-infant interactions is its broad contextualization in terms of asymmetric power relations between parents and children (cf. Blum-Kulka, 1997; Ervin-Tripp & Gordon, 1986; Ervin-Tripp, O'Connor, & Rosenberg, 1984; Goodwin, 2003). As Sirota (2004) points out, these power relations “are juxtaposed alongside the nuclear family’s role as an intimate interpersonal milieu in which interdependence and solidarity are also of paramount significance” (p. 12).

The present study found major cultural differences in how to balance and accomplish a discourse of parental authority and control alongside one of positive support and emotional relatedness. I will refer to the different patterns as (1) Co-operative vs. normative-hierarchical discourse, (2) Narrative biographical vs. rhythmic-synchronous structuring, (3) Individual-centered vs. socially oriented discourse. These patterns are not to be understood as necessarily mutually exclusive and to be only found in one cultural group and not in the other, although this was true for some features of discourse. However, the patterns described were found to be recurring within a cultural group and therefore can be considered as typical for the relevant cultural group. I will outline these three patterns by presenting relevant excerpts of both the Muenster and the Nso data corpus. Since the limitation of space does not allow presenting all excerpts, sequences that typically represent these patterns will be discussed in the following. Note: please see appendix for an explanation of the symbols used in the extracts. All names have been replaced with pseudonyms to protect individuals.

4.1. *Co-operative vs. normative-hierarchical discourse*

A first major difference in the way mothers structured the interactions can be described along the continuum of positioning the child as quasi-equal negotiation partner versus positioning the child as having to obey and comply in a hierarchical setting. There were various degrees of granting autonomy to the child and varying degrees of directness to which mothers exert control over the flow of the interaction. Interactional patterns of granting autonomy or exerting parental control become particularly evident when socially undesirable behavior is performed by the child. At the age of 3 months, mother's reaction to the child's fussiness can therefore serve as a suitable starting point for analysis. In this chapter, I will outline different discursive strategies that the mothers used in reaction to the child's fussiness as well as in situations in which the performance of parental control over the flow of activities is at stake. I will first discuss the findings from the analysis of the Muenster interactions, then those from the analysis of the Nso interactions, and will close with a summary of the findings.

The table below gives an overview of discourse strategies that were used in both groups in reaction to B's fussiness. In 16 out of 20 Muenster, and in 9 out of 20 Cameroonian interactions there were situations when the child started whining or crying.

Table 3: Reaction to B's fussiness

Discourse strategy	Muenster (n =16)	Nso (n = 9)
Cooperatively finding out what is wrong	8	1
Downplaying (irony and mitigating)	3	-
Promoting time orientation and self regulation	4	-
Requesting compliance and obedience	1	8

Moreover, while overall, the co-operative first person plural pronoun use ("we") was prevalent in the Muenster data corpus, this was not the case in the Nso data corpus as the following table illustrates:

Table 4: Co-operative pronoun use (N = 20)

Discourse strategy	Muenster sequences (cases)	Nso sequences (cases)
Co-operative pronoun use "we"	26 (14)	2 (2)

Micro-analysis of the relevant sequences is presented in the following.

The Muenster dyads

In the Muenster data corpus, the prevailing pattern in handling the child's fussiness was what I have called a *co-operative* discourse in which mothers treat the child as quasi-equal partner and using negotiating strategies. Another pattern was to use *downplaying and indirectly controlling* discourse strategies, for example irony or mitigating devices. And yet another pattern was to use straight forward *directive* strategies, e.g., by promoting time orientation and self regulation. The different patterns are discussed in the following.

Co-operative discourse strategies

Example 01: Muenster01_t12 (85-185)

In the first example, the mother was trying to engage her daughter in the interaction for about three minutes, first by prompting her to narrate, then by presenting a toy (mouse) when the child starts to whine.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
85		((WN))	presents different toy	(2)
86		((WN))	hesitates, looks briefly at toy	Oh (.)
87	> toy		shakes toy	>>Look<< (3 words unintelligible)
88	> side			(3)
89				Not good?
90			shakes toy	(3)
91	> mother			Not (.) good?
92	> side	((WN))		(2)
93				((talking to herself)) No: (.) hhh
94			lays toy aside	(1)
95	wriggles	voc		((murmuring)) good
96		((WN))		(2)
97			> B	BAH!
98			takes B up	((sights))
99		((WN))	lays B over her shoulder	Not good at a:ll (1 word unintelligible)

The mother tries to distract the child by presenting a toy and prompting B to look at it (line 85-88). She then poses a repeated question about the child's preference (line 89-100). Note that the mother has a clear sequential expectation of the child to respond in some way: she leaves a pause after each question and eventually provides the assumed answer herself (line 93). Questions always indicate that the person who poses it is missing some information that is important in the relevant situation. In this case, what the mother is asking for is information on B's preference. Pauses usually function to indicate to the other person that it is his or her turn in the conversation. It can thus be interpreted that the mother expects some kind of signal from the child that helps her to find out what the child wants. The mother ratifies ("good") what she interprets as the child's non-interest in the toy and adapts the situation to the child by putting the toy away (line 94-95) and changing B's position (line 98-99). She then repeats her interpretation of B's preference (line 99).

102		voc	> B	(1 word unintelligible) is good, hm?
103		voc		(5)
104		((groans))		↓Yeah (.)something was stuck, right?
105		voc		(2)
106	> floor		> B	↓Yea::h, something was stuck. (2)
107		((groans))	seesaws B's feet	(2)
108				Hm?
109			lifts B slightly	(3)
110	> ahead			Now it's o.k.?

After having changed B's position, M asks B whether everything is o.k. now and offers an interpretation of the reason for B's fussiness (digestive problems that might have been solved by changing the position of the child). The following discursive strategies are of interest here: Again, M has a clear sequential expectation of the child to respond in some way: first, in line 102, she adds a tag question ("hm?") to her statement and leaves a long pause of 5 seconds. Tag questions request confirmation of the statement from the addressee. They function to express uncertainty of the speaker toward one answer and also to invite the listener to take a conversational turn (Holmes, 1984; Nofsinger, 1991). We can therefore say that the mother is somewhat ambivalent whether her interpretation of the situation was correct and her strategy to change B's position has solved the problem and that she expects the child to give her a hint to confirm her interpretation of the situation. While it is obvious that the mother does not expect a 'real' answer from her preverbal child, she obviously expects B to give her some kind of communicative feedback. In lines 104 and 106, the mother ratifies B’s vocalization with “yeah” and a falling intonation and provides an interpretation of B’s vocalization. She thus treats B’s vocalization as an intentional communicative act. In lines 108 to 110, M is doing next turn repair work (Schegloff, Jefferson, & Sacks, 1977), that is, she treats the *lack* of a response as noticeable absence: she produces a tag question followed by a pause indicating that it is B’s turn in the conversation. As B does not provide an answer M provides the answer herself, however with a rising intonation at the end thus keying it as a question rather than a statement which indicates that she is still waiting for B to respond. We can derive from this sequence that the mother frames the interaction as a mutual endeavor to find a solution to the problem. She positions herself as someone who is supposed to interpret the child’s signals correctly and react appropriately by adjusting to the child’s preferences. She positions the child as someone who is supposed to cooperate with her in the solution finding process by providing the relevant communicative signals..

The interaction continues by B starting to whine again so that the mother has to revise her first interpretation:

111		((WN))		O::h gosh
112	> floor	voc	> B	So what should we do then? (2)
113				↑Hm:?
114			lays B over her shoulder	(7) ((sighs))
115	> room	VOC		What do we do then?
116			lifts B	(5)
117	> mother			↑Lau:ra
118		((WN))	> B frowns	(3)
119			puts B on her lap	((moans)) (3)
120		((WN))	> B	↑Well?
121				What’s the matter with you?

The mother reacts with an exclamation of surprise and helplessness Oh gosh) and asks the child what to do (line 112-115). By using the cooperative expression of proposition “we” she indicates that the solution finding process is a matter of both persons, mother as well as child (Pontecorvo, Fasulo, & Sterponi, 2001). Note that the mother leaves a relatively long pause in which she looks at the child attentively (line 116) thus indicating a sequential turn. The ‘missing’ response on the part of the child leads M to produce a summon (line 117). The conversational feature of a summon serves to initiate repair work as it provides a constraint for the next speaker to answer (Schegloff, 1968). The mother's expectation of B to communicate what's the matter with her is further expressed in the following pause (line 118-119), followed by a prompt (line 120) and the question "What's the matter with you" (line 121). She thus stays within the cooperation frame and actively includes B in the solution finding process.

The interaction then continues by the mother's various attempts to calm the child down, including attention seeking strategies and repeatedly asking what the matter is with her. Finally, the mother offers a new possible interpretation:

164				Are you ↑tired? (2)
165		VOC		That might be it(.) right? (1)
166			wipes B's mouth	↓Yea:h
167		sneezes		(1 sentence unintelligible)
168	wriggles	((CR))		(5)
169				Hmh? (1)
170				(asks researcher to bring her a pacifier)
171	> room	VOC	> B, seesaws B	Maybe you are ti:red, mh?
172	Paddles with arms	VOC ((WN))		(4)
173	wriggles			↑Mmh? (.) Laura?
174		((WN))		(3)
175				>↓Hey, you<
176		((CR))		(9)
177		((WN))	puts pacifier in B's mouth	
178	> mother/ upwards		> B	°↓Yea:h°
179			caressing B's face	(6)
180				I think you are a bit ti:red
181				(.) Can that be?
182	closes eyes		caresses B's feet	(10)
183	opens eyes			Mhm, I think that's what it was
184	closes eyes			

The mother brings the child's physical condition as a possible cause for her fussiness into play in form of a question (line 164). Note that she formulates it as a tentative hypothesis (line 165, 171, 180-181), leaving pauses and adding tag questions in between by which she suggest that it is the child's turn in the interaction. In light of this interpretation she gives a pacifier to the child and thus encourages self-regulation. This strategy turns out to be successful in that the child calms down and closes her eyes. The mother's final comment "I think that was it" signals that she interprets this as confirmation to her interpretation but that she is still not a hundred percent sure.

It should be noted here that the mother asked the researcher about the remaining of time which indicates that she might have felt under pressure to play with the child whereas in a every day situation she might not have tried to continue playing.

Example 02: Muenster06_t12

The next excerpt shows another example of co-operative discourse. Here the child started whining right from the beginning of the filmed interaction:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	moves arms and stretches	((WN))		(Are you pooping?) No:, not yet?
2				(1)
3		((WN))		Hm?
4		((WN))	lifts B slightly up by supporting his back	
5		((stops))		Yeah! Is it better like this? (1)
6		((WN))		Hm?
7		((WN))		(1)
8		((WN, voc))		No:?
9				Awoo:h-woo:h? ((imitates B))
10		((WN))		Well, something is not quite right yet. We'll make it a bit steeper, my friend.
11			moves B further up	(1)
12		((stops))		So:. ↑H:m?
13		((WN))		Is it better like this?
14			shakes head	↑No: (.)
15		((CR))		not yet?
16		((CR))	lifts B up	Or is it (.)
17		((stops))	puts B on laps	better like this? (1)
18				↑H:m? (1)

19	looks around			↑Yeah? (2)
20				↑That is better, I:: see!
21				Why then? (.) H:m?

The mother starts with an interpretation of B's intention (pooping) which she then puts into question again (line 1). The pause and following tag question (hm?) give the next turn to B which indicates that she expects some kind of feedback from B to confirm or reject her interpretation. She then goes on to change B's position, i.e. similar to the first example, she adjusts the situation to the child, and asks him whether this is now better like this (line 5). Again, the mother leaves a pause and poses a tag question. When B starts to whine again, she revises her interpretation (line 8-10). She mirrors B's vocalization back in a prosodic form of a question with a rising voice towards the end (line 9) and thus treats B's vocalization (line 8) as an intended response. Again, M adapts the situation to B by changing B's position (line 11). Note that the mother uses the cooperative expression of proposition "we" (line 10) like the mother in the first example. In lines 12-19 she tries several positions each time asking B for feedback whether she got it right until B finally stops whining. Her final statement "I see" (line 20) indicates that she has now "understood" what the child wanted.

The mother uses the same pattern later on in the interaction as the child starts fussing again:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((GR))		°Look! Won't you look at me?° Hm?
2		((WN))		
3				We have already fooled around this morning, haven't we?
4		((CR))		Don't feel like it? (1) Anga:h?
5			((takes B in her arms, adjusts B's legs))	(2) °My dear° (.) Hm? (1) Like this it's better?
6		((WN))		
7		((CR))		↑still not?

8		((CR))	((takes pacifier and puts it in B’s mouth))	Well and what about tha:t trick?
9	((spits out pacifier))		((puts pacifier in mouth again))	↓Hu@! ↓He:@lp. Hm? Right! Are you now ready for peace negotiations?
10		((WN))		
11				Still not?
12		((WN))		
13				↑Hm? °Is it better now?°
14		((WH))		
15		((pants))		I: see! <I think you are pressing> ↑Hm:?
16		((pants))		
17				°Ah° ((imitates B)) I: see!

The mother tries to get B’s attention and reminds him of how they both had fun earlier in the day. Her utterance implies the question: we have successfully cooperated in the past, why do you not want to cooperate with me now? In lines 4-13 she tries out various possibilities such as varying B’s position as well as self-regulation with a pacifier, again asking B each time for affirmation. In line 9 she employs an indirect request by framing her utterance in question format and offering to negotiate with B. She uses the metaphor of “piece negotiations” which implies two equal partners trying to find a solution that fits both parties’ interests. The child then provides her with a clue (panting or pressing) that she interprets as the reason for his fussiness (pooping). She phrases her explanation however as just a possibility (“I think”). The utterance “I see” in line 15 and line 17 suggest that she has now eventually found out what’s wrong with the child and successfully interpreted B’s signals.

Directive and indirectly controlling discourse strategies

Directive strategies

Some mothers in the Muenster group reacted in a more directive way to the child’s fussiness. These mothers constructed the situation in a way that suggests that they were rather sure about the reason behind B’s behavior (namely being hungry), that they judged the situation as not critical since the baby was just being fed, thus providing a rationale for not giving in to what the child wants.

Example 03: Muenster08_t12

In the following excerpt, the mother has been playing with the child for almost 8 minutes when he starts whining:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((pants))	plays with B’s hand	yam=yam=yam=yam=yam. Don’t say you are hungry yet again!
2		((voc))		(1)
3		((voc))		Daddy said you already had your portion!
4		((WN))		(2)
5			moves B’s hand to mouth	Well, then you’ve got to eat your thumb. See!
6	turns away	((WN))		
7			moves other thumb to mouth	°Take this thumb!°
8		((WN))		Well, take this one!

The mother uses the negative imperative “don’t say” in line 1 which indicates that what follows (“you are hungry yet again”) carries a socio-moral message with it. She constructs the interaction in a way that (1) indicates that she knows what the reason for B’s fussiness is (being hungry). (2) there is a certain feeding schedule to stick to. This is confirmed in line 3 where the mother claims that the child has been given a certain measurable amount of food indicating that food will be provided not according to the child’s (assumed) desire but according to a certain feeding schedule that the child has to stick to. Since, the time for the next portion has obviously not yet arrived, there is no ‘objective’ reason for B to cry which leads the mother to prompt B to regulate himself by sucking the thumb and to instruct him how to do so (line 5-8).

Example 04: Muenster16_t12

A similar pattern was observed in another dyad. Here the interaction has been going on for about 6 minutes when the child starts to whine while trying to put his hand in his mouth and eventually starts crying:

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1		((CR))	> ahead	He :y ! (1)
2	moves arms			Lu ::cas :!
3		((CR))		(2)
4			> B	Lu :::cas :!(1)
5		((CR))	takes B in her arm	↑Ye::s when you get tired you always become a bit nasty, don’t you?
6				↓Ye::s (1)
7		((WN))	softly prods B’s stomach	He:, hey, hey, hey.
8		((WN))	wipes B’s mouth	Hey, hey, hey. Let me wipe that off, won’t you
9		((CR))		↑Hm:?
10		((CR))	softly prods B’s stomach	>Hey!<
11	turns head to M’s breast	((WN))	> B	(4)
12		((WN))	swings B from side to side	No::, you don’t need to drink that, you just have drunken something.
13		((CR))		(1)
14			> B	↑Hm:? Hm::?
15				(2)
16			puts finger in B’s mouth	Well, take my finger, , hm? °(Are you sucking) the finger a bit, hm?°
17		((CR))	> B	No::! (.) <No!> (.) <NO!>

(…).

22		((CR))		↓A::h (magic bear) (ma::gic bear)
23		((CR))		<No>
24		((CR))		<No> You don’t need to drink anything now// (.) drink anything because you’re tired
25		((CR))	caresses B’s head	No, no, no, no, no.
26		((CR))	bounces B	No=no=no=no=no.
27		((CR))		↑No=no=no=no=no.
28		((CR))		No=no=no=no=no.

Similar to the previous example, the mother in this excerpt seems to be quite sure about what the reason for the child’s uneasiness is. She immediately relates the child’s behavior to his bad mood due to tiredness. She formulates it as a habit of the child (line 5) thus strengthening her interpretation by indicating that she knows this behavior well. Formulation and prosody of the sentence also indicate that there is nothing severely wrong and to worry about. Using attention seeking devices (“hey”) she indirectly prompts the child to stop (line 7-10). When B turns his head towards M’s breast the mother takes this up and interprets it as B wanting to be breastfed (line 11-12). Her reaction in line 12 suggests, like in the example above, that there is a certain feeding schedule to stick to. Similarly to the previous example, she excludes hunger as a possible reason for B’s crying. She then offers her finger to the child to suck on, which can be seen as way of ‘substitute’ or self-regulation. The child first sucks the finger but then starts crying again and turns to M’s breast which is quite rigorously denied by the mother (line 17, line 23-28). Again, the mother refers to B’s tiredness as the reason for crying. The purpose of breastfeeding is here obviously seen in nurturing the child physically, not necessarily as a means to calm the child down emotionally. Instead, B is encouraged to regulate himself in his distress.

In both examples, the mothers construct the situation as one in which they know what the reason for B’s fussiness is and that there is no serious reason to be taken care of. In both examples, the mothers use rather directive strategies to calm the child down. They both do not give in to what they believe the child wants and construct a rationale for justifying that they don’t.

Example 05: Muenster17_t12

The mother has been playfully interacting with the child for several minutes when the child starts whining:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((WN))		What then? One can’t just change one’s mood (.) like this (.) (2) on the spur of the moment, without that anything has ↑happened! (.) That’s ↑NOT POSSIBLE!
2		((CR))	((pulls B up))	(1) >Come on< (1) Mummy is pulling you up once more.
3		((stops))		

In this excerpt, the mother reacts with an expression of surprise , followed by a socio-moral message indicating that without a (serious) reason one is not supposed to change one’s mood (line 1). She uses the neutral pronoun “one” indicative of normative discourse, and demonstrates the absurdness of such a behavior by her comment “That’s not possible” and her raised voice. By that she demonstrates that she does not accept B’s fussiness. She then pulls B up and B calms down so that the topic is brought to an end.

Indirectly controlling strategies

Another pattern found in the Muenster data corpus was the use of *indirect* directives and mitigating devices including politeness strategies such as offers, requests or the co-operative first person plural use “we” to effect changes in the ongoing activities.

Example 06: Muenster17_t12

Towards the end of the above interaction, B starts whining again:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
233	turns head > mother	((WN))		And now you still want to cry? No, no, no!
234			moves B’s legs	((in playful tone)) NO, NO, NO, NO! NO, NO, NO NO:!
235		((GR))		We don’t want that at all!= >no, no, no< no:! (1)
236			bents B’s legs and stretches them again	OH NO::! (1) ↑*NO::!* (1)
237			bents over B and smiles at her	↑*NO::* (1) ↑*NO::! No::*
238	moves hands	voc		°°Oh, did you make a smell? Did you make a smell?°°
239		((GR))		
240		voc		(2)
241			bents very low over B	Never mind! That’s o.k.!
242			slightly shakes B	You may do whatever you want, except crying °°that mommy doesn’t like. Crying is not nice!°°

Again, the mother reacts to B’s fussiness by expressing non-acceptance, this time however, with a rhetorical question (line 233) referring to the child’s intention (wanting to cry). Rhetorical questions (RQ in the following) are no information-seeking questions but function to challenge propositions and actions in order to redirect or terminate the actions of an addressee (Schieffelin, 1986). She continues by a repeated negative imperative. The repetition intensifies her response, however, the playful intonation softens the strictness of the negation. It is noteworthy that she uses the inclusive first-person plural pronoun form ‘we’ (line 235) which functions to invoke a sense of collaboration and shared goals by utilizing ‘point of view operations’. It can be seen as a polite strategy to make the child comply (Brown & Levinson, 1987). This move also softens the tone of her request and appeals to reason and diplomacy (Sirota, 2006). It is interesting, in this context, that the mother continues by referring to her own personal feeling and opinion as justification for the restriction (line 242). By that she indirectly requests B to respect her individual needs and positions B as ‘democratic’ partner. However, she also refers to herself in the third person as “mommy” here. By using this membership category she positions herself as someone who is entitled to give instructions to the child. She conveys a social norm (crying is a disapproved behavior) but simultaneously grants the child autonomy and freedom in other domains by telling her that she may do what she wishes except crying (line 242).

Within the Muenster data corpus the pattern of invoking collaboration through the use of the pronoun ‘we`’ to frame the situation as a cooperative venture was also found to be used in the following contexts *other* than the child’s fussiness:

(a) announcing what is happening with the child, e.g.,:

„Now we’ll sit down again, right? Otherwise it’s going to be too exhausting for you, right? (Muenster18_t12)

„(Come on), we are putting you like this now“ (Muenster18_t12)

„(Come on) we are trying out your nice chair again “ (Muenster06_t11)

„The head has become so heavy? (1) Then we’re gonna lay you down again. THEN=WE’RE=GONNA=LAY=YOU=DOWN=AGAIN“ (Muenster17_t12)

(b) importing an activity-related transition, e.g.,:

`„Do we wanna do gymnastics once more? Do we both wanna do gymnastics once more?” (Muenster17_t12)`

`„Should we get another toy, hm:? The one you’ve got from Heike?“ (Muenster07_t12)`

`“Hey! (2) Should we do ‘the little child on the throne’ once again, hm? Do we wanna do that?“ (Muenster09_t12)`

These examples have in common that the mothers actively structure the flow of the interaction. However, rather than directly imposing an activity onto the child, they choose linguistic strategies emphasizing collaboration or solidarity that leave the intent negotiable between the two interlocutors and mitigate or soften the potential interpersonal impact of imposition or coercion (Blum-Kulka, 1997). As Brown and Levinson (1987; see also Sirota, 2004) have postulated, these linguistic devices are politeness strategies that allow for modification of the direction of interaction without threatening the affective-relational bond between the interlocutors.

The use of irony and appeasing strategies

Indirect control with regard to B’s fussiness was also accomplished by using downplaying and appeasing strategies. Mother’s would either soothe the child by assuring that everything is well or, like in one case, use irony:

Example 07: Muenster19_t12

The sequence below starts after about 4 minutes of playful interaction with the child. The child has been sucking at M’s finger for a while when she starts whining:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((WN))	((grinning))	
2		((CR))		((with ironic intonation))O::h! oh-oh-o:h (2)
3				What’s up then? Hm? What are you complaining about?
4	fondles with M’s hand			(6) °(unintelligible)°
5				(4)

6		((WN))		
7		((CR))		A:::h (.) Ah=ah=ah=ah
8		((WN)) ((CR))		And she wept bitterly
9				ey-dey:dey:? Deydeydeydey? Hey? Eydeydeydey?
10	smiles		smiles	H@ You’re not sure yourself whether you should be laughing or crying.
11		((WN))		He@he@he@he (.) deydeydey

(...)

14		((CR))		O::h
15				↑Ye:y (1) ↑Yey ↑o::h ((ironic intonation))
16		((WN))		
17		((CR))		↑Poor girl
18				He@he@he@he (2) (unintelligible) that’s mean, isn’t@it? h@h@h@ That’s me:an
19		((voc))		
20			Nods head	Yeah! (2) Yeah! Come on and rant! (1) Go ahead and rant!

This sequence differs from the previous examples in that the mother reacts with a vocal expression with an exaggerated intonation contour followed by playful teasing in form of an indirect reproach that is keyed as a question (line 3). This formulation suggests that M does not really see a severe problem in B’s crying. This is even further emphasized by the prosody of the vocal expression in line 7 followed by a comment mirroring B’s behavior that is phrased in an exaggerated fashion and formulated in the third person singular past tense thus resembling a dramatic quotation from a novel (line 8). This linguistic device makes the expression clearly ironical. Ironic expressions intend to draw attention to some discrepancy between the world as someone else is describing it and the way things actually are (Wilson, 2006). That is, from B’s crying an observer might infer that she is suffering but M calls this into question. B calms down and briefly smiles. The mother takes this up by teasing her about not knowing whether to laugh or to cry (line 10-11) and “pities” her in an exaggerated way that underscores the ironic tone in her message (line 15-17). This interpretation of teasing the child is confirmed in line 18 in which M mirrors that her reaction (from B’s perspective) is really “mean” and starts laughing. Teasing in this sequential context can be interpreted as pointing to the target’s

(B’s) complaining as being done in an overdone manner. It may also be considered “a mild and indirect form of reproof of a mild kind of transgression” (Drew, 1987, p. 250). M thus constructs B’s problems as seemingly ‘unspectacular’ and in no relation to the expressed behavior and as mildly socially unacceptable behavior. In line 20, she repeatedly encourages B verbally and nonverbally to move on and “rant” which underlines the teasing character. A few turns later, B starts to cry again:

6		((CR))	O::h ((ironic intonation))
7			(2)
8			O:::h! You poor child! (1) No?
9	smiles	((voc))	
10			He@ Do you have to suffer from hunger? Hm?

Again, M reacts with an ironic intonation in her vocalization and pitting comment (line 6-10). It becomes obvious now that M assumes hunger to be the reason for B’s fussiness but sees B’s reaction as exaggerated reaction. Through the teasing activity, the mother ‘corrects the story’ (Margutti, 2007; Wilson, 2006) that may be conveyed to other observers by the child’s crying. Finally, the child calms down and the mother reassures B that she will be fed soon:

12	But you will get something to tuck in. (.) Right? (.) Promised. (.) mh hm.

We might infer from such a response that the mother is sure in her interpretation of B’s behavior (an expression of being hungry). The word she uses (“tuck in”) has a humorous connotation. While the overall tone of the sequence is an ironic one framing B’s expressed discomfort as minor problem, B switches to a cooperative discourse in line 12 by promising to B that her needs will of course be met.

In sum, the analysis revealed two broad patterns of mothers’ reactions to the child’s fussiness within the Muenster group. The most prominent pattern was a co-operative pattern that positions the child as a quasi-equal partner. To a lesser extend, mother also used directive and indirectly controlling strategies: mothers who used a directive discourse refer to a feeding time schedule and provide a rationale why the child does not have any reason to cry, mothers who used an indirectly controlling discourse used mitigating devices and the co-operative pronoun “we”.

The Nso dyads

Normative-hierarchical discourse strategies

In the reactions of the Nso mothers to the child's fussiness, there was less variation and also there were overall fewer instances of situations in which the child started whining or crying (see table 3). The Nso mothers commonly used discursive devices to exert direct control and positioned the child as having to obey and comply in a hierarchical setting. The prevailing pattern in this group thus can be described as *normative-hierarchical* discourse as I will outline in the following.

Example 08: Nso09_t12

The mother has been rhythmically bouncing B for about one minute who has been frowning and staring into the camera and now starts to whine.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
36		((WN))	shaking B	Has someone touched you?
37		((CR))		No:=no:=no:=no:=no:=no:=no:=no:!
38		stops	stops	(1)
39		((CR))		((flicks lips))
40				ship=ship=ship=ship=ship=ship=ship
41		((WN))	picks up a leaf	Look! Take! Take Faiy[15]!
42			shaking leaf	See! See! See! Your grass! Take! Take! Take! Take sheey[16]!
43		((CR))	tries to put leaf in B's hand	Take it in your hand like this.

In this excerpt, the mother abruptly shakes the infant when he starts whining. She poses a question without providing an answer or leaving any pause which indicates that it is a rhetorical question. As mentioned earlier already, RQ's are no information-seeking questions but function to challenge propositions and actions in order to redirect or terminate the actions of an addressee (Schieffelin, 1986). RQ's can thus be conceived of as verbal form of social control and have been found to be used by parents in order to change the child’s behavior (ibid p. 178). There is an underlying proposition to the question “Has someone touched you”, namely “there is no good reason for you to be crying, therefore, you should not cry” (if someone would have ‘touched’, i.e. hit him, he would have had reason to cry, but since this is not the case, there is no reason). The mother then continues by a vigorous repeated negative imperative (line 37) thus intensifying her response and tries to gain the baby’s attention by vocalizing (line 39-40) and directing his attention to a stimulating object (line 41-42). While in the Muenster data corpus, mother’s would seek B’s attention by using suggestions as prompts (e.g., “look what I have here for you?”), the mother here uses *directives* as she prompts the child repeatedly to look at and take the object. Eventually she “makes” the child do what she wants him to do (line 43) by pressing the leaf in his hand which is an imposing strategy. She thus documents that she does not accept whining behavior and that she expects compliance and obedience from the child.

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[15] title of a lineage head

[16] title of a sublineage head

The child gradually calms down and the mother and child engage in a playful sequence of alternating vocalization. The child starts to whimper a few times, however, and eventually starts crying again:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
127		((CR))		(1)
128		((CR))		Terrible!
129		((CR))	> B, waves leaf	Take! Take! See! See!
130		((CR))	gives B a stern look, shakes head	No! No! No Don't cry again! We don't cry in Mbah.
131		((CR))		Terrible:::! They don't cry in Mbah!
132		((CR))	waves with hand	((angrily)) Stop=fast!
133				Who has told you that they cry here?
134		vo::c	smiles at B	
135				((softens her voice)) They don't cry here.
136		vo::c	smiles at B	
137				They only laugh.
138		vo::c		
139				They don't cry here.

The mother uses a shaming device (“terrible”) expressing that this behavior is socially unacceptable. She verbally and physically prompts the child to redirect his attention (by shaking him and prompting him to look at and take the leaf), followed by a repeated negative imperative. The reason she mentions is that it is not common in this area to cry. Note that she first uses a cooperative expression of propositions ("we", line 130) and then switches to "they" (line 131-139) which indicates a normative discourse. In a stern voice she commands the child to stop and again poses a rhetorical question (133) indicating that there is no reason to cry, so don't. Note that after the baby stops crying (line 134), the mother smiles at B, and the tone of her voice becomes softer. By this she takes back some of the initial severity of her reaction and re-establishes social harmony in her interaction with the child.

Although reactions to B's whining varied in their intention and intonality across dyads, the reactions in the Nso interactions followed a pattern very similar to the one in this excerpt: vocal distraction and rhythmic animation, expressing disappointment and scolding the child, conveying a social norm, commanding the child vigorously to stop, asking rhetorical questions indicating that there is no reason to cry, and taking back the initial severity after B complies. The following two excerpts serve to illustrate this pattern:

Example 09: Nso10_t12

B is sitting on mother's lap, the mother has just started to sing to the child as B starts crying:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1			> B	Mama Happiness?
2		(pants)		(2)
3			sways B from left to right	Be dancing. *March on to victory*
4		(CR)	looks briefly to camera, then to B, shakes B	a::y eme:y eme::y! (exclamation of surprise and disappointment)
5		(CR)	nodding each time with a stern look	(angrily shouting) A BAD CHILD! A BAD CHILD! A BAD CHILD! A BAD CHILD! A BAD CHILD!
6		(stops)		(3)
7				A BAD CHILD!
8		(GR)		↑He::::::, a puppy? What is it? Are you a puppy?
9		(voc)		
10				O::::::h, you are not a puppy, have you heard?
11			kisses B	You are not.

The interaction starts by the mother addressing the child as “Mama happiness” and prompting her to dance while she starts singing (line 1-2). By this the mother is actively structuring what the child is doing and indicates that happiness is a relevant topic to her. When the child starts crying, the mother reacts with looking at the camera and uttering an expression of surprise and disappointment (line 4) which may be interpreted as sign of embarrassment and a sort of hesitation over how to react to her child’s behavior. Part of the uneasiness can be explained with the performative character of being filmed and the assumption that the mother wants to display what is considered to be a nice mother-infant interaction according to her cultural belief. This points to a cultural ideal of a well-behaving and obedient child that does not display negative affect. She reacts with a direct and unmitigated shaming message, stressed by quintuple repetition as well as angry voice and mimic (line 5-7) and a rhetorical question (line 8-10) implicating that the child is not a puppy (puppies cry but not infants) and therefore there is no reason for her to cry. After the child has calmed down, the voice of the mother softens and she relativizes her previous utterances (line 11) by stating “you are not” and kissing the child. By this she ratifies the child’s obedient behavior.

Later on in the interaction, the child starts whining again while M is singing to her:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	lifts arms	pants		*march on to victory*
2		((WH))		*we are more than conquer//*
3				Yes, be conducting queen! (1) Quickly!
4			starts waving finger	*March on to victory*

The mother reacts to B’s whining with an imperative and prompt to behave well, which is even intensified by a second imperative stressing the expectation of immediate obedience. The mother then goes on and continues to sing the song without further elaborating on B’s whining.

The next excerpt is taken from an interaction which has been smoothly going on for almost 10 minutes when the child starts to whine:

Example10: Nso22_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((CR))	moves B up and down	((rhythmically))
2			in same rhythm	*Little Emy,*
3				*little Emy,*
4				*little Emy*
5				*Let her not cry,*
6				*let her not cry*
7				*let her not cry*
8				*let her not cry*
9				*let her not cry*
10				*let her not cry*
11	> camera	stops		(.)
12			stops	Why do you want to cry?
13				Did I hit you?
14				(1)
15			approaches and kisses B	Did I hit the baby?

Here, the mother first appeals to the broader social environment by prompting an anonymous audience to ‘not let her cry’ while she continues bouncing the child up and down. The repetition of the phrase underlines the character of a plea. Crying seems to be something to be avoided and others seem to be expected to intervene to avoid crying. The mother goes on and addresses the child directly in line 12-15. Similar to the previous examples, we find the pattern of a rhetoric questions (line 12-15) calling into question that there is any reason for crying, and a gesture of endearment (kissing) after the child has complied (line 15).

Rebuking and shaming devices (see also example 09) were found to be common reactions to B’s fussiness as illustrated in the following example:

Example 11: Nso06_t12

In this interaction, the mother first tries to catch B’s attention by hitting a box and a plastic bottle and prompting her to look at it when B starts whining.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
37		((WH))		
38				A::y go away! (.)
39				↑Hu::::h! ((clicks tongue – a form of insult))

(…)

59		lifts B up	The face of the child is getting bad. ((flicks lips)) ((clicks tongue - a form of insult))
60		moves B up and down	tinding (.) tinding
61			You should be dancing!
62	((°CR°))		He::?
63		puts B down	(3)
64	((CR))	bounces B	You should keep quiet!

The mother first reacts to B’s whining by rebuking (line 38-39). In the following (for the sake of length not transcribed here) she tries to distract B by shaking a box in front of her, prompting her to take it, and rhythmic vocalizing. When B grimaces and starts whining, M comments on B’s grimace (line 59). It is noteworthy that she refers to B in the third person as “the child” and that she remains on the level of the outward appearance of the child. She thus does not address B directly but constructs her as somewhat distant to herself. She uses a click sound that indicates rebuking and puts forth her own proposed activity agenda by melodic vocalization and prompting B to dance (line 60-61). She keys her utterance as an indirect reproach (you should be dancing and not crying) drawing on a normative discourse (line 61-64). By this the mother positions the child as someone who is supposed to obey and follow the orders of the mother.

The interaction continues (not transcribed here) by M prompting B to look at her and vocalizing highly repetitive at a very high pitch while rhythmically bouncing B. B then calms down briefly but starts crying again as we join the interactional scene below:

144	((WN))		NO! ((aggressively)) GO! GO! GO! Yah!
145	((CR))		
146			NO! No! No! No! You should keep quiet!
147	stops		(3)
148	((WN))	bouncing B	↑Ching ching ching, ching, ching, ching, ching, ching, tiding tinding ding ding ding
149		> besides B at a cat that passes by	Look at a cat! Look at a cat!

The mother stays within the normative frame and reacts with an even increased brusqueness using repeated negative imperative and promptings.

Other than in the previous examples, the child does not calm down. The mother finally switches from rebuking to strategies to find out what is wrong with the child:

167			Would you suck the breast milk?
168			(1)
169			Would you suck the breast milk?
170			Would you suck the breast milk?
171			(1)
172			Would you suck the breast milk?
173	((WN))		(1)
174			Would you suck the breast milk?
175			Would you suck the breast milk?
176			Would you suck the breast milk?
177			Look over there!
178		points with head to camera	Look! Look! Look! Look! Look!
179	((WN))		↑What is angering? (1)
180			↑What is angering the child?
181	((coughs and WN))	stops and looks closer at B	(.)
182			What is angering the child? (1)
183			What is angering the child?

Her question “Would you suck the breast milk?” indexes that M considers breastfeeding as a possibility to soothe the child. However, she does not try to breastfeed the child which indicates that for some reason she does not think it would be appropriate. This might actually be related to the fact that the instructions given by the research assistant was that they wanted to record first 10 minutes of breastfeeding and then of play interaction. The behavior thus may indicate that breastfeeding is what M would normally do in such a situation. Note that she does not ask whether B is hungry but whether she wants to be breastfed. This may indicate that breastfeeding is considered to not only to serve feeding purposes but also the purpose of emotional regulation when the child is not hungry, Only now, after a longer period of rebuking and attention seeking without B calming down, does the mother ask about possible causes.

Several turns later, we see again the use of shaming devices:

204			Look at how you are sitting with tears on the eyes ((flicks lips))
205		> camera	Look! Look! (.) Look!
206			((clicking tongue))

(...)

260	((WN))		
261			WHAT IS IT? LOOK AT HOW YOUR EYES ARE UGLY!
262		clicking fingers	LOOK! LOOK! LOOK! LOOK!
263	((CR))		No=No!You should stop crying
264	((CR))	takes B in her arms, bounces B	No! No! (2) No (.) No=no! (.) No=no!

The mother's mirroring of how B looks like is keyed as a shaming message (indicating that B should be ashamed of her behavior). The emphasis is on how the child looks like and hence on the public appearance and good behavior in front of others. The hectic in M's endeavors to calm B down throughout the entire interaction further supports the interpretation of crying to be socially unacceptable. The mother does not provide any further explanation after rebuking.

The interaction ends with M asking whether "it is bad" and suggesting to get some medicine for the child:

320	((WN))		Wait! Let me make and go and look for medicine for you, m:h? We will go and look for medicine you, hear?

Interestingly, the mother switches to a more co-operative discourse by using the suggestive formulation "let me", adding tag questions after her suggestions twice and by formulating the last sentence using the first person plural pronoun "we". There is thus a parallel to the above examples insofar as the mother re-establishes relational harmony – in this case not after the child has complied but after she acknowledges that the reason for B's crying might be related to some serious problem rather than to 'mere' disobedience.

In other interactions (e.g., Nso13_t12) when there were only minor signs of uneasiness expressed by B, mothers would simply react by using a negative imperative such as “No” or “you should not start” and then continue what they were doing before.

We can infer from these interaction patterns that among the Nso, crying is a socially unacceptable behavior and that the child needs to learn to behave well publicly and suppress his or her negative emotions. However, when the cause for the crying is assumed to be some serious health problem, soothing the child by breastfeeding and taking care of medical provision are appropriate caregiver behaviors. Normally, the mother might have breastfed the child (as some of her comments suggest) but might have felt that she is not supposed to because of the filming instruction).

The first person plural use “we” was found only twice within the Nso data corpus:

(a) in the above instance, it served to express assurance and to soothe:

`“Wait! Let me make and go and look for medicine for you, mmh? ((B WN)) We will go and look for medicine you hear?” (Nso06_t12)`

(b) in the other instance, also discussed earlier, it was not used to express co-operation, but to convey a social norm (see example 08):

`“Don't cry again! (.) We don't cry in Mbah!” (Nso09_t12)`

Further evidence for the relevance of obedience and the use of a normative-hierarchical discourse was also found in situations *other* than crying. These sequences followed a very similar pattern as the following examples illustrate:

Example 12: Nso02_t12

The below excerpt shows a sequence in which M wants B to learn to sit upright. B is sitting upright on M’s laps as he struggles with his balance and with keeping the head up.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	head drops down > mother			((laughing)) ↑heh heh heh.
2	> down		grasps B's hands tightly	Pumpkin leaf! Are you a pumpkin leaf?
3			> camera, turns back to B and shakes him	Are you a pumpkin leaf boy? Are you a pumpkin leaf?
4				↑°*e:::=boy Francis=Francis=Francis!*°
5			> camera	(1)
6				↑°*e:::=boy Francis=Francis=Francis.*°
7			> B lets B slightly fall back	**You have tried, e: boy?** (.)
8	> up		> camera, >left shaking B slightly	**You have tried, e:: bo:y?**

The mother laughs about the seemingly clumsy behavior of B and calls him a ‘pumpkin leaf’. This expression is normally used in the Nso culture for someone who is considered to be a looser or someone who never succeeds in anything (Yovsi, personal communication) and hence an expression of teasing. After B struggles for a while, however, M states that he has (at least) tried. By that she recognizes and credits his good will. It is noteworthy that she switches to English at that point and looks to the camera. Among the Nso, English is mostly used in schooling settings, not within the home though. An individual’s use of two or more language varieties in the same speech event or exchange has been referred to as code switching (CS) in the literature (Woolard, 2004, p. 73). It is common in cultural groups like the Nso where two or more speech communities come into frequent contact with each other (Keating & Egbert, 2004). It has been argued, that CS does not happen accidentally but to be systematic and socially meaningful (Blom & Gumperz, 1972; Gumperz, 1982, cf. Woolard, 2004), and to accomplish interactional functions or goals. For instance, it may serve to change the social positioning of participants, or for indicating a change in interactional frame (e.g., from single t multiple addressees). It is not quite clear what is accomplished in this sequence by switching to English. The fact that English is usually spoken in educational settings, however, suggests that the mother creates an educational situation which she uses to teach B obedience.

Later on in the interaction, a similar sequence occurs:

1			sits B on lap	
2	> down	((GR))	leans back, > B	
3	struggles to sit			Hoh: (.) e::h (.)
4			takes arms away so that child sits without help	Hey!(.) Hey!(.) **Sit like this!** (.)
5	falls forward	((GR))		**Sit! (.) Yes! (.)**
6			pushes B back and removes her hands	**SIT ERECT! (.) ho:: (.) ho:: (.)**
7	falls forward	((pants))		**Sit straight (.) Sit straight (.)**
8				((laughs)) AHAHA::
9			pulls B closer to her, prodding him	heh heh he::h.
10	stares in front at M's chest		lifts B up, > B	↑hu::::::=Francis (.) ↑hu::::::=Francis (1)↑hu::::::=Francis (.)
11			sits B down on her lap	**Francis have seated (.).**
12				**You have seated now Wa::iy** [wa::iy is a friend], haven't you?

Again, B is struggling to sit on his own. This time the mother prompts him to sit (line 4-5) and even pushes him back and commands him in a strict voice to sit erect as he falls over. The strictness in her voice disappears however in line 8-12 when she pulls B closer to herself and sits him in the desired position herself. Note that she recognizes that he has managed to sit although in fact it is her who holds him. The mother thus uses a child-raising strategy (Ochs & Schieffelin, 1984) by accomplishing the required task herself but treating it as an accomplishment of the child. She addresses B as friend and adds a tag question which serves to elicit a ratification of B's accomplishment. Similar to the above excerpt, the mothers switches to English. In this sequence, code switching seems to introduce a new interactional frame, namely the performance of obedience learning and may function to enact authority towards the child (Gumperz, 1982, cf. Woolard, 2004).

The two above excerpts of example 12 thus follow a pattern that is similar to the reactions to the child's fussiness insofar as the mother initially requires obedience but restores the harmonious relationship at the end when B is obviously not able to accomplish the required task.

In the 4th minute of the same interaction we find another example of installing obedience on the child. Mother has been moving B up and down rhythmically for a while when she stops and grasps a pen that is lying next to her.

1			Grasps pen	Take! Take! (.) Take! **Have pen!**
2	> down		shows pen to B	**(1)** **Take! Have this:!**
3				**(2)**
4	Moves hand slightly			**<HAVE THIS::::!>** **Have this pen!** Say it!
5				((talks to others and laughs))
6		sneezes	puts pen away	

The mother stops her previous activity and introduces a new activity by prompting B to take the pen she is presenting him. She repeats her prompt several times with increasing emphasis which gives the impression of a command. It is interesting to note that she applies code switching again when changing from a playful rhythmic interaction frame to an obedience-training frame, which might point to a more general pattern of using English for educational purposes.

Summary

In this chapter, we have investigated discursive strategies of granting autonomy and requesting compliance in mother-child interactions. These strategies became particularly evident in situations where the child started to whine or cry but also in other situations. In 16 out of 20 Muenster and in 9 out of 20 Nso interactions there were situations when the child started whining or crying.

The Muenster mothers in this study use various strategies to facilitate and guide the ultimate realization of compliance: predominantly, they enter into negotiation with the infant treating him/her as a quasi-equal partner. Moreover, they accomplish a blending of solidarity and social control via certain politeness strategies, such as indirectness (e.g. cooperative pronoun use “we”) and explaining, thus managing and addressing nonimposition and positive support simultaneously (Brown & Levinson, 1987; Sirota, 2006). Reference is made to the needs and personal preferences of the mother, conveying the message that mutual interests need to be respected. Indirect control is to a lesser extend also exerted by use of mitigating devices and irony. Notably, this communication style emphasizes diplomacy, reasoning, and interpersonal maneuvering as strategies that work toward securing an alignment of relational perspectives with a minimum of direct, overt confrontation (Sirota, 2006, p. 502). To a lesser degree, they draw on overtly directive strategies. Directive strategies comprise expressing non-acceptance of the child's behavior and making clear that the decision is not negotiable. This pattern is found in conjunction with a strict orientation towards a feeding schedule. Mothers who draw on this last pattern communicate to the child that there is no reason to cry by providing a rationale or by using rhetoric questions. Overall, the Muenster mothers seemed to not see a big problem in letting B cry for a while. Moreover, the findings suggest that breastfeeding is seen by these mothers to serve primarily physical nourishment, and the infant is encouraged to emotionally regulate himself by sucking on his own or the mother's finger.

The Nso mothers, on the other hand, use very directive discursive strategies to facilitate immediate compliance, such as commands and shaming messages as well as rhetoric questions, leaving little or no autonomy to the child. They communicate to the child that there is no reason to cry by using rhetoric questions. They do not provide any further explanation after rebuking the child. Reference is made to social norms, conveying the message that crying is socially unaccepted and that social rules need to be respected without discussion. They achieve a balance between social control and emotional relatedness and warmth, however, by conveying relational closeness through signs of endearment once the child has complied or in case of health related problems. The findings also suggest that breastfeeding may not only to serve to physically nourish the child but also to sooth and emotionally regulate the child. The strong orientation towards obedience and respect also becomes evident in situations other than crying.

4.2. *Narrative biographical vs. rhythmic-synchronous structuring*

A second major difference in the way mothers structured the interactions can be described in broad terms of narrativity and rhythmicity. Central features of rhythmicity in mother-infant interactions are turn-taking, repetition, and musicality. The present analysis, therefore, tried to identify various forms and (possible) functions of these features in the two groups. Analysis revealed cultural differences in the way and extend to which turn taking is established, as well as in the extend and structure of repetitive and rhythmic features of communication. Within the Muenster group, the prevailing pattern was a diachronic narrative-eliciting structuring along dyadic turn-taking. Some mothers also showed a somewhat more lopsided pedagogic discourse to elicit conversation. In the Nso group, in contrast, the interactions where lopsidedly and highly rhythmically structured and showed a more salient pattern of musicality.

The table below provides an overview of the main discursive strategies of narrative and rhythmic structuring that were found in the data corpus. Since rhythmicity is a general aspect running throughout the entire interactions, it is not listed here as a separate category but will be discussed along with the analysis of individual excerpts.

Table 5: Overview of narrative-biographical strategies

Discourse strategy	Muenster sequences (cases)	Nso sequences (cases)
Narrative structuring devices		
Explicit prompting to narrate	19 (13)	-
Referring to biographical experiences	13 (9)	4 (4)
Referring to future events*	12 (10)	6 (6)

Table 6: Overview of singing repertoire

Discourse strategy	Muenster sequences (cases)	Nso sequences (cases)
Singing		
Lullaby (indigenous)	-	2 (1)
Religious hymn (English)	-	10 (2)
Pedagogic/medical song (English)	-	6 (3)
Other children songs (indigenous)	2 (1)	4 (4)

* this does not include announcing immediate actions

In this chapter, I will first discuss findings within the Muenster dyads, I subsequently discuss the discursive patterns found in the Nso Dyads, and will conclude with a summary of this chapter.

The Muenster dyads

Narrative-eliciting turn-taking and biographical structuring

The way the interactions were structured in the Muenster data corpus largely corresponds to what has been described as *protoconversation* in the literature: mothers typically initiated a dyadic turn taking pattern by applying a question-answer pattern, interpreting the infant’s vocalizations as communicative act and providing the missing parts of the conversation on the child’s behalf. A very prominent finding was the focus on a *narrative* structure of the interactions: Mothers were typically found to (1) explicitly prompt the child to narrate, (2) refer to the child’s biographical experience in a narrative way, (3) announce upcoming events, thus bringing the child’s experience in a biographical form. In doing this, mothers were found to often gradually unfold a narrative as the interaction developed.

In the following, I will first present findings from the micro-analysis of the interactions to support these claims.

Explicit prompting to narrate

The most striking finding was that explicit prompts to narrate were found only in the Muenster data corpus and were found as a solid recurring discursive pattern in a large number of cases (19 sequences in a total of 13 interactions). The following excerpt presents an example of how a mother gradually unfolds a narration drawing both on a biographical event to initiate the play interaction and by directly prompting B to narrate:

Example 13: Muenster01_t12

The mother sits on the sofa with her legs bended and B lying on her legs facing the mother as the filming session starts:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
2	moves hand and legs	@voc@		
3			adjusts B’s head	Ye:s(.) ba:thing (1)
4	stops > mother	VOC	adjusts leg	Today it was good (.), wasn’t it?
5		VOC	> B	(2)
6				((sniffs)) Today it was good the bath, wasn’t it?
7			caresses B’s face	(2)

8	> mother			Without any plunching (.) h@
9	moves fingers	°voc°		(1)
10			stops, smiles, > B	Mhh?
11	> mother	VOC		(4)
12	> mother		nods	↓Yea:h
13				(6)
14				Today it was good, wasn’t it?
15				(2)
16	moves hands			That was fun, wasn’it? (4)
17			smiles	↑Yes?
18				(7)
19				Was that good?(.) yes?
20				(4)
21				Mmh?
22				(5)
23				Tell me!
24			puts finger in B's hand and moves it	(11)
25				°Honey°
26				(2)
27				Won’t you tell' me something!
28				(2)
29			parallel movement with finger	Say: Lau::ra!
30	moves hands and legs		puts hand aside, smiles	(1,5) h@
31				Lau::ra!

The baby moves her arms and legs as she produces a vocalization that can be taken for an expression of happiness (line 2). M responds to B’s vocalization with a ratification („yes”) in line 3, followed by a description of what they were doing earlier in the day. By that she constructs B’s vocalization as an intentional act of wanting to communicate something to the mother. The mother provides an interpretation of what it might be that the child wants to communicate by referring to a shared biographical event (bathing earlier in the day). M continues by evaluating the shared past event as something positive, repeating this statement several times, each time followed by a tag-question and a longer pause (lines 4-10,). Tag-questions expect an answer from the addressee in form of a ratification or contradiction and thus can also be seen as a prompt to communicate. Pauses index the next change of turns. By applying this pattern, the mother thus initiates turn-taking indicative of adult communication. Indeed, B’s vocalizations are mostly produced during the pauses by the mother. In line 12, the mother, after leaving a relatively long pause of 4 seconds during which B vocalizes, again ratifies B’s vocalization verbally as well as through gesture (nodding) and falling intonation.

The mother not only provides a narrative turn-taking structure but also step by step ‘unpacks’ the content of the narrative by adding another piece of information with each turn (line 3-8) (see also Labov, 1982 quoted in Pontecorvo, et al., 2001). This structure moves the text along and provides a narrative frame.

Conversation analysis has shown that people follow certain implicit communicative rules, for instance it could be shown that the first pair-part of an adjacency pair (e.g., question-answer) always need the second pair part to follow. If the addressee misses to provide the second pair-part, the speaker is obliged to rephrase the question or to provide the answer himself. This is what M does in line 14-22 each time using tag-questions which function as prompt and leaving relatively long pauses for B to take over the next turn. However, B does not vocalize which leads M to prompt B explicitly to narrate in line 23. After another long pause, she gives her prompt an even stronger emphasis in line 27 by repeating her prompt and adding the word “won’t you” (German: “*doch*”), and eventually provides a specific prompt of what the child should say and repeating it (lines 29-31).

What becomes clear in this interaction, is that M actively tries to engage B in a protoconversational pattern of sequential dyadic turn-taking and provides a biographic-narrative script as ‘template’ for conversational interaction.

The sequence continues with a series of repeated prompts to which B does not react leading M finally to ask B whether she is dreaming:

49			(5)
50		runs her hand over B’s head	Mh, are you dreaming a bit?
51			(3)

Her question provides a possible explanation for what is conceived of as missing reaction and thus even underlines her expectation of B to enter in dyadic communication.

Similar communicative strategies were found repeatedly within the Muenster group as illustrated in the following two examples:

Example 14: Muenster13_t12

B is lying on the sofa, M is sitting next to him and bents over him.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((VO:C))		
2				YES::!
3				[Come on] Tell me about it! [Come on] Tell me about it! ↑Yee °[Come on] Tell me about it!°

Similar to the previous example, the mother ratifies B’s vocalization by a confirming utterance and emphasizing intonation (line 2), followed by a repeated prompt to ‘narrate’ (line 3) thus intensifying her prompt and expressing eagerness to hear the presumed story. It should be noted here that the German word “*erzähl*” used here actually has a stronger connotation with narrating and corresponds more to the English word “narrate”. By using the formulation ‘[come on], tell me about *it*’ he constructs B’s utterance as intentional and meaningful, as if the child was trying to tell her a ‘story’. She emphasizes her prompt by repeating it several times (line 3). A few turns later, the same pattern is produced again:

4		((VO::C))		
5				Yes! Yes, well, tell me about it! Tell me about it!
6		((voc))		(1)
7				↑Come on do it! (1) Yes. You’re such a good narrator at other times.
8				You don’t feel like it this morning? You don’t feel like it this morning? Hm?
9				No? You don’t feel like it this morning?
10		((voc))		
11				Ho:h ((imitates B))
12				<Too tired yet?> Are you too tired yet? Hm? Are you too tired yet?

This time the mother emphasizes her prompt to narrate not only by repetition but also by adding “Come on, do it” [*tu’s doch*] and commenting that at other times he has done so well. B does not vocalize immediately which leads M to ask whether B ‘does not want to’ or does not feel like telling anything today (line 8-9). She repeats her question, adds a tag question and provides a possible answer on B’s behalf, that is, she applies a turn-taking structure (line 8-9). B’s next vocalization in line 10 is imitated by M. Imitations may be conceived of as ‘direct repetition’ that serves to acknowledge and show awareness of B’s utterance similar to backchanneling (Fujimura-Wilson, 2007). Similar to the first example, the mother provides a possible explanation (tiredness) for B’s non-engagement formulated as a question which she repeats (line 12). This repair work underlines the implicit expectation towards B to actively engage in a dyadic conversation with a narrative structure.

Example 15: Muenster20_t12

The baby is lying on a blanket on the floor. The mother sits in a face-to-face position to her and both look at each other.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((voc))		
2				Hooy::!
3		((GR))		
4	> camera		> B	(4)
5				↑Hoo-hoo! (1)
6				°↑He::::y!° Well? Don’t you want to ↑tell me something?
7	> M			(1)
8	moves arms			↑Hello: little mouse! (.) Hmh? (.)
9				Yeah? (.)
10			bents over B	<Well?>

(13 sec. Later:)

11	> M		> B	Tell' me something!
12	moves arms	((GR))		
13				Mh hm
14				What are you ↑grumbling about? °°What are you grumbling about?°° ↑Hm?

15		((voc voc ↑vo:c))		
16			nodding	↑Ye:a. (1)
			nodding	Quite a lot?
17	moves arms	((GR))		
18				Yeah! (.) °There's quite a bit to complain about?° (1) °°Yeah!°°
19	moves arms	((voc))		
20				Yeah:?
21	stretches	((vo::c))		
22				Yea:::h (.) (Well) that is quite something!
23	moves arms	((GR)) ((CR))		
24	moves arms			Ohh! (2) So ↑mu:ch? (1) °You have never told me that before!°
25		((voc))		
26			nodding in agreement	°Well, that's quite something!° (.) °That's quite something.°
27		((voc))		
28			nodding	Yes! (.) That's really a cheek, isn't it?
29		((pants))		
30			nodding	right (.) right (1) Hm:?

This segment is a good case in point since it shows how the mother interprets B's utterances as communicative act ascribing intentionality to the child. After prompting B to narrate, M interprets B's vocalization as complaint (line 14-18) and in line 22-28 elaborates on it as if B had told her the details of her complaint. Note that throughout the interaction M and B follow a dyadic pattern of alternately giving the floor to the other interlocutor through leaving pauses. M ratifies B's vocalization verbally and gesturally, and makes clear that her attention is concentrated on what B wants to communicate to her. She thus encourages B to 'express her opinion' and communicates that she takes serious what B is expressing. By applying the turn-taking pattern throughout the sequence and interpreting richly the assumed content of what B is uttering she involves the child in a dyadic adult-like communication.

Biographical structuring

Another aspect of the narrative character of the Muenster interactions is the biographical structuring of the child’s experience by referring to past and future events. Mothers would sometimes refer to a past event that the child experienced earlier in the day or the day before. By doing so, they brought B’s biographical experience in relation to the present situation as the following examples will illustrate:

Example 16: Muenster08_t12

B is lying on the sofa. M bents over him and looks at him. The filming has just started as we joint the interaction:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	(What) did you do then (.)today?
2				↑Hm?
3	moves arms	((pants))		You have already told me all that.
4				.hh hhh ((imitates B))
5				.hh hhh
6				(2)
7			rubbing B’s feet	Krkrkrkrkrkrkr
8				(2)
9				Krkrkrkrkr
10				(1)
11	moves arms		rubbing B’s belly	Where have we just been? Have we just gone for a ↑walk?
12		((voc))		
13				Yea:h?
14				Yesterday evening you peed on mummy twice, right?
15				(1)
16				Did you pee on mummy twice?
17	moves arms	((voc))		(2)
				Yea:h?
				Mummy couldn’t even dash away that quickly, right?
		((voc))		(1)
				That was good, right?
				(2)
				Yea:h?

The mother starts the interaction by asking B about what he has done this day, followed by a comment that he has already told her everything earlier this day which functions as indirect prompt to narrate. She then goes on to successively ‘unpack’ the story by producing question-answer pairs and initiating turn-taking, similar to example 16 in the previous section. In this example, the reference to biographical experiences serves to elicit a protoconversation. Since this sequence is taken right from the beginning of the interaction, we may assume that initiating protoconversation is what the mother conceives of as ‘playfully interacting with the child’. I will come back to this when discussing the Nso data corpus.

Reference to biographical events was not only made to elicit protoconversation but to bring the present situation in relation to something from B’s past experience. One mother started the play interaction as follows:

Example 17: Muenster15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		> B caresses B’s hands	This morning we’ve already played together in bed for one and a half hours.(.)
2				↑Bah, ↑that was great!

Example 18: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M moves arms		> B	Yeah, yesterday we were still//
2		VOC		(2)
3	stretches		nodding	yesterday we were singing a song together, right? Yippy yeyeyey you could already [sing], right?
4	Moves arms/legs			(2)
5				Do we want to sing that once ↑more?

In both examples, the mother refers to a shared experience from the near past and by doing so establish a connection to what is going on in the present situation. They are thus taking up something that the child is already familiar with to introduce a new activity in the interaction. The child is hence not “unprepared” and abruptly confronted with a new activity.

In other contexts, referring to biographical events seemed to have another function:

Example 19: Muenster08_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	((yawns))			
2	> ceiling			Ahh! Tired are you
3				(5)
4				°°tired are you, right?°° (3)
5			shakes B’s hand	°°Have you played with your Pluto the whole day that you are tired like that?°°
6	> M			(1)
7	> ceiling			Have you played with your Pluto? Hm? Pluto?
8			moves B’s hand in parallel	Have you always dong dong dong hit on him? (1) °Dong, dong, dong°

Here, the mothers bring B’s signals (tiredness) in relation to what B was doing earlier in the day and thus provides an account for B’s tiredness. The mother conveys that one’s present experience is somehow related to one’s past and thus lays the foundation for biographical reasoning.

Reference was not only made to past events but also to *future* events in the Muenster data corpus:

Example 20: Muenster13_t12

	BAB NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	°This afternoon grandma will come by°
2		((vo:c))		(2)
3	Moves arms		nodding	Yea@:h, this afternoon grandma will come by. Yeah, she will take care of you this afternoon.
4			nodding	↑Yea:h.
5		((voc))		
6			nodding	Takes a walk with you.
7				takes a walk with you, ↑yea::h.
8				↑Mhm mh. In the snow.

In this excerpt, the mother announces what the child is likely to experience in the near future. She introduces other persons of the child's social environment in the discourse and explains what is going to happen to B.

This was a repeated pattern in the Muenster group as the following excerpts illustrate:

Example 21: Muenster17_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M moves arms		> B	Do you know where you are going to be put in a moment? In your new bike trailer.
2		((voc))		
3			caresses B's belly	Daddy and grandpa want to do some groceries then. (Then) it's over, your comfortable life in the ↑buggy.
4			bents over B caresses B's belly	That is ↑o:ve:r! (.)
5				That is ↑o:ve:r!

Example 22: Muenster17_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	Later today we're going to visit grandma.
2	moves arms			(1)
3				And Torsten will be there (.)
4			bents over B	It's Torsten's ↑birthday today.
5	smiles			(1)
				°Yeah!°

Example 23: Muenster15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B, tickles B	>>°hello=hello°=hello=hello<<
2	moves arms	((GR))		(.)
3				>>hello=hello=hello=hello<<
4			nodding	This afternoon there will be lots of children coming here
5		((voc))		↑>>hello=hello=hello=hello<<

Example 24: Muenster02_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B holds B’s hand	Are we going to see the ↑doctor tomorrow?
2				(1)
3			shakes B’s hand	He is going to prick you tomorrow. (.) He is going to prick you tomorrow.

Mothers would also announce what is going to happen with B in the next moment when they were going to change B’s position or to start some physical exercise:

Example 25: Muenster14_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				Come here, (I) pull you up!
2			pulls B up	(…)
3				↓Yea:h
4				And now back ag↑ain!
			lets B fall back again	

Example 26: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				°once more?° >Do come!<
2			pulls B up	Oh::::hhh! (1)
3				°There you are again?°
				(1)
				°°Yeah?°°
				↑And back again
			lets B fall back	Bwr::::::::t

Example 27: Muenster05_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				I’m briefly putting you up
2			pulls B up	

Example 28: Muenster18_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1				[Come], we put you like this
2			changes B’s position	

By announcing and explaining future events to the child, the mothers position the child as someone who is entitled to know what is going to happen with him. By doing so, they establish a flat hierarchy in their relationship with the child. Announcing to a person what is going to happen with him in the next moment also gives the other person the option to object. While this strategy is also a polite means of indirectly exerting control over the child (see section 4.1), the mothers can be said to teach to the child a democratic way of communicating with others.

Pedagogic discourse

Besides the described prevailing narrative-biographical dyadic turn-taking pattern within the Muenster data corpus there were also interactions that showed what I will call a *pedagogic discourse*. Here, the interaction followed a more instructive pattern and a more lopsidedly structured communication as I will outline in the following:

Example 29: Muenster03_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	moves arms/legs	pants	bents over B	Where is the little Tim?
2				(1,5)
3				°tell me!°
4				(2)
5			> B	
6	moves arms		bents further over B	Where is the little dear Tim?
7	> M smiles		smiles	(2)
8				Ha:h?
9	smiles			(1)
10				H@h
11				HA@HA
12				(.)
13	laughs, moves arms/legs	voc		↑Hm::h
14		pants		(2)
15				Yes (.) the:re he is

In this excerpt, the mother prompts B to say something (line 3), however, in contrast to the previous excerpts, the child is not prompted to narrate and tell about his experience. Rather, he is prompted to give the answer to a knowledge question. The mother repeats her question and adds a tag question (line 6-8). When B vocalizes (line 13) she ratifies this as the correct answer (line 15).

The interaction continues as follows:

16			puts finger in B's hand and shakes it	Where have we been today?
17	> camera			(3.5)
18				In the park?
19				(6.5)
20		((GR))	prods B's belly	Where have we been today?
21				(6)

This excerpt shows a similar pattern with M asking a 'knowledge question', providing the answer, and repeating the question. While she refers to a biographical event and applies a turn-taking pattern, she is not developing a narrative like in the previous examples. Rather, the sequence reminds of an educational situation in a school setting where B is expected to give the correct answer.

This orientation toward pedagogical instructing is found later on in the same interaction again:

22	kicks	((GR))		
23		pants		
24				Dododo
25	briefly stops		prods B's belly	(2)
26	kicks			Voice training (.) that's what Meike said
27			prods B's belly	(1)
28				Voice training
29				(1.5)
30				Yea:h!
31				(1)
32				Making some o*u:::::h=eh* (1)
33				Come on!
34		VOC		(2)
35				Oeh!
36				(2)
37	stops kicking		prods B's belly	Meike works with handicapped people (.) at the moment, (1) doing an internship (1.5)

38			plays with B's hand	And there they say (1) Voice ((burps)) °training°
39	moves hands/feet			(2)
40	stops			Ha@hik ((laughs))
41			prods B’s belly	Hmh? (0.5)
42		((burps))		(1)
43				>Come on!<
44			prods B’s belly	(2.5)
45	moves hands/feet			
46				↑*Lololololo::*
47				(3)
48		((GR))	grasps B’s arm, plays with B's hands	Baw::p!
49		pants		(9)
50			leans backwards	.hhh hhh((sighs))mmh. (1)
51			plays with B's hand	Come tell' me something with voice!
52				(3)
53			> B	
54			plays with B’s fingers	Rawraw. (2)
55			pads B’s chest	Hmh? (2.5)
56				(1 word unintelligible)
57	moves hands/feet	voc		(1)
58				h=h@=h=h@
59				(1.5)
60	> M			M:::::::::h
61	deep inbreath			(2)
62				Pf::::.(0.5) pf ((imitates B))
63				(3)
64			prods B’s belly	Where are we going to go on holiday?
65	kicks		smiles	(3)
66	stops			Well? (.) to:?
67				(1.5)
68			prods B’s belly	Juist (1.5)
69				for one week

A voice training theme is emergent throughout the interaction. In contrast to most of the other dyads, the mother in this interaction is actively structuring the interaction by providing instructions for the child to follow and providing sounds that the child is supposed to imitate. While she prompts B to ‘narrate’ (line 51) the focus is clearly on training the voice rather then on encouraging B to express his experience and thoughts like in the previous examples. This interpretation is supported by her comment in line 26-28 and 37-38 where the mother explicitly refers to voice-training. Likewise, although the mother refers to future events (line 64-69), the theme is keyed as an educational interrogation. The child is positioned as a novice who receives instructions while the mother is positioned as teacher. In sum, the interaction is similar to other interactions of the Muenster dyads in that the mother refers to past and future events and applies a turn-taking pattern by using question-answer pair-parts and leaving pauses for the child to respond; However, the interaction differs from the above examples by framing the interaction as a more lopsided instructional situation.

Rhythm and repetitions

There were various kinds of repetitions found in the Muenster data corpus. In the following, I will first discuss a typical pattern of repetitions produced on the part of the mother that can be described as '*self-repetitions*' (Tannen, 1987) ('other-repetitions' produced by the mother will be discussed in the section on mirroring). I will then discuss the occurrence of salient *patterned rhythm* found in the data.

Self-Repetitions

A reoccurring pattern of repetition found in the Muenster data corpus was the repetition of partial sentences or slightly modifying or paraphrasing a previous utterance like the following example illustrates:

Example 30: Muenster13_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				°kick, kick°
2				°kick, kick°
3		((B voc))		
4				Ja:::! Ha@hahihi@
5				kick, kick
6				That's great, isn't it?
7				That's great, hm?
8				Hm@h@h@h
9	moves arms and legs		> B	That's also one of your favorite activities here,
10				mo:ving everything,
11				mo:ving everything,
12				ja@ha.
13				°This afternoon grandma will come by.°
14		((voc))		Yea:h, this afternoon grandma will come by.
15				Yeah, she will take care of you this afternoon.
16				↑Yea:h
17		((voc))		goes for a walk with you,
18				goes for a walk with you, yea::h

In this brief excerpt, we find several instances of repetition: the first in line 1-2 and 5 where the mother produces an exact repetition of her mirroring B's behavior. The repetitions in line 6-7 are ratifications of B's vocalization (line 3), which the mother interprets as expression of pleasure. She then paraphrases her utterance (line 9) which in a sense also can be considered as a repetition (Tannen, 1987, 1989). Line 10-11 is an exact repetition of a partial sentence that again mirror B's behavioral preferences. Lines 6-11 thus treat the same topic with slight variation, weaving the words together through picking up and repeating. In line 13, the mother starts a new topic (the grandmother coming in the afternoon) and in a similar way, develops the theme by repetitions involving slight variations and elaborations of the same theme. Line 17-18 are again an exact repetition of a partial sentence still referring the announced event and serving as ratification of B's vocalization in line 17. On a meta-communicative level, this discursive strategy functions to express *participation* in the ongoing communication (Tannen, 1987, 1989), to *ratify* B's communicative signals and to demonstrate *focus* and *attention* (Johnstone, 1994) on the child. It can hence be seen as a means to keep protoconversation going in the interaction.

Rhythmic patterned repetitions

Rhythmic vocal and verbal patterns in the Muenster data corpus were far less than in the Nso data corpus. They comprised playful body stimulation situations such as tickling-sequences, gymnastics and narrative play interactions as the following examples illustrate:

Example 31: Muenster 15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
45			dabs off B's mouth	Is there a little (greeting) sticking out on this Side? (.) Tut-tut-tut-tut
46		((GR))		(.)
47			dabs off B's mouth	Tut-tut-tut-tut-tut (2)
48		voc		Tut-tut-tut-tut (.) Ye:s? (.)
49				↑Tut-tut-tut-tut

Example 32: Muenster 17_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	Some more gymnastics?
2			takes B’s legs and crosses them rhythmically	(1.5)
3		((GR))		Tschu:tschu:tschu:tschu:tschu:tschu: Tschu:tschu:tschu:tschu:tschu:tschu=yeah-ah. Tsch. Yea@a:h

Example 33: Muenster 15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
91	> M		> B	Should we do our clock game again? (1)
92			swings B from side to side in gradually accelerated rhythm	*<big clocks do tick tack tick tack>. small watches do ticketacke ticketacke. And the little pocket watches >>ticketacketicketacketicketacketicke tacke<<*

Example 34: Muenster08_t12

In the next example, the mother stimulates the child corporally by telling a story of a man who rings at someone’s door. The story has a ritual character and each sentence is combined with a specific corporal stimulation:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	stares at ceiling		prods B’s cheek	Pr, pr, pr, pr, pr
2				(1)
3			prods B’s cheek	Pr, pr, pr, pr, pr
4			prods B’s arm	°°Hey°° °°Hey°°
5			pods B’s chin	°°Pr (.) pr (.) pr pr pr°°
6			‚walks’ with fingers across B’s belly and prods B’s chin	°A man goes up (.) the stairs.
7			joggles B’s nose	rings (.)
8			knocks on B’s cheek	knocks at the door.
9			shakes B’s arms in parallel	"Hello, young man!" "Hello, young man!"

What these examples have in common and what has been a recurring pattern of rhythmic vocalization in the Muenster data corpus is the accompaniment of rhythmic body touch with vocal sounds that match the touching movement. The mother's vocalization (and hence B's auditory experience) is thus synchronous with the child's corporal experience. In the first example, the mother produces vocalization that matches her dabbing B's mouth. In the second example, the mother produces vocalization that matches the rhythm of moving B's legs. The third and the fourth example constitute ritualized interactional games drawing on fixed texts: in example 33, the vocalization imitates the sound of a clock while M moves B in the rhythm of the pendulum of a clock with increasing speed, in example 34, the mother combines the content of the story with analogue stimulations of parts of B's body.

Singing

One repertoire in which rhythm and repetition are particularly outstanding is singing. While singing has been claimed to be a universal feature in mother-infant interactions, there were only two singing sequences found in the Muenster data corpus, both within the same mother-infant dyad. In the original (see appendix), the lyrics in both songs have a rhyming structure.

Example 35: Muenster07_t12

M was presenting and playing with a rattle that has the form of a butterfly as she starts singing:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	grasps rattle	((GR))		*butter*(.)fly *you little thing* *looking for a dancing girl*
2				(3)
3				*butter*(.)fly, *you little thing*
4				(1.5)
5				↑*looking for a dancing girl.*
6			rattles	
7	> rattle		lifts rattle up	*Fiderallalla, fiderallalla* (1)
8	moves arms/legs		and down	*oh, what fun to dance like thi:s* (1)
9			prods B's nose with rattle	*merry, merry like the wind* *like a little flower child*

Example 36: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M moves arms		> B	Yeah, yesterday we were still//
2				(2)
3	stretches	VOC	nodding	yesterday we were singing a song together, right?
4	moves arms/legs			Yippy yeyeyey you could already [sing], right? (2)
5	kicks			Do we want to sing that once ↑more?
6		VOC	nods	Yeah?
7			moves	*When the In-di-ans are ri-ding*
8			B’s	*they are ri-ding like-this*
9			feet	Ktk-ktk-ktk-ktk-ktk.
10	takes hands	((GR))	in parallel	*When the In-di-ans are ri-ding*
11	to mouth			*they are ri-ding like-this*
12				Ktk-ktk-ktk-ktk-ktk.
13				Now you’ve got to join in!
14				Yippy yeyeyey *yippy yoyoyo*
15				*they are ri-ding like thi-i-is.*
16	kicks	VOC	takes B’s	Yippy yeyeyey *yippy yoyoyo*
17	wriggles		hands	*they are ri-ding like this!*
18	stretches			You’d rather do gymnastics, right?

It is noteworthy that in the second example, the mother first makes reference to a past shared event (line 2-4) and then asks B whether he wants to sing it again using the co-operative pronoun “we”(line 5). She ratifies B’s vocalization as a possible answer which she keys as a question (line 6) thus constructing the suggestions as optional. Also, she stops at B’s vocalization (line 2) thus letting B the floor. Similarly, she ends the singing sequence by producing an interpretation of B’s behavior as wanting to do something else now (line 18). She thus frames the singing sequence in a larger context of co-operative negotiation (see also section 1.1.2).

In both examples, the content of the song is not related immediately to the child or the mother. The content can be considered as having primarily entertaining, not any educational character.

In sum, the analysis revealed that narrative-eliciting and narrative-unfolding strategies are predominant within the Muenster group. By referring to shared past events and announcing future events the child's experience is brought into an autobiographical narrative structure. To a lesser extend, mothers would draw on a pedagogic discourse eliciting conversation by addressing 'knowledge questions' rather than narrative-eliciting prompts to the child. Rhythmicity is primarily expressed in a smooth dyadic turn-taking pattern. Moreover, self-repetition is used as means to maintain the ongoing conversation, and rhythmic patterned repetitions are used to playfully accompany body stimulation. Singing was not predominant and based on fixed song texts.

The Nso dyads

The way interactions were structured in the Nso data corpus differed largely from the Muenster interactions. The prevailing pattern was not one of dyadic reciprocal turn-taking sequences with extended pauses as described in the concept of protoconversation but one of overlap with the infants vocalizations and of highly rhythmic chorusing synchronous to rhythmic body stimulation. There was, however, a turn-taking pattern that comprises a chorus like structure. Moreover, in several interactions large portions did not include any verbal or vocal utterances at all. References to past or future events were not very prominent in the interactions. In the following, I will present findings from the micro-analysis of the interactions to support these claims.

Rhythmic turn-taking

Prompting to engage in rhythmic turn-taking

While narration-initiating sequences were found quite frequent in the Muenster group, there was not a single instance in the Nso data where children were asked to narrate. There were, however, sequences of dyadic turn-taking. Other than in the Muenster interactions, however, this occurred less frequent and followed more a rhythmic pattern than a conversational one as I will outline in the following:

Example 37: Nso09_t12

This sequence followed after a sequence in which M tried to calm B down and starts when B eventually stopped whining. B is sitting on M's lap and both look at each other:

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	> M		nodding to B with each utterance	babe:: (.) eh::
2		((VOC))		(.) eh::
3				(1)
4				Kerry:: (.)
5				My:: Kerry?
6		((voc))		(.) Eh:: Tata::
7		((voc))		(.) little Baby::
8		((GR))		(.) baby::
9		((voc))		(.) Thank you::
10		((voc))		(.) eh::
11		((voc))		Tata::
12		((voc))		(.) eh::
23		((voc))		((flicks lips))
24				((flicks lips))
25		((voc))		((flicks lips))
26		((voc))		(.) eh::
27		((voc))		(1)
28				eh::
29				(.) Where are you here now?
30				(1)
31				>Where are you here now?<
32		((voc))		(.) eh::
33		((voc))		(.) Where are we?
34		((voc))		(.) Where are you here now?
35		((voc))		(1)
36			Shaking B	Where are you here now?
37		((voc))		(.) eh::
38		((voc))		Yes babe::
39			Bending to B	(.) What are you doing here?=what are you doing here?
40				(2)
41			Leans back	What are you doing here?

This sequence follows a surprisingly rhythmic give and take between mother and child that is mostly dyadically alternating and in part overlapping. The mother readily responds to B's vocalization in contrapunctual rhythm offering short utterances which in turn are responded by B vocalizing. The coordination of turns is almost in the manner of a call and response initiation and creates a rhythmic pattern in unison which is reinforced by the mother's rhythmic nodding towards B. They thus both enter a rhythmic interactional dance which spans multiple conversational turns. M addresses the child alternately in terms of endearment (“*baby*”, “*little baby*”, “*tata*” [= grandpa]) and his first name while ratifying his utterances (“e:h” may be interpreted in an onomatopoeic sense but also signifies ‘yes’ in Lamnso). In the second part of the sequence (line 29-41), the rhythmic pattern remains but the mother now addresses repeated questions to B. Unlike the Muenster mothers, she does, however, not provide the second part of the adjacency part by answering on behalf of the child. While the questions still can be seen as prompts for B to take the next turn, the child’s vocalization are not further interpreted but responded to again in brief sentences of similar intonation. The point I want to stress here is that B is actively encouraged to engage vocally in a dyadic turn-taking pattern. In contrast to the Muenster interactions, however, the interaction is not structured in a narrative pattern of rich explanations and interpretations of B’s presumed thoughts and feelings but rather in a pattern of participatory rhythm with choral responses. Both interlocutors thus display mutual awareness and involvement in the interaction, show an enthusiastic agreement with each other and contribute to the development of a shared intensive emotional interaction. Through the repetitive structure they construct the sequence as sharing the same speech floor (Fujimura-Wilson, 2007) which creates an impression of harmony and rapport (Tannen, 1987, 1989).

Biographical structuring

In the Nso data corpus, there were only four instances of referring to a biographical event of the child. In contrast to the Muenster data corpus, these biographical references were not further elaborated and did not function to elicit conversational turn taking as the following excerpts show:

Example 38: Nso12_t12

M has been rhythmically bouncing B as she starts to yawn.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M	> B	shakes B rhythmically	°Mmh (.) ting (.) ting (.) ting (.) ting (.)
2				((yawns)) *Mmh mmh mmh mmh mmh mmh mmh mmh mh mmh mmh mmh mmh, mmh mmh mh mmh mmh mhm mmhmmh mmh mm hm mm hmm hmm hmm*
3			((stops))	(1) You do not allow one to sleep in the morning.
4			shakes B rhythmically again	°*Mmh mmh mmh mmh mmh mh mmh mmh mmh mmh mmh mmh mmh mmh mmh mmh mmh mmh mmh mmh*°

The mother refers here to B not letting her sleep in the morning as a comment to explain her tiredness and thus makes a reference to her yawning. The interaction continues with no further reference to this comment.

Example 39: Nso19_t12

In this sequence, M has been rhythmically bouncing B for a while, and has stopped in between to talk to the researcher. She then tells B (who is making a fist) to open his hand and then says:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		opens B’s hand	We would have gone this morning and cut a flower from mummy Ernesta´s up compound. Mmh?
2				(.) and play with it not so?
3			shakes B’s hand	*Ting ching, ting ching*
4			> camera	((talks to researcher))

Again, the interaction continues without further reference to the biographical comment. Unfortunately, since the conversation with the researcher was not transcribed/translated, it remains unclear whether this comment is somehow related to what the mother was talking about to the researcher. In any case, although the mother produces tag questions (line 1 and 2), she does not leave pauses indicating a turn switch nor does she produce the second pair part (answer). We can argue therefore, that the comment is not intended to illicit a turn-taking conversation.

Example 40: Nso13_t12:

In this interaction, M had been bouncing B rhythmically for a while as someone in the room starts talking. M briefly looks up and then looks back to B and starts singing:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		Lifts B up and down rhythmically	*That we are coming to God* ((two sentences unintelligible))
2			((stops, shakes B briefly))	Smile then! (.) You are not smiling.
3				That is how they were singing yesterday (.) as they were giving the child´s gift.
4			kisses B	((flicks lips))

In this example, the mother is referring to an event in the past, however, not directly related to the child but to what other persons, presumably of the same community where doing the day before. The interaction continues by addressing B by name and talking to other persons in the room in between. Again, there is no further elaboration of the event and no narrative-eliciting features as in the Muenster interactions.

There were also very little references made to *future* events. In three sequences, the reference was made to the immediate future by announcing what was going to happen next (fetching medicine, going to sleep and changing the position of the child). The overall pattern, however, was that mothers would not announce what was going to happen next and simply change the activity or the position of the child without previous comment. This is in sharp contrast to the prevailing pattern found in the Muenster dyads.

Two sequences referred to the remote future of the child:

Example 41: Nso10_t12

In this interaction, the mother has just scolded an older child who is also in the room and turns again to B as we join the interaction:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				Mh:m (1)
2			points at B	Tomorrow it will be you
3				(2)
4				Ye:s, be smiling!
5	smiles, falls towards M	((pants))		oh=o::@h
6	> B		> camera	((talks to researcher))
7			> B	
8				Be laughing Joy! (1)
9				Tomorrow it will be you. (1)
10	> M		nodding to corner of room	Then I will be whipping and going with you there like this. (2)
11			> B	You have heard, haven’t you?
12			leaning head to one side	Right? (1)
13			leaning head to other side	Right?

Reference to a future event here occurs in the context of learning obedience. The mother announces that the same thing that has happened to her sibling, that is, being scolded, will happen to her. The rhetoric question in line 11 and the twice repeated question “right?” (line 12-13) are formulated in a way that demands an answer of compliance from B. The future event, thus, here has the function of threatening with punishment of bad behavior.

Example 42: Nso24_t12

Previous to this sequence, there was a mentally disabled child in the background shouting the name of the lineage head. Within the Nso culture, the lineage head is a person of respect and it is socially inappropriate to call his name in such a way (Yovsi, personal communication). The mother looks up and briefly and listens, then laughs and turns again to her baby:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				Have you heard that Aaron called the Tsenla lineage head?
2	fidgets with hands		kisses B several times	
3		pants	bouncing B	((talks to others))
4			kissing child	dji:ji:ji:
5				Shall you ever be calling the Ngamanse lineage head?
6				Shall you ever be calling? Shall you ever be calling?

The mother draws B’s attention to what the disabled child was doing. By using the form of a rhetoric question starting with the words “have you heard” (line 1) she conveys that the other child’s behavior is unconventional and surprising. She further elaborates on the topic by addressing and repeating a rhetoric question to the infant (line 5-6). Underlying to this rhetoric question is a social expectation (“I hope you will never do such thing”). The mother hence conveys a social norm of what is appropriate behavior, as well as the expectation of respectful behavior towards the head of a compound.

Similar to the previous example, reference to a possible future event is made in the context socially inappropriate behavior and as a means to express expectations on correct behavior.

Example 43: Nso05_t12

In this interaction, B has repeatedly taken her left hand to the mouth as we join this excerpt:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> straight ahead		takes hand away from mouth	Will you be left-handed, that you are smart with the left hand?
2				(1)
3			pulls out B's right hand and	E:h?
4			knocks with hand against B’s mouth	Be hitting with this one like this (.) Be hitting with this one like this (.)

M utters an assumption about a possible development of left-handedness which she keys as a question. She does, however, not produce an answer to this question but instead intervenes by taking B’s left hand away and prompting her twice to take the other hand. The mother actively tries to change B’s behavior which indicates that the child’s possible left-handedness is not a desirable development.

We can summarize that while there are a few instances in the Nso data corpus where the mother refers to biographical past and future events, these do not function to illicit a narrative proto-conversational pattern as in the Muenster interactions. The main difference is that the references to future events in the Muenster dyads seem to have an informing purpose and position the child as someone who is entitled to know what is going to happen with him, whereas the references in the Nso interactions mainly convey social norms and expectations and hopes on the part of the mother. Moreover, these sequences do not draw on discursive devices to establish a narrative.

Silent interactions

Within the Nso data corpus, there were also several sequences without any verbal/vocal communication during which mothers would lift the child up and down or simply hold it. In one interaction, the mother actually did not speak to the infant at all. This interaction (Nso25) consisted mainly of lifting and throwing the child up and down, smiling at him. The mother was very well alert to the infant’s signals as she would immediately look at him when he vocalized, sometimes briefly stop and then continue.

This particular mother was still very young (17 years) and was said to have a very quiet personality in general. In another case, the mother, while acting in line with the overall pattern of the Nso interactions, seemed generally more reluctant and sincere than the other mothers. As we found out after data collection and analysis was completed, this mother was victim of incest which might explain her reluctant behavior toward the child.

From an indigenous perspective, this ‘non-communicative’ pattern of interaction would be considered as acceptable but would not correspond to what is considered as good mothering including lively rhythmic verbal and vocal interactions (Yovsi, personal communication).

Rhythm and repetitions

A clearly prevailing feature of the Nso interactions was the highly rhythmic and repetitive character. Repetitive patterns in the Nso data corpus comprise musical chorusing as well as repeated addressing of the infant by name. The infants were greeted by a variety of names such as proper names, gender role (*boy*/*girl*), term of endearment (e.g., *little child*), often in combination with a term of respect (*grandma*/*grandpa*), or with a linguistic appendix (*o::* as in “*girl=o::*”). In synchrony with these utterances, mothers would typically rhythmically bounce or shake the child. Other than in the Muenster group, all repetitions discussed in the following are self-repetitions that are highly rhythmically patterned. Therefore, these two types will not be discussed separately.

Example 44: Nso13_t12

The mother sits on a chair with B lying in her arms as the recording starts. Both mother and child are in a face-to-face position and M approaches B with each utterance in a rhythmic manner as she starts calling him repeatedly by name:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	moves arms	voc	> B	
2				Yes! E@he@ He:h!
3				(1)
4			kisses B several times	((flicking lips))
5				Johny=Johny=Johny
6			kisses B several times	((flicking lips))

7				Johny=Johny=Johny
8				(1)
9				He::y
10				(1)
11				He:y Johny!
12			briefly turns around and back	he@he@he@
13	moves arms	voc		He:y Johny!
14	> camera			E::y Johny
15				Johny=Johny ((flicks lips))
16			kissing B	Grandpa Boy
17				(1)
18			kissing B	Grandpa Boy

The mother starts by ratifying B’s vocalization (line 2). She then produces an attention-seeking device (“He:h!”), followed by flicking the lips and calling B by name repeatedly, which frames the sequence as attention-seeking by the mother. The repetitions are produced in a rhythmic prosodic pattern accompanied by M’s movements towards B and back. In line 16-18, M addresses B as grandpa boy but stays in the same rhythm. After a brief sequence of rhythmic vocalization and singing, which for the sake of brevity is not quoted here, the interaction continues as follows:

1		kisses B	((flicks lips))
2			Johny=ou::
3			((talks to others))
4		kisses B	((flicks lips))
5		briefly turns around to other children,	
6		then back to B	He::y (.)
7			He::y Johny(.)
8			He::y Johny
9			(1)
10			He::y Johny
11			(1)
12			He:y Johny
13			((talks to others, laughs))
14			((flicks lips))
15		((kisses B))	((flicks lips))
16			Fa:y=o::h!
17		((kisses B each time))	John=John=John=John (.) John=John=John=John=John (.) John=John=John=John (.) John=John=John=John
18			(1)
19			Johny=Johny=Johny Johny=Johny=Johny (.) Johny=Johny
20			(1)
21			He::y!
22	((smiles))		(1)

23			He::y!
24			(1)
25			He::y Johny
26			(1)
27			He::y Johny
28			(1)
29			He::y Johny
30	fondles	kisses B	((flicks lips))
31	with hands	kisses B	((flicks lips))
32		kisses B	((flicks lips))
33		lifts B and	Heh! Heh! Heh! Heh! Heh! Heh! Heh!
34		starts bouncing him rhythmically	heh! Heh! Heh! E:y! e:y! e:y!
35			Grandpa John!
36			Ee:y, grandpa John!
37			Ee:y, grandpa John!

The mother takes up the same rhythmic pattern as described in the first sequence with brief interruptions of talking with others. Line 16-19 show an alternation in the pattern of repetitions by first addressing B as faay and adding the ending o::, followed by series of repetitions of B's name. In line 20 M returns again to the previous pattern of repetition, and starting from line 33, she intensifies the rhythmic pattern by starting to bounce B in the same rhythm of her utterances. Again, she ends the sequence by addressing B as grandpa.

Repetition, here, clearly functions to *maintain the rhythm* of the interaction and to attract B's *attention*. The importance here thus seems to lie not primarily on the content of what is being said, but on establishing and maintaining a rhythmic pattern. Repetitions always convey more than what is denoted by the literal meaning of the words; the metamessage on the relational level conveyed here is attention and rapport as well as mutuality of experience.

This pattern of addressing the infant by rhythmically repeating his or her name was very common in the Nso interactions. Other typical forms of repeatedly addressing the child were "little child", "little baby", "girl"/"boy", "grandma"/"grandpa", "mum"/"dad", often in combination with the prolonged vowel 'o::' as suffix at the end of a name such as in 'Johny=o::h' or 'mama=o:.h' which serves to maintain the rhythm (Yovsi, personal communication). While infants were also addressed as "faay", "sheey" or "queen", these forms of address were usually not rhythmically repeated.

Example 45: Nso22_t12

This interaction starts by the mother holding her daughter Emily Shalanyuy high and shaking her while she slowly lowers her again:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B, shakes B	Baby:::
2		pants	slowly lowers B while shaking her	↑*chibih chibih chibih chibih chibih*
3				*little baby*
4				*little baby*
5				*little baby*
6				*little baby*
7				*little baby*
8				*little baby*
9			puts B down	(1) little baby Emily! (1)
10	> down	((GR))	on her lap	With your little flabby legs (.)
11				flabby legs
12				flabby legs(1)
13				*Little Emy! (.)*
14				*Little Emy o::h*
15				Sha:lanyuy! (1)
16				Sha:lanyuy! (1)
17		pants		Sha:lanyuy=o::h? (1)
18			slightly shakes B	Ma:?

Again, we see a pattern of repeatedly addressing the child, first as “baby”, then after a short sequence of onomatopoeic vocalizations, as “little baby”, extended first by her name Emily in line 9 and by a description of her outward appearance which again is repeated in a rhythmic prosody, followed by a diminutive form of her name in line 13-14 and a triple repetition of her second first name (line 15-17) with a rising intonation at the last repetition suggesting that the mother is seeking B’s attention. This is confirmed in line 18 where the mother slightly shakes B and addresses her as “ma” again with a rising intonation thus keying the utterance as question. Similar to the above example, we may conclude that repetition, here, functions to keep the flow of the interaction going and to attract B’s attention.

Rhythmic repetition was often accompanied by synchronous body stimulation and also comprised onomatopoeic vocalization as in the following example:

Example 46: Nso02_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
14	> mother, then into the room as his head falls up and down		shakes B rhythmically, smiles	((rhythmically)) chikichik chikichik chikichik chikichik chikichik chikichik chikichik chikichik chikichik chikichik Tiketike=tiketike= tiketike=tiketike= tiketike
15			stops, lifts B	((laughs)) heh heh he::h
16			sits B down	°hhh Francis::!°
17	> room		lifts B up and down rhythmically	(2) °Francis:: Francis:: °
18	> mother > room		moving B closer to her face	Francis Francis Francis Francis Francis Francis
19		voc	kisses B in same rhythm	jugu: (.) jugu: mhm=mhm=mhm=mhm
20		GR	lets B down on her lap, smiling	Your mouth smells of breast milk@. The breast milk may go to your head (1)
21	> mother, moves hands > room	voc/WH	moves her arms up and down in the same rhythm	((rhythmically)) t.hhh=hhh t.hhh=hhh t.hhh=hhh t.hhh=hhh t.hhh=hhh (.) Let us be dancing kikum °t.hhh=hhh°
22	> mother > room			HEH HEH HEH he:h
23	moves hands			Let us be dancing kikum boy!
24			shakes B rhythmically and moves him alternately to both sides	((rhythmically)) Kikum kikum kikum! o:h juju juju juju juju. Shaka shaka shaka shaka shaka shaka Shaka shaka shaka shaka

In this sequence, the mother produces a repetition of highly rhythmic onomatopoeic vocalization and moves the child up and down in the same rhythm while she smiles at him and laughs (line 14-15). This has an inviting character as if the mother tries to say „join in”. She rhythmically repeats the child’s name while coming closer and kissing him (line 16-19). She briefly stops the interaction and continues with a series of repetitions of B’s name. After a brief pause and comment which suggests that the throwing up and down might have been too strong (line 20), she imitates the child’s utterance (line 21) and then she starts another rhythmic sequence by inviting the child to join in a traditional dance (Kikum) with her. She repeats her invitation (line 23) and starts another sequence of rhythmic onomatopoeic vocalization with parallel body stimulation.

The chiming of the repeated vocalization and simultaneous kinesthetic stimulation creates an accordance of the mutual activity that is characterized primarily by emotional and physical intimacy. The mother brings the child's bodily and auditory experience in unison with her own behavioral and vocal experience. In terms of the musical aspects, the repetitions in this interaction results in a rhythmic pattern that creates ensemble.

Singing

Other than in the Muenster dyads, singing sequences were quite frequent in the Nso data corpus (see also table 6). The types of songs comprise lullabies and children songs in Lamnso and another local Muslim language, as well as Christian choruses and songs with educational/medical content that were sung in English. While in the Muenster data corpus songs were only song once, songs in the Nso data corpus were repeated over and over again. Several interactions consisted almost exclusively of singing (Nso04, Nso10, Nso11, Nso 17).

Examples of *Christian hymns* are presented below:

Example 47: Nso10_t12

The mother has been repeatedly singing the following verses and slightly bouncing B who is sitting on her lap as we join the interaction:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> straight		> B	***Joy joy jo:y***
2			bounces B	***in Jesus there is joy***
3				***Joy joy jo:y***
4				***in hi:m there is joy***
5			Gets close to B's ear	Have you heard?
6			moves back	(2)
7			approaches B	Are you hearing what I am singing?
8				(1)
9				**ARE YOU HEARING ME?**
10				(1)
11				E:H?
12			clears throat	
13			> camera	
14			> B	**ARE YOU GETTING WHAT I'M**

			DOING?=WHAT I'M SAYING?= WHAT I'M SINGING?
15			(2)
16			Mmh?
17			(3)
18			**OPEN YOUR EARS AND HEAR!** (.) Mmh?
19		clears throat	
20			Be singing that eh!
21			***Open your ea:rs and listen to Romkong.***
22	Moves arms		***We are singing about the birth of Jesus Christ***
23	> camera		***Emmanuel was born was born in Bethlehem.***
24			***He was bo:rn on Christmas da::y!***

The mother sings in English, then stops and addresses a rhetoric question which she repeats in slight variation several times (line 5-14). The use of rhetoric questions, as well as the pauses in-between and the tag questions (line 11 and 16) make clear that these questions are meant to be prompts. The questions are directed at making sure B ‘gets the message’ (line 14) and internalizes what M tries to convey to her. Interestingly, she first addresses B in Lamnso (line 5-7) but then switches to English (line 9-18). Code switching in this sequence might well point to the context of Sunday school teaching were these songs are typically learned and thus frames the situation as educational.[17] The mother continues by a direct prompt to listen (line 18) and to repeat what she was singing (line 20) which confirms the prompting and educative character of the situation. She then goes on by taking the formulation (“open your ears”) up to start another Christian hymn. The singing thus has a clear educative function.

This pattern runs through the entire interaction of this mother and her daughter. Along extended sequences of singing, the mother would stop in between and relate what she was singing about to the child. For example, she exchanges the name of the place (Romkong) in the following by the name of the Sunday school she and her child attend. Later on, she sings a song with the wording “Give one tenth to the lord, for whatsoever you have”, then stops and asks B “What will you give? What will your give your own tomorrow? Tomorrow is harvest thanksgiving. Mmh? What will you give tomorrow? What will you give? (.) Mmh? “ and then again takes this up to start the next song with the wording “What shall I render, what shall I render, what shall I render to thee oh

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[17] Interestingly, in other contexts, codeswitching to English was mainly used in situations when M tried to teach B obedience, however not when scolding the child or when prompting the child to do things that had a more inviting character like joining a dance.

Lord?”. The point I want to make here is that the mother applies the content of what she is singing directly to B’s life and uses it for educational purposes.

A similar pattern is found in another dyad:

Example 48: Nso11_t12

The mother in this interaction has been repeatedly singing the following verses while shaking B vividly in a lifted position facing the camera.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1			shakes B at a very fast rhythm	***I'm happy that I'm sa:ved I'm happy that I'm sa:ved. My sins have been washed by the blood of Jesus that is why I'm*** ((spelling each letter)) **h (.) a: (.) p: (.) p: (.) y:**
2			stops	
3			shaking B with each syllable	((spelling each letter)) **H (.) a (.) a (.) p (.) y**
4			> camera	HA@HA@HA@HA@HA
5				((talks to others))
6			lifts B	**That is why I am h**// (.) mmh::?
7	> M	voc	stops, lowers B and > B	((kisses B 3 times))
8	> camera			(2)
9				**That is why:: (.) Kila: is**
10	voc	moves arms/legs		((spelling each letter)) **h (.) a (.) p (.) p (.) y**

In line 6, the mother stops in the middle of a sentence and utters a vocalization that indicates astonishment. She then continues by adapting the text of the song (replacing “I” with the name of her child) so that it applies to the child (line 9).

Another type of songs comprised *health themes* such as vaccination, healthy diet, and hygienic issues. These songs were not sung directly to the child. Rather, it seemed that the mothers were singing to themselves while bouncing the child. These songs were also all in English. Examples of the content of these songs are:

Example 49:

Balanced diet
balanced diet.
fish and spinach
fish and spinach
rice and beans

rice and beans
eat them everyday
eat them everyday

Example 50:

Wash your hands after eating (alternating: after sleeping, after toilet)
with water and soap
wash your hands after eating
with water and soap
Wash your hands to prevent diseases
With water and soap
With what?
With water and soap
With what?
With water and soap

The examples discussed so far have in common that they all point to educational goals and have a clear relation to the concrete every day life. They were sung in English and probably learned by the mother in Western NGO or missionary settings.

More traditional children songs in Lamnso treated topics like the mother providing food for the child or asking for protection of the child. These more traditional songs were mainly onomatopoeic and highly repetitive. The text passages were the following:

Example 51

If your mummy comes
I will tell her
She will buy you bon bon
She will buy you biscuits
She will buy you chocolate and sugar

Example 52

Yi yo: yo: ke
Yi yo: yi yo: yo: ke
Yi yo: yi yo: yo: ke
Yi yo: yi yo: yo: ke
Let mother come back from the farm
And peel your yams for you to eat
When you are eating, don´t give any child.

Example 53

Bird of the forest
bird of the forest

give our child's sleep
Thrower of bamboos
thrower of bamboos
give our child´s sleep

Summary

In this section, we have examined the ‘protoconversational’ character of the mother-infant interactions with specific respect to the narrative and rhythmic, repetitive structures of the communication.

The Muenster mothers’ discourse was mainly characterized by a dyadic narrative structuring which was achieved by explicitly prompting the child to narrate, referring to past and future biographical events, treating the child’s utterance as communicative act and using diverse other turn-taking eliciting devices. Overall, the child is positioned as quasi-equal communicative partner that will respond and engage in turn-taking interaction.

The Nso mothers’ discourse was mainly characterized by a highly rhythmic and repetitive lopsided structuring. Turn-taking sequences were rare and followed not a narrative but an echoing rhythmic pattern. Moreover, the interactions were not only characterized by verbal but also by nonverbal communication, such as onomatopoeic vocalizations (click sounds etc.) or silent interactions. The prevailing pattern was one of highly rhythmic and musical communication.

While rhythm and repetition were also general features in the Muenster interactions, they were structured differently and accomplished different functions: In the Muenster group, rhythm and repetition was mainly used to establish a harmonious flow of alternating dyadic turn-taking between two clearly separated individuals with own intentions, preferences etc. the rhythmic pattern in the Nso interactions was more of a: “symbiotic” relationship stressing unity. This kind of communication pattern “is indicative, not of the operations of a turn-taking system, but of a relationship at a moment of harmony” (Cowley, 1994 p. 367). Intimate contact thus is established by sharing in the fluidity of rhythmic patterning, by “speaking with one voice” (p. 371). The rhythmic interaction, moving the child in the same rhythm as mother speaks and moves, could hence be interpreted as creating close unity and harmony with the mother by setting up a complementary rather than a dyadic pattern. To echo Scollon (cf. Tannen, 1989, p. 19), mother and infant are not just “being together” but “doing together” and thus achieve one mind or one body in the performance of their interaction. One might therefore also summarize these differences as *diachronous* vs. *synchronous* communication style.

4.3. Individual-centered vs. socially oriented discourse

A final major difference between the Muenster and the Nso interactions consists in the degree to which attention is shifted to the child's individual experience and preferences as opposed to shifting the child's attention to the social world. At one end of the possible spectrum is the strategy of following the child and giving the child the lead, at the other end of the spectrum is the strategy of giving him or her little or no choice in the process or sequence of activities. In this chapter, I will discuss sequences that point to either individual- or socio-centered orientations. These orientations became especially salient when comparing sequences in which mothers (1) *take up on what the child is doing* (2) *seek the child's attention.* While these features were very common in both groups, Muenster and Nso mothers differed largely in *how* and *to what end* they would take up on what the child is doing and seek the child's attention. The patterns in which these orientations manifested themselves were found to be difficult to translate into frequencies of specific discursive features. Since the analytical focus of discourse analysis is primarily to identify reoccurring patterns of how mothers accomplish specific ends in the flow of the interaction rather than on how often a certain discursive feature occurs, findings will be presented in the following by directly discussing representative excerpts without previously providing a numeric overview of specific strategies.

While the Muenster mothers were found to take up on B's behavior to focus on the child's individuality, the Nso mothers were found to take up on B's behavior to integrate it in rhythmic interactions or to prompt the child to do something. Likewise, the Muenster mothers were found to seek the child's exclusive attention while the Nso mothers were found to seek the child's attention to either check on his or her well-being or to draw his or her attention to other people and to convey moral messages. I will again first discuss findings within the Muenster dyads, and then those found in the Nso dyads. I will conclude with a summary of this chapter.

The Muenster dyads

Mothers in the Muenster group used discursive practices that largely focused on the individual experience of the child. They would, for example, typically seek the exclusive attention of the child by following the child’s gaze and calling him, take up on what the child is doing and mirror not only the behavior but also the assumed inner states and emotions of the child and provide rich explanations of what was happening. However, there was also some variation in the degree to which mothers would give the lead to the child: while the overall pattern was one of following the child and letting the child initiate actions that the mother takes up and elaborates, there were also some mothers who would structure the interactions somewhat more actively (Muenster03, Muenster04, and Muenster12). The findings will be discussed in the following.

Taking up on what child is doing

Example 54: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> own fingers		holds rattle > B	°You’ve got to look at your hands again, right?°
2	moves fingers			°hhh@° (2)
3	puts hands in mouth			But they don’t taste very good right now (.) ‘cause we just put cream on them.
4			rattles	the rattle here (...) makes them real sore, you know.

The mother takes up what B is doing and mirrors B’s behavior back by interpreting it as a habit of him (line 1). She thus conveys that she knows his personal preferences. She then goes on to mirror what she assumes the child is experiencing (taste of cream) and offers an explanation for B’s experience (line 3). She not only offers an explanation to B for why the hands don’t taste very good but also for why she put cream on them in the first place (line 4). She applies logical reasoning and positions B as a novice, a learner, and herself as an experienced person who ‘explains the world’ to the child. The focus is taking up what B is doing and explaining and making the child ‘understand’ his own experience.

Later on in the same interaction, we find further evidence for an individual-centered discourse. Though the following sequence is rather long, it has been chosen because it illustrates very well a number of discursive features that were typical also in the other Muenster interactions. After the mother had sung a song to B, she now moves on to another interactional frame:

	BABY NONVERB	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	stretches		pulls B up	You'd rather do gymnastics here, right?
2				Ohhhhhh! Ho@ho@ho@h.
3	looks around			↑Hooyooyooyooyooy! Who have we got here then?
4			lets B fall back	Bwr::::::::t!
5	stretches			(2)
6				°Once more?°
7			pulls B up again	>Alright!< Oh::::hhh!
8	> M			°There you are again?°
9				(1)
10				°°Yeah?°°
11			lets B fall back	↑And back again Bw::::::::t.

The mother takes up what B is doing (stretching) by interpreting it as communicative signal that B wants to do some physical exercise rather than singing (line 1). She then follows up on B's expressed preference by starting a sequence of pulling B up and letting him fall down again repeatedly. Note that in line 5, M leaves a pause and only pulls B up again after he gives her a signal to continue and after asking him whether he would like to do it again (line 6). In line 3 and 8 respectively, the mother uses discursive devices that put B in the center of attention.

The interaction continues as follows:

12	kicks			(2)
13				↑°[that's] good, isn't it?°
14	stretches > side	pants	lets go of B	(4)
15	turns back to M			
16			takes B's hands	Once more?
17			briefly lets go of B	(3)
18	stretches		takes B's hands	Once more? >(Alright), come!<
19		°voc°	pulls B's hands	
20	lying		lets go of B	Ah! ((imitates B))
21	calmly			No strength left?
22				Ah! ((imitates B))
23			shakes head	No strength left?

24	°voc°		(2)
25	pants	nods	°Mh?°
26		shakes head	(2)
27			°No strength left?°
28			(2)
29			.hhh hhh ((imitates B))
30			(1)
31			.hhh hhh ((imitates B))
32			(2)
33		nods	°°taking a little rest first, right?°°
34		moves B’s hand	(3)
35			°°Everything so exhausting°°
36			(2)
37			.hh hhh ((imitates B))
38			(4)
39			°dream,drea@m,drea@m@°

The mother interprets B’s kicking legs as ratification that B liked what she just did with him (line 13). She then leaves a rather long pause in which B stretches and turns away from her. She thus gives him the floor of the interaction, and only when he turns back to her (line 15), she asks him whether he would like to do it again, grasps his hands but holds on for a moment. The following pause and repetition of the question (line 17-18) can be considered as a repair initiator (Schegloff et al., 1977), which works to elicit a ‘response’ from the child. When the child stretches (line 18), the mother starts pulling him which indicates that she has taken B’s corporal signal as the answer. However, obviously noticing that B himself is not supporting the action, she does not continue but lets go of him (line 20) thus following what she interprets as his preference. The sequential organization of this interaction demonstrates that the mother is waiting for B to communicate his preferences which she in turn will follow.

She then provides an explanation of B’s behavior by mirroring his assumed physical state (not having any strength any more) and imitating his vocalizations and panting. The focus is on what the child experiences and feels at the moment. It is interesting that the mother uses a variety of repetitions in this sequence which serve to mirror B’s experience and hence can be considered as ‘other-repetitions’: she uses exact repetitions of the sentence “No strength left” (“*Keine Kraft mehr*?”) (line 21, 23, 27), direct imitation (line 20, 22, 29, 31, 37) as well as paraphrasing/reformulating the description of the child’s emotional state (line 33, 35, 39). These other-repetitions serve to show attention and interpersonal involvement (Tannen, 1987) through which ‘the recipient is told that he is not an island unto himself and that others are, or seek to be, involved with him and with his personal private concerns' (Goffman, 1967, p. 73 quoted in Tannen, 1987). Repeats in form of paraphrasing can be seen as serving the function of maintaining further attentiveness through providing some variety in the form and content of the repetition (Merritt, 1994).

The point I want to make here, is that the metamessage on the relational level produced by these discursive devices is a message of attentiveness to the individual experience of the child.

The interaction continues by B becoming more awake again and looking at M:

40	> M	moves legs		(1)
41			pulls B up	Yes, come! Yea:hhh!
42				(1)
43				↑Hello, hello!
44			lets B fall back again	°And back again? ↑Gl::::ps°
45		pants		(2)
46				W↑e:ll done!
47				(1)
48			nods repeatedly	↑Really great!
49				(4)
50	> M			°Uhum. ↑Really great!°
51				(4)

Immediately, M takes up B's signal and starts another pulling-up session. This shows that she is highly alert to B's communicative signals and gives B the lead in the interaction adapting the situation to B's preferences. In line 46-50 M uses "child-raising" strategies (Ochs & Schieffelin, 1984) by praising B for his accomplishment while, indeed, it was the mother who pulled B up.

52				°°↑Hm? I think you're not gonna like to crawl later on, right?
53	stretches legs upwards			rather standing up right away I think°°
54			pulls B up	↑Weeweeweeweeweeweewee
55		pants		(2)
56				hhh@h@h@h@h@h@
57				(2)
58				And back?
59	> M	pants	lets B fall back	°°Yeah-yeah-yeah-yeah-yeah!°°
60				Hr::hh (1)
61				°So grudgingly, right?°
62	kicks	pants	lets go of B	(3)

63				Hah:! ((imitates B))
64				(1)
65				So grudgingly?

The mother now makes a projection into the future and formulates a possible later preference and trait of B. She thus stays within the focus on B’s preferences and individual character. In line 53, she immediately reacts to B’s stretching by pulling him up again. It is noteworthy that, again, she does so only after the child has given a signal which M interprets as B’s preference. In line 61-65, she further mirrors what she assumes to be B’s thoughts, that is, his reluctance to lay down again, both verbally and onomatopoeic imitation of B’s sighing (line 63). What is also noteworthy, is that throughout the interaction, M provides onomatopoeic utterances that match B’s physical experience as he is pulled up or dropped back. By that, she provides an auditive experience that is synchronous to the physical experience of the child. Also, the mother always announces what she going to do next (line 7, 11, 16-18, 44, 58) which conveys that she wants B to know what is going to happen with him. These announcements are mostly keyed as question thus constructing the interaction in a way that gives B the option to agree or reject.

Taking up on where B is looking

There were several sequences in which the child is looking to the camera and the mother takes up on it in some way:

Example 55: Muenster15_t12

In this interaction, the researcher has kneeled down while continuing filming as we joint the interaction. The child turns to and looks to the researcher:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		> B	(6)
2				°°Now she has kneeled down there. What is that now?°°
3				(1)
4				°°What is that?°°
5				(3)
6			> camera	°weird, is’n it? (.)
7			> B	weird, ´is’n it?°

Example 56: Muenster09_t12

In this example, the child has repeatedly turned to and looked to the camera throughout the interaction while the mother has continuously tried to gain B's attention.

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	> camera		> B	((laughs)) Boah, that's all so exciting, isn't it?
2				Who is that?
3				Who is that?
4			shakes her head	You don't know that girl yet at all? (.)
5				Yes, you do, right? Or don't you?
6				hm?

Example 57: Muenster08_t2

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	turns head to camera		> B	(3)
2	> side		shakes B's hand	Something is different here, right?
3				Something is different.
4				You haven't slept that much the other times, have you?
5				I don't that girl know at all.
6				Always only on Tuesday h@h@h

The three sequences have in common that the mothers try to gain B's attention by following the *child's* focus of attention and taking up on it by mirroring 'the world from the child's perspective' and constructing a rich interpretation of B's inner life.

Seeking exclusive attention

Mothers would also take up on B's focus of attention and try to re-direct it to herself thus creating exclusive mutual attention. They would do so by physically adjusting to the child to re-establish eye-contact, by greeting (“hallo”) and calling the child by name, by directly prompting B to look at her, or making indirect reproaches if B was attracted by other things:

Example 58: Muenster09_t12

In this interaction (see also example 56 above), the mother was continuously trying to get B’s attention throughout the entire filming session while B was most of the time looking to the camera.

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		> B	°°Hey?°°
			kisses B’ neck	((laughs))
2				↑*little stinker*! Won’t you look at me once!
3			turns head in direction to where B looks at	(1)
4				You don’t even think about it, right?
5				That’s not exciting, right?
6			nods	I’m already familiar to you, right? That’s what I thought!

Example 59: Muenster10_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> wall		> B	Hello!
2		voc	> wall and back to B	
3				Hm:? What’s there that’s so interesting besides the white wall?
4		((WH))		
5				°Yeah!°
6		((WH))		
				Yea:yea:yea ((imitates B))
			bents sideward, establishes eye contact	↑Hello! Peek-a-boo!
			sits up again shakes B’s hands shakes head	The mother is not interesting for you. is not interesting at all it seems!

Both examples reflect indirect reproaches that are addressed to the child because the child’s focus of attention is not with the mother. Both mothers first try to get B’s attention by calling the child (hey, hello, peekaboo) and using rhetoric questions (example 59 line 3) and tag questions (example 58 line 4, 5 and 6; example 59 line 3) and direct prompts (example 58 line 2). In both examples, after these prompting strategies did not succeed to gain B’s attention, the mothers finally state that apparently something else is more interesting than the mother. They do so in form of an indirect reproach (example 58 line 6, example 59 line 9-10). Both examples hence show an underlying expectation of the mother to get the exclusive attention of the child.

In sum, the analysis revealed that the Muenster mothers of this study take up on what the child is doing by following the child and giving the child the lead, by mirroring and richly interpreting the assumed intentions and thoughts of the child, and by explaining the assumed experience to the child. Mothers also often ratify the child’s behavior and use child-raising strategies. They demonstrate that their exclusive attention is with the child and make explicit efforts to gain the child’s exclusive attention By doing so, they emphasize and project a sense of individuality to the child.

The Nso dyads

To a large extend, the mother’s utterances in the Nso interactions were not based on, nor did they usually originate with, anything that the infant has initiated vocally or gesturally. Rather, the mothers would follow their own agenda and lopsidedly structure the interaction by initiating what they thought should be done next. This does not mean, however, that the mothers were not attentive to what the child was doing. Rather, while mothers were attentive to the child, the focus was not exclusively on the child but the mother would share her attention with other people and talk to the researcher or to other children or passing people. But even when there were no other people around, mothers would often not be exclusively focused on the child. However, they seemed to immediately react to various communicative signals by the child, but then turn away again or lopsidedly structure the interaction. It was clearly the mother who decided what is going to happen next. Mothers were also found to take up on things that the child was doing, however, they mirrored the outward appearance of the child, not any inner thoughts or feelings, and also would not further elaborate on it. Comments on the child were not necessarily mirrored directly to the child but addressed to other persons such as the researcher. Also, they would take up what the child was doing by prompting B to show a certain behavior without following up on it, or include it in a rhythmic repetitive interaction. Moreover, sometimes the child would be addressed by other people of the village who were passing by and the child's attention was directed to other things that were happening in the village neighborhood. Mothers would try to get B's attention mostly by flicking the lips, flicking the fingers, by shaking the child or by calling B by name, term of endearment or term of respect (see also paragraph on membership category devices on page 162). The findings will be discussed in the following.

Taking up on what child is doing

The following extract displays several discursive features that were typical in the Nso data corpus:

Example 60: Nso02_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	moves hands			Let us be dancing Kikum[18] boy!
2			shakes B rhythmically and moves him alternately to both sides	((rhythmically)) >Kikum Kikum Kikum! o:h juju Juju juju juju[19]< Shaka (.) shaka (.) shaka (.) shaka (.) shaka (.) shaka (.) Shaka (.) shaka (.) shaka (.) shaka
3	> M		stops	(1) o:h (1) o:h
4	yawns		leans back	
5				((clicks tongue))
7			leaning forward to B' face	haha hahhh! ((imitating B)) (1)
8			leans back and forward again	.ha.ha hahhh!
9		burps		
10				Wonderful! Wonderful! Wonderful! Wonderful! Wonderful!
11				gha::h! ((imitates B)
12				Who has belched like this?
13				Who has belched like this, boy?
14			lifts B up and down	*Who has belched like this?*
15				*Who has belched like this?*
16				*Who has belched like this?*
17				*Who has belched like this?*
18				*Who has belched like this?*
19				*Who has belched?*
20				*Who has belched Francis?*

---

[18] Kikum isthe name of a traditional dance

19 juju is a masque

21				*Who has belched?*
22				*Who has belched Francis?*
23				*Who has belched?*
24				*Who has belched Francis?*
25				*Who has belched?*

Several discursive strategies are of interest in this excerpt: In line 1, the mother invites B to dance with her. She formulates this invitation as a prompt and immediately starts with rhythmically shaking B. She *actively structures* the interaction rather than taking up assumed preferences by the child. It is the mother who takes the lead and decides what to do next. In line 4, the mother reacts to B’s yawning with clicking the tongue at the back of the palate. This reaction was found throughout the Nso data corpus when a child was yawning, and only when a child was yawning, often accompanied by supporting B’s chin with the hand to close the mouth. This practice is related to the belief that if the mother would not do this, the child’s mouth would remain open and not close again (Yovsi, personal communication). The mother then imitates B (line 7-8), a feature that was also common in the Nso data corpus and which is similar to the Muenster data. In line 9, the mother takes up on B’s burping by praising B repeatedly (line 10), imitating him (line 11) and then producing a series of rhythmic repetitions in form of rhetoric questions (line 12-25). She thus *integrates* what B was doing in the continuation of the rhythmic interaction from the beginning of the sequence. She does, however, not further elaborate what B is doing. Also, what is mirrored is an *outward* behavior, not an inner experience. A similar pattern is found in the following interaction:

Example 61: Nso16_t12

The mother has been bouncing B up and down rhythmically as we join the interaction:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B, shakes B rhythmically	Be dancing with this your big trousers!
2				Be dancing!
3				*Tingding tingding, tingtidndingding,tidndingding, tidingdingdingdingtiding*
4			puts B down, slightly turns him to camera	Ah@↑he@
5		pants	smiles	↑MUCUS ON THE NOSE!
6				(1)
7	opens mouth			A:Y (.) go away!
8		voc		A:y! Nastiness
9			Touching B’s nose with own	A:y go awa:y

10			> camera	A:y mucus on the nose
11			> B lifts B, shaking him rhythmically	↑mucus on the nose (.) mucus on the nose= mucus on the nose= mucus on the nose= mucus on the nose h@

After another brief interaction of throwing B up and down the interaction continues as follows:

12	> side		puts B on her	°mucus on the nose!°
13			lap and bounces	mucus on the nose!
14			him rhythmically	mucus on the nose!
15		pants		mucus on the nose!
16				mucus on the nose!
17	> camera			Be dancing a dance!
18			stops	(1)
19			shakes B	Be dancing a dance!
20				(1)
21			shakes B	*Kidingding dingding*
22			rhythmically	*kiding ding dingding*
23				*kiding ding ding ding*
24				*kidingdingding*
25				*kiding ding ding*
26				*kiding ding ding*
27				*kiding ding ding*

Again, we see an active structuring on the mother's part by prompting B to dance (line 1-2, 17-19) followed by rhythmically bouncing him. In line 5, M mirrors B's appearance (having a dirty nose) and comments on it as "nasty", however, in a playful tone and with a gesture of endearment which point to the playful character of the utterance. Similar to the previous example, the mother produces a series of rhythmic repetitions of her comment (line 10-16) thus *integrating* it in the continuation of the rhythmic interaction from the beginning of the sequence, without further elaborating it or mirroring any inner experience of the child.

A third example should serve to support my argument:

Example 62: Nso22_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		coughs	> B	Kousou! (.) This your cough!
2		coughs		(1)
3	> camera		Shaking B	*coughing grandmother*
4			rhythmically	↑*coughing grandmother Emily.*
5	> down			grandma Emily!
6		pants		grandma Emily!

			stops	(1)
7		pants	Shakes B briefly	Little grandma?
8				(2)
9		yawns		Did you sleep for the whole day?
10				*°The baby’s nose°*
11				(1)
12			shaking B	*the baby’s nose*
13			rhythmically	*the baby’s nose*
14	> camera			*the baby’s nose*
15		((GR))		*the baby’s nose*
16	> down		stops	(1)
17			bounces B	Little Emy?

In this excerpt, the mother takes up on B’s coughing with a cultural greeting (‘kousou’ meaning something like ‘bless you’) and mirroring B’s behavior by formulating it as a personal adjective of B (line 1-4) and by integrating it in a rhythmic interaction. Another instance of taking up what B does is found in line 9 where M comments on B’s yawning with a question, however without providing any answer which indicates that it is meant as a rhetoric question. In line 10-15, the mother follows up on the topic of B’s cold, this time not on the coughing but on the running nose, by producing again a rhythmic repetition of the her utterance. Similar to the previous examples, mirroring refers to the outward appearance of the child and is not further elaborated.

Taking up on where B is looking

There were several sequences in which the child was looking to the camera and mothers would take up on it. The following excerpts illustrate a prevailing pattern found in theses sequences:

Example 63: Nso01_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera			(2)
2			> camera	°°Who is that?°° (.) °°Who is looking?°°
3		pants	> B	
4	> M		> camera	°°Look!°°
5		pants	> B, smiles	

The mother takes up on where B is looking at by turning to the camera and asking “Who is that”. At first glance, this seems similar to the examples from the Muenster dyads and could be interpreted as mirroring the thoughts of the child. However, the following utterance “Who is looking?” is formulated in a way that suggests that it is not meant as an interpretation of B’s thoughts but rather as a rhetoric question and a prompt. This is confirmed by the following utterance “Look” which clearly prompts the child to direct her attention to the camera. It is noteworthy, that the mother looks to the camera when she prompts the child to look there, however immediately turns to B each time the child pants (line 3 and line 5). This shows that she is highly alert to what B is doing. However, the attention is not on the inner experience of the child but on shifting B’s attention to the person who is filming.

Example 64: Nso10_t12

Previous to this sequence, the child in this interaction was whining and seems tired, the mother had prompted her to look at her when the child looks to the camera:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	B >camera		> B	
2	> underneath of camera			((commanding tone)) **Who is that?** (.) **Who is that?**
3	stares			(1)
4				e:h? (.) **Who is that?**
5				(1)
6			abruptly nodding towards B	↑e:h? (.)((commanding tone)) **WHO IS THAT?**
7				(1)
8				°Who is it?° (.) Who is looking at you?
9				(2)
10				e:h?
11				(2)
12			touching B's forehead	**Ha::rd work!**
13			with her own	(1)
14				e::h? **Ha::rd work! ↑Not harvesting much ↓food.**
15	> camera			(1)
16	Stares straight	pants		e:h, Mayra? ((clears throat)) Say it then!
17	forward			(4)
18			points head to	°°Look°°
19			> camera	(1)

20				Who is it queen?

The mother in this excerpt also immediately takes up on what B is looking at by producing the repeated question “who is that” (line 2). The commanding tone suggests that it is not meant as mirroring the inner thoughts of the child but key it as a prompt. This is confirmed by the increase of voice in line 6 and the repetition of tag questions “e:h?” (line 4, 6, 10, 14, 16) which serve as summons here. (It is not quite clear to what lines 12 – 14 refer to, but possible to the previous singing sequence). The child, however, does not show much reaction and makes a tired impression, starring straight ahead which eventually leads M to a direct prompt in line 16 and 18. It is noteworthy, that in line 8, the mother formulates her question as “who is looking at you” thus focusing not on the inner experience of the child but on B’s perception *by others*. This carries the metamessage that others are looking at you, and you are expected to behave well. This is in line with other sequences in the Nso data corpus where mothers would comment to the child that the researcher has come to look at him and that he therefore should smile/not cry. Both in this and in the previous example, we find almost the reverse of what Ochs has called ‘child-raising-strategies’: the mothers take up on what B’s is doing (looking at the camera) by prompting the child to do exactly what he or she is already doing thus keying it as if the child is following the mother’s prompts. It becomes clear that the function of taking up on what B is looking at is to teach the child compliance. This was also one of the few instances in which a mother would code-switch to English (see also example 47 in section 4.2). We may speculate whether this is related to the framing of the situation as teaching the child compliance. Further analysis on a more broader data corpus might reveal more insight to this possibility.

The next excerpt is another example of taking up on B’s looking at the camera:

Example 65: Nso12_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera	pants	> B	
	moves arms	VOC		
	> side			(2)
2			shakes B softly	Who is it queen?
3				(2)
4				°Who is that?°

5	> down			(1)
6			slightly shakes B	°mmh?°
				(1)
7			bounces B	°Look at auntie!°
8			bounces B	(2)
9				↑Be looking but over there!
10				(1)
11				°Mmh°
12				(2)
13				<°Be looking but over there°> <°Be looking but over there°>

The pattern in this sequence is very similar to the two previous examples in that the mother takes up what B is doing by prompting him to do exactly the same thing (to look at the camera). Again, the mother uses the rhetoric question "who is that?" when she notices that B is looking at the camera (line 1-4). After the child turns away, and obviously does not show the desired 'response', the mother initiates repair work in line 4 and 6 by repeating the question and adding a tag and eventually directly prompts him to look to the researcher and uses nonverbal attention-getting strategies (shaking B). It is also noteworthy that she uses the formulation "look at aunty" thus using a term which may be used for a variety of persons. In contrast, mothers in the Muenster group would sometimes comment to the child "this is Heike" thus using a term that describes a specific individual.

These examples show that the Nso mothers, while being attentive to the child and taking up on what B does, the focus is not on the inner and individual experience of the child and thus *towards the child* but on compliant behavior and outward attention *away from the child*. Other instances in which mothers take up on where B is looking at, show a similar pattern of repeatedly asking where B is looking at without further elaborating on it or integrating it in a rhythmic interaction, as illustrated in the following excerpts:

Example 66: Nso22_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		> B shakes B	A:ba::iy! ((expression of surprise))
2			stops	Widely opened eyes
3			shakes B	↑Widely open-eyed Emily
4			stops	(3)

5			bounces B	°Little grandma?°
6	looks around	pants		(2)
7	> camera		Shakes B	*Little grandma o::h*
8				(2) *Little grandma o::h*
9	> side	pants	stops	(1)
10				What are you looking at:? (2) What are you looking at?
11				((flicks lips))

(about 3 minutes later)

182	stares > camera	> B, bouncing B on knee	Aba:iy! This girl widely opens her eyes!
183		stops	(1)
184		shakes B rhythmically	((rhythmically)) Widely opened eyes Emily! Widely opened eyes Emily! Widely opened eyes Emy:?

In the first excerpt, the mother mirrors the outward appearance of the child while shaking her which indicates that she is trying to get B's attention. She continues by summons (line 5-8) which serve as attention-seeking strategies along with nonverbal strategies to gain B's attention. The child, however, still seems rather lethargic and tired which leads M to use rhetoric questions (line 10) and vocal attentions-seeking strategies (line 11). In the second excerpt, the mother again mirrors B's outward appearance and builds up a rhythmic interaction by repeating her utterance and shaking B parallel to it.

We can infer from these examples that while mothers are clearly not giving the lead to the child, they nevertheless are very attentive to and take up on what the child's behavior or appearance. They do so by mirroring the behavior or outward appearance without further elaborating it, often integrated in rhythmic repetitions thus creating a shared synchronous experience. No reference is made to the child's inner experience. The child's gazing at the camera is taken up on by prompting. The focus is clearly not on the individual inner experience but on rhythmic interaction on the one hand, and on teaching obedience on the other hand.

Within the Nso Data corpus, there was, however, one sequence which also showed an orientation towards the perspective of the child:

Example 67: Nso16_t12

The mother has been humming and bouncing B on her knees as he vocalizes

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	> straight	voc	> B	
2			stops bouncing	↑Haih!((imitating B))
3			gets closer to B	(1)
24				↑Haih! (.)
5				↑Say that I am tired
6				(1)
7		pants	kissing B	↑I am ti:red ehi@hi@
8				(1)
9			wrapping arms around B and kisses him	↑I am tired oh:::: ↑I am tired oh::=↑I am tired oh::=I am tired oh::

This excerpt is different in that the mother does refer to the child’s inner experience (being tired) and that she speaks from the perspective of the child (line 7-9). However, it is also different from the Muenster examples and similar to the other Nso interactions in that the mother prompts the child (line 5) and uses rhythmic repetition (line 9). This may be the exception to the rule or point to intracultural differences which would need to be studied with a more heterogeneous sample.

Orientation towards the social environment

Attention seeking

Analysis of the Nso interactions revealed a variety of strategies to get the child’s attention: Most commonly, they would flick the lips repeatedly or use summons, e.g. calling B by first name or term of endearment (“little baby”), “baby” repeatedly, or by mom/dad, faay/sheey/queen, often accompanied by bouncing or shaking B or prodding B’s cheeks and mouth. Other means are to prompt B to look at an object or to flick with the fingers.

Once they had the child’s attention, mothers would either start bouncing B rhythmically or turn around and talk with others. The goal of gaining B’s attention seemed not to be to establish exclusive attention but to make sure the child is awake and everything is o.k.. This interpretation is also supported by the finding that mothers would sometimes prompt B to *smile* after using attention seeking strategies:

Example 68: Nso08_t12

The mother was talking to someone else and now turns back to the child:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	°*Ba:by:*°
2			prodding B on chest each time	↑*Solice=o:h* (.) ↑*Solice=o:h* (.) ↑*Solice=o:h* (.) ↑*Solice=o:h* (.) ↑*Solice=o:h* (.)
3				°Be smiling so that it should be visible° (.)
4				°Be smiling so that it should be visible°
5			> side	¤(1)
6			> B	°Mhm:°
7			> side > B	¤°Be smiling so that it should be visible

Example 69: Nso13_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		prodding B on chest	John=John! (.) John=John! (.) Johny=Johny Johny=Johny Johny=Johny!
2				Smile!
			prods B's cheek	(1)
3			each time	Smile!
4				(1)
5				Smile!
6				(1)
7				SMILE!
			kisses B	((flicks lips))

What becomes evident in these examples, is also the performance orientation: the baby is supposed to smile so that it is visible to others. In other words: the child is supposed to demonstrate happiness as a sign that everything is ok as well as a sign of proper demeanor.

Distributed Attention

One pattern that was identified from sequences including third persons was what I would like to call ‘distributed attention’: When talking to other people, mothers would look briefly to the child in between whenever the child was moving or vocalizing. Mothers would also often continue to bounce the child while talking to others thus signaling to the child: “my attention is still with you although I also share my attention with others". Moreover, there were sometimes other people present in the Nso interactions with whom the mother would talk or who would address the child.

Drawing attention to the social environment

Sometimes, people would talk in the background and the mother would draw B's attention to what they were doing. This could be older siblings, co-wives or other members of the village, as well as the research assistant:

Example 70: Nso07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				Have you heard that Samuel has eaten Queen?
2				(1)
3				He has eaten.
4				(2)
5				He has eaten.
6			stops, arranges B's clothes	(3)
7				Would you be moving around and eating people's foofoo?
8			starts shaking B's hand again	(2)
9				He has eaten.

Here, the mother refers to something the people around were talking about. Obviously, another person, possibly a child had eaten another person's food. The mother uses a rhetoric question (line 1) to refer to what these people where talking about. The way she constructs the utterance keys the behavior as bad behavior. The term "have you heard" also implies that this bad behavior has implications for one's reputation since people are talking about it publicly. She uses another rhetoric question (line 7) to apply others' bad behavior as moral lesson to the child. She thus conveys a social norm that one should not eat other people's food.

Example 71: Nso22_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				((laughs in reaction to background conversation)) e@h he@h he@h e@h he@h he@h

2				Emily, do you hear what those children are doing over there to Seldrick? (.) e:h Emy::?

In this excerpt, some children in the background were apparently doing something bad (as a native speaker who transcribed the interactions confirmed to me). The mother refers to what these children are doing by using the term “Do you hear” which is similar to the above example. However, the mother, by laughing, keys the other children’s behavior as something less severe.

Note that the pattern in these two examples is very similar to the pattern in example 41 and 42 discussed earlier. In all four examples, mothers draw B’s attention to socially inappropriate behavior of others in order to convey social norms and to teach moral lessons on expected appropriate behavior to the infant.

Third persons addressing B

Instances where *third persons* would address the child consisted mainly of summons (“hey!”, “e:h!”), calling the child by name or by title (*faay* or *sheey*), or of other nonverbal attention-seeking strategies such as clapping hands or flicking the lips.

Example 72: Nso22_t12

People in the background are calling the child as we join the interaction:

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> down		> B, shaking B	Little Em Emy Emy Emy Emy
2	> straight to other people			((person in background calls B's attention and prompts her to smile))
			stops	(1)
4			shakes B briefly	Who is calling for you?
5				((person in background: ↑Ouhi:::!))
6			shakes B briefly	((firmly)) Who is calling for you?
7				flicking lips
8				((others in background) Ou::, ou::!
9				((flicking lips))
10				Smile! Are you not smiling?
11				((others from background)) Smile! (2) Smile! (2) O:::h!

12			[one sentence missing]
13			((others in background)) No::!
14		shakes B briefly	You are trying to smile and are refusing.
15			(1)
16		Nods against B’s forehead	You are refusing.
17			(1)
18			e::h Emy:?
19			(1)
20			((flicking lips))
21			((others from distance)) Smile!

In this excerpt, people from the background are repeatedly calling for B. The mother takes up on their calling by formulating a rhetoric question that indicates that B should respond when other people are calling for him (line 3) which she emphasizes by repeating the question in a firm voice (line 6). She then tries to get B’s attention by flicking the lips (line 7 and 9) and prompts B to smile (line 10). By reformulating her prompt in form of a rhetoric question, she emphasizes her expectation of B to comply. The people in the background take this up and now also prompt B to smile (line 11). The mother now interprets B’s behavior (line 14-16) as trying to smile but ‘refusing’. She thus mirrors an assumed intentionality to not comply. The prompting character continues by her summon in line 18 and the other people’s repeated prompt to smile. What becomes evident in this sequence again is the performative character and the expectation that B is to show happiness and compliance to the public. The attention is directed from the child to the social environment and conveys the expectation of proper demeanor.

Membership category devices

The orientation towards the social environment also becomes evident in the positioning of the infant in terms of social membership categories. The ways a person is addressed in a conversation, invokes implicit features, characterizations and presuppositions regarding this role positions. By using these ‘membership categorization’ devices (Forrester, 2001), the mother conveys a significant amount of cultural knowledge about her conception and expectation of the infant. Infants in the Nso group are frequently and repeatedly addressed by one of their *first names* or various *titles or of respect* associated with specific *social roles* (mum/dad, grandma/grandpa, faiy, sheiy/queen) or *terms of endearment* (diminutives like ‘little child’). They are also sometimes addressed in the third person singular as “the child”.

We can infer from these findings that the infants in the Nso group are to a large extend addressed in their (potential) social roles. Also, while they are addressed by first name quite frequently, the focus is not on the individuality of the child as we have discussed earlier since the repetition of the child's name is usually integrated in a context of synchronous rhythmic interaction.

Summary

In this section, we analyzed the degree to which attention is shifted to the child's individual experience and preferences as opposed to shifting the child's attention to the social world.

Analysis of the Muenster interactions revealed a salient pattern of exclusive attention for the child, of taking up and following what the child has initiated thus letting B structure the flow of the interaction and respecting his or her preferences. The focus of the discourse is on the child's inner state, imputing meaning in the child's bodily and vocal expressions by mirroring and taking the perspective of the child. It is clearly a discourse that puts the child with his or her individual experience in the center of attention. Infants in the Muenster context are oriented towards themselves, that is, they are encouraged to express their own preferences, opinions and experiences.

Within the Nso interactions, although mothers were found to be very alert to the infant's signals, the child's individual experience is clearly not in the center of attention. Mothers showed for example strategies of distributed attention, talk to others while bouncing or holding B or looking somewhere else while singing. Infants in the Nso context are oriented towards others, that is, to notice others, to show respect and to listen to them. Also, children are addressed more frequently by third persons and thus are exposed to the larger social world. While the Nso mothers use a variety of attention seeking strategies, and also take up on what the child is doing, they do so not to initiate protoconversational turn taking but rather to make sure the child is awake and everything is o.k. Mothers actively structure the flow of interaction, presumably independent of what the child himself is doing and thus convey to the child the metamessage that *others* are telling you what to do. Through highly rhythmic stimulation comprising auditive and kinesthetic senses, the focus is on the *shared* experience with the mother rather than B's individual experience.

Overall, the findings can be summarized as revealing distinct communicative patterns across the two cultural groups. The general pattern in the Muenster group is one in which mothers position their infants as quasi-equal partners, engaging them in co-operative negotiations and structuring the interactions in a dyadic turn-taking pattern as well as eliciting autobiographical narratives. The focus is on the individual experience and personal preferences of the child. A few mothers, however, draw on a pedagogic discourse and structure the interactions more lopsidedly. The general pattern in the Nso group is one in which mothers position their infants as novices who need to learn compliance and subordination. The interactions are lopsidedly structured by the mothers and follow a highly rhythmic synchronous pattern including a large amount of repetitions and nonverbal vocalizations. Reference to the broader social environment is made to convey moral messages to the child. Both groups use discursive features like imitation, mirroring, taking up on what the child is doing, as well as rhythmicity and musicality, however, to various degrees and serving different functions as will be discussed in the following chapter.

5. Discussion

5.1. *Relevance of the findings*

This discourse analytic study has investigated mother-infant play interactions in two distinct cultural contexts which have previously described as prototypical independent (Muenster) and interdependent (rural Nso communities). Particularly, the study was interested in examining how the dimensions interpersonal relatedness and autonomy are negotiated in these interactions. In demonstrating how mothers draw on specific discursive devices in the co-construction of the interactions, the study provides evidence that mothers are guided in their actions by distinct cultural models of good child care. Against the backdrop of the relevant ethnographic background, these cultural models can be considered to be functional in the relevant socio-cultural context they are embedded in.

Moreover, from the evidence presented it can cautiously be inferred that the pattern of ‘protoconversation’ described in the literature may in fact be one of several possible phenotypical manifestation of an underlying innate parenting system. The pattern found in the Nso group may then be seen as a different phenotypical manifestation of such innate system. The study suggests that both manifestations of ‘protovonversation’ can be understood as having evolved out of an adaptative process to the respective socio-cultural environment (e.g., Keller, 1996, 2000, 2007). This claim is supported by the fact that there are a number of discursive features that have been found in both groups, however, to various degrees and serving different functions.

Imitating the child

First, imitation is an innate tendency to communicate with others and may be considered as a means to establish intersubjectivity at the most basic level. In infant-directed communication it is the predominant way to indicate sharing of internal states and hence contributes to the organization of subjective experience of the developing self (Stern, 1985, cf. also Forrester, 2006; Trevarthen, 2005). Mothers in both groups *imitate* their infants, for instance the infant’s vocalizations, yawning, or sneezing.

Mirroring and taking up on what the child is doing

Likewise, mothers in both groups *mirror* and *take up on what the child is doing*. However, there are major differences in the way they do this: the Nso mothers mirror what the child is doing by referring to the child's outward appearance without further elaborating on it. They take up on the child's behavior by prompting him or her to do something. In contrast, the Muenster mothers mirror the child's behavior by referring not only to the outward appearance but most prominently by referring to and richly interpreting the assumed intentions and inner experience of the child. They take up on what the child is doing by following the child and giving the child the lead. Establishing intersubjectivity by referring in some way to what the child is doing therefore might be a universal feature while the way this is done points to specific cultural models. The Muenster mother's 'phenotype' points to a cultural model that stresses agency and individuality while the Nso mothers' 'phenotype' points to a cultural model that stresses obedience.

Rhythmicity and musicality

Rhythmicity and *musicality* can be considered to be universal communicative means for connecting individuals in close relationships and becoming members of a social group such as families and cultural communities (Cowley, 1994). *Rhythmicity* and *musicality* were present in both groups. However, the interactions in the two groups varied greatly in intensity and structure of rhythm: the Muenster pattern of protoconversation comprises a 'narrative', conversational, diachronic rhythm, the Nso pattern largely follows a synchronous, highly repetitive rhythm. The Nso pattern thus corresponds to what Cowley (2003) described as *protosong.* Those mothers of the Nso group who did address no or only little verbal communication to their infants, nevertheless showed rhythmic patterning by lifting the child up and down for example. It is well documented that infants can discriminate features of rhythmicity and musicality, like timing patterns, pitch, loudness, harmonic interval and voice quality (e.g., Trehub, Trainor, & Unyk, 1993). Trevarthen (1998a p. 92) points out that the poetic and musical awareness of young infants has long been underestimated and that these universal abilities are necessary to interact mentally and to make sense of one another's feelings, actions, ideas and opinions. The rhythmic organization of early mother-infant interactions and its musical features play a crucial role in primary intersubjectivity and for the meaning that is transmitted to the infant (Stern, Hofer, Haft, & Dore, 1985; Trehub & Nakata, 2001-2002; Trevarthen, 1994). While 3 months old infants obviously cannot understand the meaning of the words the mother is using, there is evidence that they are able to ‘understand’ communicative messages on an affective level (Reddy, 2003; Trehub & Trainor, 1993) based on universal associations of specific acoustic patterns with particular emotions (Frick, 1985; Scherer, 1986 cf. Trehub & Nakata, 2001-2002), or through a process of emotional contagion (Hatfield, Cacioppo & Rapson, 1994 cf. Trehub & Nakata, 2001-2002). Similarly, one can suppose that three-month-old infants might not comprehend a verbal command itself, but are nevertheless able to learn the ‘message’ conveyed in a commanding tone of voice and in the gesture of the mother (Quinn, 2005b). Word-based forms “are not the *sine qua non* of sophisticated vocal communication” (Cowley, 1994 p. 355, emphasis in the original). Singing is especially notable for its heightened emotional expressiveness (Trehub & Schellenberg, 1995; Trehub & Trainor, 1998 cf. Trehub & Nakata, 2001-2002). Interestingly, it has also been suggested that musical aspects in infant-directed communication may contribute to identity formation and a sense of belonging, similar to the way in which music listening in adolescence is claimed to play a crucial role in identity formation (North, Hargreaves & O’Neill, 2000 cf. Trehub & Nakata, 2001-2002). Rhythm can thus be seen as the “communicating door between two minds, leading to transmission of motives and awareness before language can serve that function” (Gratier, 1999-2000, p. 96).

What is more, cultural messages can also be conveyed through channels other than language. A cross-cultural study with deaf children (Van Deusen-Phillips, Goldin-Meadow, & Miller, 2001), for example, showed that these children showed culturally distinct ways of communicating indicating that cultural meanings may be transmitted by non-auditive channels. Similarly, with reference to socialization patterns among Mazahua children, Paradise (1994) argues that nonverbal behavior is not merely supporting verbal behavior but “constitutes an enculturative experience involving specific culturally relevant meanings” (p. 157). There is also an increasing body of research that stresses the pre-reflexive nature of bodily self-consciousness. For example, Legrand (2006; 2007a; 2007b) postulates a pre-reflexive self-consciousness in infancy, as well as a pre-reflexive sense of agency based on sensori-motor integration and spatial experience (cf. also Thompson, 2005). In a similar vein, the cultural anthropologist

Csordas (e.g., 1993; 1999), and the developmental psychologist Forrester (2006) drawing upon the phenomenological psychology of Merleau-Ponty talk of ‘embodied knowledge’ based on the perceptual experience and the mode of presence and engagement in the world. They stress that the embodied experience is “the existential condition in which culture and self are grounded” (Csordas, 1993, p. 136). Csordas (1993) further argues that embodied intersubjectivity might be performatively elaborated in certain societies, while it is neglected or feared as abnormal in others. In the same vein, some societies in West Africa have been reported to a subjective experience described as ‘seselelame’ (literally “feel-feel-at-flesh-inside”) which does not make a distinction between sensation and emotion, and between intuition and cognition and attends to bodiliy feeling as a source of vital information (Geurts, 2002). Similarly, Cowley (Cowley, 2003, 2006, 2007; Cowley et al., 2004) stresses that an infant’s emerging understanding of the world does not derive only from (maternal) discourse but is inseparable from the embodied experience of the infant. Semiogenesis - i.e. the evolution of semiotic behavior, and with it, of culture - emerges in the embodied, joint activity of primary intersubjectivity. *Feeling* the rhythm of the speaker allows for empathic entering into the movements of the speaker to which the sounds are clues. It conveys a metamessage on the relational level (Bateson, 1972; Malloch, 1999-2000) of involvement and participation (Johnstone, 1994), relational symbiosis and harmony (Bennett-Kastor, 1994; Cowley, 1994; Gratier, 2001; Rabain-Jamin & Sabeau-Jouannet, 1997; Tannen, 1987, 1989), and of achieving group involvement in the family and cultural community (Cowley, 1994; Merritt, 1994). By sharing the same experience and inhabit the same world of discourse and rhythm, an intimate contact is established – mother and infant can be said to “speaking with one voice” (Cowley, 1994, p. 371).

Generally, the interactions can be said to follow two different modes that were described by Stern (1977) as *co-action* mode and *alternating* mode. Both modes can be conceived of as part of a universal parenting repertoire whose phenotypical manifestation, however, varies across cultural contexts (cf. also Keller, Otto, Lamm, Yovsi, & Kaertner, in press). The prevalent mode of rhythm and turn-taking allows the infant to perceive how he or she is perceived by others (Stern et al., 1985) and to construct a specific ‘schema’ of being-with other (Stern, 1995, cf. Feldman, 2007). For example, the experience of synchronous and highly rhythmic chorusing and bodily stimulation, like in the Nso group, may foster the conception of a *socially related and* *embedded* self while the experience of a diachronic rhythm with relatively long pauses, like in the Muenster group, may foster the conception of a *separated individual self*. In other words: in both cultural groups, interpersonal relatedness is fostered through the rhythmic character of infant-directed communication. The dyadic rhythmicity in the Muenster group, however, fosters a sense of emotional bond that recognizes the child in its individuality whereas the synchronous rhythmicity in the Nso group fosters a sense of emotional bond that stresses the unity between persons.

Culturally distinct patterns of rhythm and repetition may also be related to broader patterns of the society: In many Western cultures, repetitions are perceived as redundant and pointless and therefore have a negative association, whereas in several non-Western cultures, repetition is a way of establishing a rapport between people also in every day conversation (Tannen, 1987). The high repetitiveness in the Nso interactions may, thus serve as a kind of "filler" that enables the speaker to carry on conversation with relatively little effort (Johnstone, 1994; Merritt, 1994; Tannen, 1987), especially to maintain an ongoing rhythm in the discourse, and allowing mothers to focus on their expressive goals (Trehub & Nakata, 2001-2002). Music and dance also play a prominent role in the every day life of the Nso society. In this context, it is interestingly the Lamnso words for 'dance' (*dzə̀n*), 'life' (*dzə'ə̀m*), and 'to be' (*dzə̀*) obviously have the same root (Banboye, 1980). In sub-Saharan Africa echoing repetitions and choral responses have been found to be salient patterns of interaction (Merritt, 1994) in a variety of every day situations such as class room situations (Pontefract & Hardman, 2005; Tannen, 1989; Williams, Makocho, Thompson, & Varela, 2001). By socializing children into the habit of rhythmic repetition, Nso mothers thus also prepare their infants for a more general communicative strategy of the society. Frequent repetition of the child's name may be related to the child's integration in the community since for the Nso, a name is what gives the child the social integrity and recognition as a community member. While the discursive pattern in the Nso interactions may be semantically less dense, it nevertheless shows a dense discourse texture conveying a rich discursive metamessage. Communication in 'simple' language need not be 'simple' communication.

The Muenster mothers, in contrast, use an alternating turn-taking rhythm in which they explicitly encourage their children to express their inner feelings and thoughts and make explicit attributions of the infant's mental states by explaining actions in intentional terms. This interactional style has been described to be typical of Western white middle and upper-middle class families (Ochs & Schieffelin, 1984). This also corresponds with a more general pattern of many Western societies, where it is common to explicitly guess at what another person might think. Many pedagogical procedures in Western societies include mind-reading games and riddles. This cultural pattern also becomes evident in that the legal assessments of wrongdoings consider the mental fitness of the actor at the time of the action (Ochs, 1990).

Rich communication and undivided attention builds up expectations later on in life that, in the case of the Nso, might interfere with the mother's work load when she returns to work or when the next baby is born. The pattern of communication may thus also be explained by a maternal theory of infant habituation that enables them to anticipate future time and energy demands (Richman et al., 1988). Moreover, in the Nso conception of child care, a good mother is supposed to know what is good for the child and to decide what is going to be done. There is therefore no 'need' to speculate on what might be going on in the child's mind (Yovsi, personal communication). Not referring to the internal experience of the child has also been found in other non-western cultural groups (cf. also Ochs, 1982, 1990; Ochs & Schieffelin, 1984). For instance, the Kaluli in Papua New Guinea use little language except for greetings, imperatives and rhetorical questions towards infants (Ochs & Schieffelin, 1984). This has been related to their belief that infants have no understanding yet and hence are not able to initiate appropriate interactional sequences. Western Samoans have been found to not directly address infants except in the form of songs or rhythmic vocalization (ibid). Moreover, societies such as Samoans (Ochs, 1988), Kaluli of Papua New Guinea (Schieffelin, 1989), and Athapaskan (Scollon, 1982) strongly dislike verbal speculation on what someone else might be thinking or feeling or to express personal thoughts also in adult conversations[20]. (Kulick & Schieffelin, 2004) which also explains why this pattern is not found in interactions with infants. These findings suggest that similar 'protoconversational' patterns like the one prevalent among the Nso also exist in other non-Western societies that live in ecocultural environments characterized by rural non-industrialized living conditions, high birth rates and infant mortality.

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[20] This obviously does not necessarily mean that members of these cultures do not have assumptions about what other people have in mind. It is just to say that it is not common to *verbally refer* to theses assumptions.

From a developmental pathways approach, the different discourses the child grows up in should also have wide ranging developmental consequences. There is empirical evidence suggesting that synchrony in early caregiver-infant interactions is critical for the child's development of empathy, emotional resonance, and self-regulation and lays the foundation for the child's later capacity for intimacy throughout life (cf. Feldman, 2007 for a discussion). Synchrony, may, however, be defined as either co-occurring or as sequential relation between the behaviors or affective states of parent and infant and it can be assumed that the prevalence of one or the other pattern may have consequences for later development. Keller et al (in press), for example, speculate that an alternating turn-taking rhythm could be associated with the development of analytic thinking while a synchronous rhythm could be associated with the development of holistic thinking. Likewise, rhythmic aspects in the regulation of infant's behavior have been related to the development of cognitive competence (Feldman, 2007; Stern et al., 1982). Being socialized towards a cultural practice of reading what is going on in other people's mind, for example, has been related to later performance in theory-of-mind tasks (Bonaiuto & Fasulo, 1997; Kiessling, 2007).

The fact that Nso mothers quite often share their attention with other people around, making the infants to listeners and observers of communication happening around them rather than being directly addressed should have consequences for later communicative patterns. Heath, for example, in her famous ethnographic study of two small North American communities (1983; cf. also Heath, 1988; Mistry et al., 2006) found that African-American working-class children produced more expressive than referential speech in contrast to white Euro-American children, and related this to language socialization patterns within the family. Middle class families used dyadic exchanges with their infants and focused children's attention on labels – the names of objects, events, and attributes – and they expected children to answer knowledge questions to display the children's labeling abilities. Similarly, adults asked children to recount or retell the chronology of events the children had witnessed or taken part in. Working – class Black families did not accommodate the world to their children, nor did they address their children directly, except on occasions of displays of affection. When asking the child questions, they did so to obtain information they did not know and expected the children to do rather than say what the children knew (Heath, 1988, p. 35/36). Similarly, Triandis (1994) argues that polychronic communication, i.e. several activities or interactions with various people occurring at the same time, prevalent in many Non-Western societies, tends to be primarily ‘affective exchanges’. Monochronic use of time, i.e. conducting one dialogue with one person at a time, prevalent in most Western societies, make considerable cognitive demands on the communicator who has to pay attention to every single word.

Some authors stress that speech is inseparable from our consciousness (e.g., Bruner, 1991; Ong, 1988; Slunecko & Hengl, 2007) and that a narrative mode of discourse is inextricably linked with a narrative mode of thinking (Bruner, 1991). We might infer from this that by bringing the child’s experience in a biographical and narrative structure, children are also socialized into the habit of telling about one’s life in a narrative structure and to think in terms of individual autobiography. Wang and colleagues (Wang & Brockmeier, 2002; Wang & Ross, 2007) point out that autobiographical memory is central for self-definition in Western analytical traditions, yet in other cultures it is not. In cultural contexts that stress interdependence, identity is largely defined by an individual’s place within his or her network of relationships.(cf. also Kagitçibasi, 1996a; Markus & Kitayama, 1991; Shweder et al., 2006).

Interestingly, the turn to narrative, as well as to a more self-conscious, more agentic oriented self-accounting within Western societies has been linked to the shift to literacy (i.e. not an individual’s ability to read or write but of a society’s ability to participate in a literate tradition) starting with classic Greek (e.g., Bruner, 1991; Bruner & Weisser, 1991; Havelock, 1991; Johnson, 2003; McLuhan, 1962, 1964; Ong, 1988; Slunecko & Hengl, 2006, 2007). While there has been an ongoing debate about this ‘literacy hypothesis’ (Brandt & Clinton, 2002; Fleisher Feldman, 1991; cf. e.g., Olson & Torrance, 1991 for general discussion; cf. Scribner & Cole, 1981 for distinction between schooling and literacy), it should be stressed here, that these differences are, not rooted simply in the modality of oral vs. written speech but rather in the *media* of communication that have become available through literacy (McLuhan, 1962, 1964; Slunecko & Hengl, 2006, 2007), i.e. the function (Heath, 1983; Scribner & Cole, 1981) an social practice (Brandt & Clinton, 2002) of literacy, and in the *mental skills* that the use of these media allows for (Olson, 1991). For example, ‘fixing’ a text to memorize or to interpret later on, in oral cultures requires the use of repetition and formulaic forms of expressions, while literate cultures can use other forms of fixation that allow for more freedom and complexity of formulation as well as for interpretation and abstraction.

Typical genres of ‘texts’ in oral societies therefore comprise epics and sagas, poems, ritual songs, and genealogies. People use them to impart moral lessons and to promote a feeling of group solidarity through a sense of common history. Literacy encourages people more to be aware of texts as object and not merely as content, and hence to reflect on and revise texts (Olson, 1991; Ong, 1988). In a way, it could even be argued that a social constructionist world view could only develop within a literate culture that allows for fixing and hence reflecting on language itself (in oral cultures, words are considered much more powerful because language is seen as a mode of action rather than as a countersign of thought (Ong, 1988)). The post-modern understanding of multiple possible versions of constructing social reality, from a media perspective (McLuhan, 1962, 1964) may then be intrinsically related to new technologies that allow for virtual realities.

Although some of the farming Nso do have some formal schooling (in English) and thus may not be part of an oral culture in the strict sense any more, they certainly still have preserved much of the mind set of orality. Reading and writing is, in any case, not part of the every day life and most of the participating Nso mothers of the present study were, for instance, not able to write their own name. The prevalence of singing and repetition may be one expression of this. Story telling to imply moral lessons is practiced in the evening while the mother cooks. Singing is a common means used in workshops of medical help centers to teach mothers about health care and nutrition while in Germany, mothers are referred to written materials. It is widely known that cultures also differ with respect of their understanding of time (cf. Birth, 2005 for an overview; Levine, 1997). Oral cultures have been described to live very much in a present which keeps itself in equilibrium by sloughing off memories which no longer have present relevance (Ong, 1988, p. 46). This offers a possible explanation why the Nso mothers of this study do not refer to shared past events in the way the Muenster mothers do.

Summarizing this point it can be said that while the Nso mothers create and share an emotional envelope mainly through synchrony and rhythmicity evolving in the here and now, the Muenster mothers share an emotional envelope that evolves through shared time expressed in autobiographical narratives (Malloch, 1999-2000; Stern, 1993; Trevarthen, 1988, 1998b) corresponding to what Stern (2004) describes as ‘proto-narrative’ comprising a proto-plot, an action, an instrumentality, a goal and a context.

Hierarchical asymmetry in mother-infant interactions

Another universal feature of infant-directed communication which may be handled very differently is the hierarchical asymmetry which puts the mother in a more powerful position than the child. Muenster mothers are less directive and use indirect strategies of control while the Nso mothers are more overtly directive. Information about how power and status are negotiated in social interactions can for example be derived from the way turn-taking is applied (Keating & Egbert, 2004, p. 178). The Muenster manifestation of turn-taking positions the infant as quasi-equal partner. Infants are addressed by first name, or terms of endearment in order to attract the child's exclusive attention and engage in dyadic conversation. Mothers use negotiating, mitigating, and politeness strategies, which play a prominent role in counterbalancing autonomy and compliance. This is again consistent with a mode of communication that has been associated with Western middle and upper-middle social class (Hasan, 2002). This interactional style prepares the child to be aware of own desires and preferences and to learn to negotiate diverging interests with interaction partners. This corresponds to the democratically structured social environment the child grows up. Those mothers who applied a more directive or pedagogic discourse, interestingly were relatively old compared to those mothers who didn't. While the sample size does not allow for a general claim about this finding, it might point to an age- or generational effect. It is interesting here to note that a historical change towards a more independent parenting style with infants has been reported within Germany (Keller & Lamm, 2005). Further research is needed to systematically study diversity within cultural contexts to make valid claims about dimensions such as mother's age, historical change or milieu-specific differences.

The Nso manifestation of turn-taking positions the child at a hierarchical lower rank. Infants are addressed by titles of respect. Similar patterns have also been found to be common in other sub-Saharan African societies (Demuth, 1986). By addressing infants by social titles, they grow up with a 'natural' understanding of the importance of social roles and of the hierarchical structure of their society. By using these categories in every day discourse, people also learn to *treat* one another and themselves according to these categories (Ochs & Schieffelin, 1989). The lopsided active structuring observed in the Nso group reflects a strategy of installing obedience and the goal of a quiet baby. Giving the child little or no choice of initiating an activity, as well as the early enactment of obedience training prepares the child to be undemanding and to show obedience and respect to those of higher status which is a vital aspect of social conduct within this community. It also keeps babies more easily managed and make it easier for the mother to tell when the infant is seriously becoming sick, as opposed to ‘merely’ being hungry or temporarily distressed, and ‘may help her decide when special attention and efforts are required on her part’ (Richman et al., 1988; Yovsi, 2004). According to the Nso concept of childcare, if a mother’s cry management strategy is not successful, this is a sign for serious health problems (Yovsi, 2004). Crying is believed to make the baby grow pale, sick and anorexic since it might refuse the breast milk. It is also considered a degrading marker in the baby’s overall development as expressed in a Nso mother’s comment: “ A child who is constantly crying and nothing is done to calm his crying is already condemned for life. Such a child can never be normal in life” (ibid). A mother who is not able to make her infant stop crying is attributed a very poor level of quality care because this seems to be a marker that the care is insufficient for the well being or stability of the baby. A compliant child will also more easily fit in with a mother’s regular involvement in agricultural subsistence work requiring a rhythm that cannot easily be interrupted by lengthy negotiations over why a child should do what he or she has been told to do (LeVine et al., 1994). Also note that scolding is mitigated by smiles, kisses and hugs, and the mother’s playful tone of voice once the child has complied. Obedience training and teaching to be subordinate to strict hierarchical structure is an essential component of child-rearing practices in several sub-Saharan African Societies such as the Gusii (Kenya) (LeVine et al., 1994; LeVine & LeVine, 1966), the Mfantse (Ghana) (Quinn, 2005b), the Baoulé in Côte d’Ivoire (Dasen, 1984), the Yoruba in Nigeria (Babatunde, 1992; Ogunnaike & Houser, 2002; Zeitlin et al., 1995), the A-Chewa people of Zambia (Serpell, 1993). Outside-regulation has also been found among the Kipsigis in Kenya (cf. Super & Harkness, 1986) where emotional perturbations were met with calming and distraction, not communication and elaboration.

The punishment of emotional display beginning at this point and continuing into later childhood can be assumed to have a more general effect on the child’s emotional expressiveness (LeVine & LeVine, 1966, p. 195). The child learns to experience a relatively calm state as positive. For example, a recent study by Otto (2008) found that a large number of one-year old Nso children show an ‘unemotional’ reaction when exposed to a ‘strange’ person and that such a behavior is a desirable reaction in the eyes of their mothers. Similar findings have been reported by a study using the ‘strange situation test’ in sub-Saharan Africa (True, Pisani, & Oumar, 2001). Within a highly hierarchically structured society like the one of the Nso, giving the child the lead and following what the child is doing would encourage self-determination and make the child disobedient and hence disruptive of the hierarchy. Within the Nso society, people might also object to accommodations to others when the addressee is of lower rank than the speaker. Similar patterns found in working-class Afro-American family interactions with school aged children (cf. Heath, 1988): parents did not accommodate the world to their children; they expected the children to adapt to the situations offered by the world. When given unmitigated directives and little or no choice, children get socialized into a more habitual, routinized way of doing things, and they learn that reality is less negotiable when it comes to particular activities. The Nso mothers, by lopsidedly structuring the interactions construct a certain version of the social world around the infant that teaches him a sense of subordination and heteronomy.

Offering choices and asking questions, in contrast, gives children more autonomy and agency and constructs them as having a say in every day decision-makings (Fasulo et al., 2007). The Muenster mothers, by taking on the infant’s role as communicative quasi-equal partner who expresses his intentions and preferences and by adjusting the situation to the child, construct a certain version of the social world around the infant that teaches him a sense of equality and assertiveness. By being directive and giving little or no choice when it comes to sticking to feeding schedules the Muenster mothers display cultural knowledge that stresses the value of ‘order’ (Ordnungsliebe) and a parental beliefs that infants need to learn to stick with family schedules (LeVine & Norman, 2001). Like in many other Western cultures, families in Germany tend to have fixed meal times that help organize daily family life. A temporal orientation towards ‘clock time’ (rather then ‘event time’) is also considered to be necessary for economic systems to function and a result of industrial revolution (Birth, 2005). By synchronizing the biological rhythms of the infant to social and cultural rhythms, the Muenster mothers hence can be said to prepare their infants to grow up in a world of timekeeping and to train them in self-discipline which is in line with the broader organization of society. In both groups, mothers draw on predictably ordered, culturally relevant semiotic resources that work to facilitate and guide the ultimate realization of compliance.

Allowing for choice or not may certainly result in a certain kind of world view. This may, for example, explain why Nso participants in other studies tend to give rather extreme answers when asked about their opinion on child care practices while German middle class mothers show more variability in their opinions (Kärtner et al., 2007; Keller, 2007; Lamm & Keller, 2007). Similarly, one could speculate whether socializing children towards thinking that there is ‘one truth’ that is not negotiable fosters the strict maintenance of traditions as they are transmitted from one generation to the next while in societies where children have various options how to construct one’s world view fosters post-modern thinking. The fact that among the Nso, children are socialized towards respecting hierarchical settings and to properly behave towards higher ranked persons rather than encouraged to express their own opinion might also explain why it is often difficult to conduct studies that explicitly wants the participants to share their personal opinion in African contexts (Harkness & Super, 1977).

While some of the Nso parenting strategies such as threatening and shaming the child might seem inappropriately harsh to most Western white middle class, it is important to stress that these strategies are not abusive but occur within a context in which the child is well-loved and secure of that love (Yovsi, personal communication). On the other hand, strategies used by the Muenster mothers might seem inappropriate and unloving to Nso mothers (Demuth, Keller, & Yovsi, under review; Keller, Voelker et al., 2005; Keller et al., 2002).

To summarize, the present study provides evidence that rural Nso and Muenster mothers construct protoconversation in culturally distinct ways that are in line with the broader cultural models of sensitive maternal care and that can be seen as strategies that prepare infants for successfully functioning in the relevant society.

It could also be demonstrated that discursive practices are powerful cultural tools to construct and mediate social reality. This comprises verbal, vocal and nonverbal means of communication. By means of these discursive devices, mothers place their infants in situations that demonstrate the infant’s role in their developing social matrix (Kaye, 1991). The study shows that cultural analysis is crucial, and a culturally sensitive understanding of socialization has the potential to illuminate key dimensions in the production of subjectivities or self-construals. The findings support the claim that while there may be a universal repertoire of maternal communicative responses to infants during the first months of life, mothers of different cultures either define the tasks of infant care differently or carry them out under such different conditions that their communicative behavior and the interactive experience of their infants are correspondingly divergent (cf. LeVine, 1988).

By taking an socio- or eco-cultural approach considering contextual features such as maternal beliefs and ethnotheories, domestic and societal organization, this study has been able to provide plausible explanations for the culture-specific communication styles of mothers with their 3 months old infants emphasizing autonomy and separateness as well as heteronomy and interrelatedness differently. The findings refer to two groups of people of specific milieus (agrarian vs. urban middle class) in specific cultural contexts (Western Grassfields vs. North-Germany) studied at a particular time in history (2002 for the Nso and 1995/96 for the Muenster dyads). It recognizes the heterogeneity of cultural contexts and hence the variety of existing cultural models across cultures as well as the co-existence of autonomy and relatedness in any given cultural context. However, it can be assumed that cultural models in comparable eco-cultural niches will show some overlap, especially with regard to the two dimensions autonomy and relatedness are negotiated in every day life since they constitute basic dimensions of human existence. A strong focus on autonomy is only ‘affordable’ in contexts in which dependence on adult offspring is not necessary. A strong focus on relatedness is functional in contexts in which the family depends on the children to provide economic and utilitarian support. Changing lifestyles through growing urbanization and economic development will contribute to changes of cultural models. Differences have, for instance been reported between rural and urban Nso (Keller, 2007; Keller et al., 2008), between the Nso and the Fulani, an ethnic group who live in the same area as the Nso (Yovsi, 2001), between North-German (and US) middle class mothers and grandmothers (Keller & Demuth, 2005), as well as over historic time (Keller & Lamm, 2005).

The present study has focused on mother-infant play interactions and hence presents but one domain of every day socialization practices. In other every day routine practices, when not playing with the infant, mothers might communicate differently with their infants. Similarly, caregivers may stress different aspects as the child grows older. However, it can be assumed that they act in accordance with their tacit cultural knowledge and hence will not display completely different cultural values.

As pointed out earlier, the acquisition of culture in the course of ontogenesis is a dynamic and life-long process that is not limited to childhood. Culture understood as the sum of a person's experience implies that to the degree to which a given's person experience differs from that of others, that person will hold individually distinctive cultural models (Quinn, 2005b, p. 483/483). Nor is the child a passive recipient of culture. Rather, culture needs to be seen as a process of mutual constitution of person and the social world (Shweder, 1990) and a constant process of semiotic mediation (e.g., Valsiner, 2000b, 2003, 2007). As the child grows older, it may "distance" him- or herself from specific cultural values or analyze and reorganize them in personally novel forms in the process of adapting to novel circumstances of life that become necessary with the ongoing changes in society. Adaptation is hence always a mutual adaptation of organism and eco-cultural context, a co-evolution of the individual and the environment (Super & Harkness, 1986).

Globalization and with it the rapidly increasing possibilities for connecting with and engaging with people in other parts of the world, be it through mass media and mass communication like the internet, or by lower costs for transportation and traveling, will certainly bring about changes within both socio-cultural contexts that require an adaptation of the cultural models according to what proves to be functional in each context (Weisner & Lowe, 2005). The significance of cultural-historical changes introduced by modernization in non-Western societies, leading to a gradual shift from a traditional interdependent to an individualistic orientation has been pointed out by Whiting and Whiting (Whiting & Edwards, 1988;. Whiting & Whiting, 1975), Mpofu (1994) for Zimbabwe, and Branco (2003) referring to studies by Graves and Graves (1985) for the Cook Islands. The rapid change in many African societies during the past few decades due to the influence of modernization and urbanization, and the subsequent implications for people's daily lives and developmental pathways has also been acknowledged in other disciplinary fields such as (psychological) anthropology (e.g., Weisner, 2000) and sociology (e.g., Clark, 2000). A stronger orientation towards independence among urban Nso compared to rural Nso has been found by Keller and colleagues (e.g., Keller, 2007; Keller et al., 2008). An increasing trend towards individualism has been observed for North-Germany (Beck, 1986; Keller & Lamm, 2005). Some authors predict an increasing urbanization world wide and with it a *global* trend towards cultural models stressing the children's independence, individuality, and self-actualization (e.g., Gielen & Chumachenko, 2004; Kagitçibasi, 2007). This trend can be expected to be even enhanced by an increasing development of many cultural contexts towards knowledge societies (Bindé, 2005). The findings of this study therefore are considered to apply to the specific eco-cultural and socio-historical cultural contexts of the two groups under study. It can be expected that in both groups, the ongoing socio-historical change will bring about gradual change of cultural models of infant care and with it different manifestations of ‘protoconversation’.

The methodological approach used in this study combining procedures from discourse analysis, conversation analysis and documentary method has proven to be a very fruitful way to study cultural models in mother-infant interactions. In particular, the study was able to demonstrate that language, or rather talk-in-interaction, is a powerful tool to mediate cultural knowledge. The fine-grained sequential examination of how interactions develop on a moment-by-moment basis has revealed the overt and subtle ways in which infants can be socialized towards orientations of autonomy/independence and heteronomy/interdependence through everyday social practices. Analyzing real interactions also allowed inferring tacit cultural knowledge that becomes activated in the interactions without the mothers necessarily being aware of it. It has allowed gaining further insights on how caretakers accomplish to construct a specific social world around the infant that is in line with the broader cultural models of the specific socio-cultural context. It thus provides a deeper understanding of how infants acquire socio-cultural knowledge and worldviews necessary for them to function as competent members of society.

5.2. *Implications for policy and practice*

The findings put into question some previously held theoretical assumptions of protoconversation to be a universal pattern based on a Western model of maternal sensitivity which is considered to effect healthy psychological development of the child. The definition of mental health needs to be derived from an understanding of what is functional in a given socio-, and eco-cultural context. Echoing the line of argumentation by LeVine & Norman, (2001), what is considered as ‘subordination’ and lack of self-assertiveness in Western Psychology might simply refer to a pattern that counts as moral virtue in the Nso community but which is morally disapproved of by contemporary North-Europeans and Euro-Americans. In both cases, what is considered to be ideal child care practices will equip children with capabilities that are well adjusted to the ideologies and requirements of the cultural context so that they are prepared to lead a successful life later on.

For the definition of what can be considered healthy development across cultures, Weisner (2000) suggests that three criteria are to be met: well-being, basic support, and sustainable daily lives. However, how, with what specific content, and toward what cultural goals these three conditions should be achieved need to be defined within each specific cultural community.

However, globalization brings about a growing income inequality between the wealthiest regions of the world (of which Germany is part of) and all others, most notably sub-Saharan Africa and thus challenges healthy child development (Weisner, 2000; Weisner & Lowe, 2005). In developing countries, especially in subsistence based communities, socioeconomic insecurity is translated into both early marriages and the early onset of reproduction (Gielen & Chumachenko, 2004). At the same time, middle-income and high-income contexts, especially German middle class families, experience a decline of fertility rates and late onset of reproduction, a trend that is expected to increase in the future, especially within urban middle-class and upper class families. It has been predicted that poor agrarian societies, particularly in the sub-Saharan region, contribute the most to the world population growth (ibid). That means that not only does the great majority of children live in the non-Western agrarian contexts, but that this trend also is bound to intensify in the future (p. 83). Research on child development therefore needs to focus more on contexts in other non-Western rural cultural communities around the world that have so far been neglected in academic theorizing. Moreover, how globalization and the rapidly growing global interconnectedness through the internet and other modern technologies alters cultural models on child care and ultimately child development outcomes are crucial empirical questions that need to be addressed. Such studies can provide a basis for reconsideration of developmental theories that assume a middle-class Western way of life.

The practical steps that need to be taken if we want to take this arguments serious, have been pointed out by Gielen and Chumachenko (2004): “As educators we need to expand both our own horizons and those of our students by teaching developmental psychology from a truly global perspective, with due consideration from the long-term impact of material factors and for the lives of otherwise invisible children in the poor countries" (p. 107). That is, curricula and text books for training psychologists, teachers, and other professionals in the educational realm need to teach an eco-cultural approach to child development that considers the specificities of the local setting in which it is embedded in.

Moreover, local experts (pediatricians, advice columnists, social workers etc.) must be aware that what is healthy and pathological development needs to be (re-)defined for each specific cultural context. That means for example that early childhood development (ECD) programs in developing countries need to be appropriate to what is functional in the *local* setting. This requires prior studies on local parenting practices and ethnotheories in order to avoid a host of counterproductive and unintended outcomes. Psychological anthropologists and cultural developmental psychologist are therefore urgently needed to be involved, but so far have been largely absent, in the planning of ECD policies and programs, (Vargas-Barón, 2008). The present debate in the German media and politics about appropriate child care with respect to whether financial support should be provided for children's day care so that their mothers can pursue their work career, or whether mothers should rather receive financial support to stay home with their children might also be discussed under the aspect of what is functional in the specific local socio-cultural context today. One might, however, also discuss, whether one wants to support a development of the socio-cultural environment towards increasing individualism and independence or whether socio-cultural structures should be maintained or established that foster both psychological relatedness and material independence, thus fostering an autonomous-related self which according to Kagitçibasi (1996a; 2005) corresponds most to healthy development.

A culture-sensitive approach to good child care also becomes important and challenging in light of the increasing number of migrants in Western urban societies who often come from non-Western, traditional agrarian contexts. In the host-country, they are often faced with a strikingly different socio-cultural environment to which the child care practices that they have subscribed to in the past might not be functional any more. Immigrant programs should consider the 'intermediate' state in which immigrant infants grow up and help their parents to re-adjust their cultural models in a way that allows them to keep important values that they bring from their culture of origin and at the same time allow their infants to become competent members of the respective cultural context in the host society.

5.3. *Limitations of study*

Conducting a discourse analytical study with transcripts that have been translated from a language that the researcher himself does not understand to a secondary language of the researcher is obviously is bound to have some limitations, some of which may not be completely overcome (Birbili, 2000; Shi-xu, 2005; Temple, 1997; Temple & Young, 2004). Language structures and idioms are so culture-specific and dynamic that, even with highly competent and motivated translators, inaccuracies are difficult to avoid. Some subtle and hidden meanings might therefore have remained undetected in the analysis of the Nso transcripts. The present study worked with transcripts that were directly translated from Lamnso into English and compared them with German transcripts. This was partly done because Lamnso has long been an oral language, and its written form has only recently become available (Trudell, 2006). The different languages make available different grammatical strategies and vocabularies to construct conversations. Without knowledge of Lamnso, discourse and conversation analysis does certainly miss out on certain aspects (cf. also Amorim & Rossetti-Ferreira, 2004a). Moreover, utterances in any language carry with them a set of assumptions, feelings and values that members of a given culture may or may not be aware of but that the researcher of a different cultural background usually is not. Translation can thus never convey the exact meaning of an utterance in the original. The present study tried to minimize these limitations and to obtain highest possible ‘conceptual equivalence’ by having the translations done by a native person who is familiar with the semantic net of the Nso and also fluent in English and had some background knowledge in socio-linguistic. Moreover, translations aimed at giving a literal version of the original as much as possible and meanings of utterances that seemed ambivalent or unclear were discussed with that person or with a native colleague who works in the same department. The limitation of language understanding also concerns the parts in which the mothers talked with persons other than the child that were largely not transcribed since the focus was on the mother-infant dyad. These conversations would have certainly provided fruitful information that could have further enriched the analysis.

A second possible limitation lies in the degree to which ecological validity one the one hand, and comparability of the two groups on the other hand could be attained. As argued in the introductory chapter already, the present study follows a case-based rather than a variable-based design and logic (Ragin, 1987 quoted in De Vaus, 2008). It therefore does not aim at matching (paralleling) samples and to control for ‘confounding variables’ to compare them on some dimension, nor would it make sense within this approach: “Rather than proceeding by isolating and measuring discrete variables in each country, case-based designs seek to build a rounded understanding of each country regarding the phenomenon being investigated. Each case (country) is treated as a unit in its own right that deserves to be understood as a coherent whole rather than simply the site to which variables are somehow attached” (De Vaus, 2008, p. 252). The present study aims at comparing how similar activities(playful mother-infant interactions) are socially constructed in two distinct cultural contexts. Ecological validity was attempted to be ensured by choosing an environment that corresponds to every day life in each group, i.e. the homes of the families. The aim was not to reach comparability by strict standardization but by reaching ‘functional equivalence’ (Herwartz-Emden, 1995) of the settings, i.e. it studies play interactions in settings where mothers usually play with their infants. This implied that mothers in the Muenster group were alone at home in closed rooms, while the Nso mothers were often sitting outside the house or with several persons around. All Muenster infants were first borns who can be given the mother’s undivided attention, most of the Nso infants, however, were later borns and mothers would speak sometimes to other siblings or passing people during the recordings. Since the object of the study is to study infancy in cultural context, this is not considered as bias, as some people might object. The setting corresponds to the real context in which the infants of the relevant group grow up which is crucial to ensure ecological validity. It can be objected that in the Nso culture, as in most sub-Saharan African societies, childhood socialization is a collective process that involves a number of care givers, predominantly older siblings, but also aunts and uncles, neighbors etc. (e.g., Nsamenang, 1992; Nsamenang & Lamb, 1994). However, at this early age, infants are basically always with the mother also amongst the Nso. Moreover, Nso children’s ethnotheories have been found to correspond to those of maternal caregivers (Lamm, 2008). Nevertheless, the study of discourses other then that of the mother by which the infant is surrounded could provide valuable insights on child socialization.

One may also ask whether the instruction to ‘playfully interact with your child’ has the same meaning in the semantic net of each group and hence might have lead to different behavior. Again, from an ethnomethodological approach, the aim is to see how mothers construct the meaning of a ‘playful interaction’ and to derive cultural models from the way they do this. Different conceptions are hence not necessarily seen as bias but as evidence of different underlying cultural models. Previously, the Nso concept of ‘play’ with infants has been described by Yovsi (2004) as follows: “The Nso concept of play, which means *séériri* in Lamnso, is considered to keep the baby in a non-crying mood, making the baby to smile and be happy. *Sheˆer wan* (making the baby to smile) and *séériri* are two words that are often used alternatively in Lamnso meaning to play with the baby and to make the baby to smile and be happy. Parents and caretakers try to keep the baby in a well-balanced state by playing with him.” German mother’s concept of ‘play’ with an infant has previously been described more in terms of ‘*Beschäftigung’* which mainly comprises talking to the child and telling the child stories, as well as facial interaction, eye contact, and actively stimulating the child to interact with the surrounding social and physical world. It is considered important for language acquisition, developing the senses, and cognitive development; it also establishes contact, builds trust, and leads to relationship and love. As a consequence, babies feel attended to (*beachtet*) and realize that they have a person who relates to them (*Bezugsperson*) (Keller & Demuth, 2005). The findings of the present study are very much in line with the conceptions described in the literature and hence further confirm the claims made about the relevant cultural models.

A possible limitation is the scope of generalizability or degree of ‘typicality’ of the findings. The data collection comprised 10 minutes of play interaction per mother-infant dyad and hence a limited scope of the infant’s every day experience. To make valid claims about how ‘typical’ this pattern of interaction is for the infant’s daily experience, it would certainly be helpful to have a larger ethnographic data collections comprising routine activities across a variety of situations, which would, however been beyond the scope of the present study. The interactional patterns are, however, coherent with other ethnographic descriptions and empirical studies. Moreover, playful interactions of this kind have been described to be common among the Nso in every day situations, however not necessarily without interruption for a time span as long as ten minutes (Yovsi, personal communication).

The mother’s reactivity to being filmed may have lead to somewhat ‘unnatural’ performance in some cases. However, on both groups, mother had already been filmed 11 times before so that it can be assumed that they had become familiar with the situation and that the camera had little influence any more. Nevertheless, in both groups, some comments from the mothers suggest that there was a certain ‘performance’ character in the interactions. As argued earlier, however, it is not possible to ‘escape’ the modus operandi one has acquired during life and mothers can be assumed to act according to their cultural knowledge. If at all, they will have tried to perform as what they consider to be a ‘good mother’ and presumably performative behavior will thus point even more to the prevalent cultural model.

A last limitation concerns the within-group heterogeneity: while the main focus of the study was on between-group differences, there is obviously also heterogeneity within each group. To develop a socio-genetic typology that encompasses systematic patterns *within* each group and relate it to specific socio-demographic dimensions, the individual groups were too homogeneous, however. Nevertheless, the findings points to interesting directions that could be followed up in future studies: for instance, those mothers who used a ‘pedagogical’ and more directive discourse in the Muenster group tended to be somewhat older and/or have a lower education than those mothers who did not. Also, there were a few Muenster mothers who would use click sounds and flick the lips to gain the infant’s attention, which is very similar to the vocalizations used by the Nso mothers. These mothers, again were somewhat older compared to those who didn’t. In the group of the Nso, there were a few mothers who did not verbally or vocally interact with their infants very much, however were very attentive to the child and also used rhythmic movements. One of these mothers was very young, the other mother was a victim of incest (as turned out later on). Both mothers also seemed to be somewhat intimidated by other people who were present in the room.

Also, while traditional titles like fay and shey (for boys) were commonly used, independent whether the child was first or later born, they were not used for all children. The demographic data gives information on whether these children are first, or later borns, but not whether a child is the first male child, for example. It would be interesting to know whether these titles are only used for the first male descendent, i.e. the actual future lineage head, or also for later born male descendents.

Within-group variance also points to differences in the culturally defined ‘quality’ of maternal care. For instance, Grossman and Grossman (1991) have distinguish a ‘sober’, ‘tender’, and ‘lighthearted’ conversational style to define maternal sensitivity within a German context. Different levels of maternal sensitivity for the Nso culture has been described by Yovsi (2004). The present study did, however, not aim at examining the quality of maternal care, but was interested in underlying cultural models.

The present study does not aim at a probabilistic generalizabilty and is based on analytic rather than statistical induction (Gobo, 2008). From an eco-cultural approach, considering the specific local socio-demographic and socio-historical context in which child development occurs is crucial. The aim therefore is not to make claims that are representative on a national level. The claims made in this study refer primarily to the local contexts the study was conducted in (rural Nso in 2002, Muenster middle class in 1995/96). It can be expected that there are differences in child rearing beliefs and practices across regional, urban-rural, educational, and class divides. However, it can also be assumed that common patterns do pertain in the society beyond the study sample, as a result of traditional cultural teaching or media exposure, for instance (Quinn, 2005b). Moreover, findings can be considered to be ‘transferable’ to other contexts that are culturally similarly organized (i.e., according to their ‘fittingness’, cf. Lincoln & Guba, 1985). Comparison with studies in similar contexts (defined by socio-demographic parameters) allows for further generalization (cf. e.g., Keller, 2007).

5.4. *Outlook*

The existing empirical evidence on different manifestations of child-directed communication could be greatly enriched by incorporating a wider diversity of research participants encompassing diverse social classes, as well as different ethnic, economic, political and religious groups. More studies are needed that systematically relate infant-directed communication, parental ethnotheories and cultural models of child care and developmental outcome, especially from societies that have so far been neglected in the literature, are needed to clarify how variations of cultural contexts are translated into different infant care practices. Since most studies on child care practices in Western societies have been carried out in highly educated middle class families, it would be important to conduct studies with working class families and in rural areas. Considering the large number of migrants in Germany, further studies are also needed that investigate child care practices and beliefs within migrant families (but see Citlak, Leyendecker, Harwood, & Schoelmerich, 2008; Leyendecker, Schölmerich, & Citlak, 2006).

To make valid claims about the developmental consequences of specific parental strategies, *longitudinal* studies are essential. Chen and colleagues (2005, quoted in Miller, Fung et al., 2007), for instance, by following up on the development of a Taiwanese boy could show how cultural models are discursively mediated by caregivers in early childhood and found again in the child's communicative patterns some years later. More of these case based studies are needed to investigate the process of cultural mediation and transmission of norms and values. Future studies could investigate how children at a later age discursively construct themselves in interaction in diverse cultural contexts or how they talk about autobiographical memories, what kind of subject positions they afford to themselves and to others and whether this is in line with other studies on cultural models. Longitudinal studies might also provide empirical insight into possible individual developmental changes of norms and values across the life span and how they are related to changes of the socio-cultural environment in which a person lives.

Moreover, studying different routine practices that constitute children's every day life, such as dinner conversations, family gatherings, traditional celebrations, children play, schooling or kindergarten could provide a broader and more complex picture of the social world in which children grow up. It would also be interesting to study how child development in 'patchwork families' as a new and increasing social form of living in many Western contexts is organized. Another interesting line of research could be the study of discourse *about* childhood, for example in children books and books on child care, newspaper articles, talk shows, internet sites etc. to gain a more complex picture of the cultural models of child care. Finally, future studies could combine a variety of methods and methodologies comprising a variety of perspectives to the study of child development in cultural context. While there is a small but growing body of researchers addressing these crucial issues and contributing to a new level of understanding of child development in cultural context, I want to conclude with LeVine (2007 p. xii): "Let others follow; there is much to be done“.

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Appendice

APPENDIX A: Transcription Notation

The transcription symbols used in this study are an attempt to capture the sound of the talk as it was originally spoken as close as possible. The symbols mainly derive from those developed by Jefferson (1984) as well as those suggested by Ochs (1979, pp 43-72).

Symbol:	Explanation:
↑↓	vertical arrows precede marked pitch movement
Underlining	signals vocal emphasis
CAPITALS	mark speech that is obviously louder than surrounding speech
Italics	marks singing
Bold	marks utterances that were English in the original
°I know°	'degree' signs enclose obviously quieter speech (i.e., hearably produced-as quieter, not just someone distant).
°°I know°°	double degree signs signifiy very quiet whispering
(1)	pauses in seconds
(.)	a micropause, hearable but too short to measure.
she wa::nted	colons show degrees of elongation of the prior sound; the more colons, the more elongation.
hhh	aspiration (out-breaths); proportionally as for colons.
.hhh	inspiration (in-breaths); proportionally as for colons.
bu-u-	yphens marks staccato speech
Darl// darling	marks cut off of the preceding word
>he said<	inward arrows show faster speech
<he said>	outward arrows show slower speech
>>he said<<, <<he said>>	double arrows signify very fast/very slow speech
solid=we had	'equals' signs mark the immediate 'latching' of successive talk with no interval.
heh heh	voiced laughter. Can have other symbols added, such as underlinings, pitch movement, extra aspiration, etc.
sto@p it	laughter within speech is signalled by @.
((text))	additional comments from the transcriber, e.g. context or intonation like ((cough)), ((sniff)) etc.
((CR))	cry
((WH))	whimper
((WN))	whine
((GR))	grunt
Voc	vocalization
(text)	unclear reading
>	looks into direction of
B	baby
M	mother

APPENDIX B: German transcript excerpts

Example 01: Muenster01_t12 (85-185)

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
85		((WN))	hält anderes Spielzeug hin	(2)
86		((WN))	zögert, blickt kurz zur Maus	Oh (.)
87	> Spielzeug		schüttelt Spielzeug	>>Guck ma<< (3 Wörter unverständlich)
88	> Seite			(3)
89				Nich’ gut?
90			schüttelt Spielzeug	(3)
91	> Mutter			Nich’ (.) gut?
92	> Seite	((WN))		(2)
93				((zu sich selbst sprechend)) Ne: (.) hhh
94			legt Spielzeug weg	(1)
95	windet sich	Vok		((murmelnd)) Gut
96		((WN))		(2)
97			> B	Bäh!
98			nimmt B auf Arm	((stöhnt))
99		((WN))	legt B über Schulter	Ga:r nich gut (1 Wort unverständl.)
102		Vok	> B	(1 Wort unvertändlich) is gut, hm?
103		Vok		(5)
104		((ächzt))		↓Ja (.) da saß noch was quer, ne?
105		Vok		(2)
106	> Boden		> B	↓Joa::, da saß noch was quer. (2)
107		((ächzt))	wippt B’s Füße	(2)
108				Mmh?
109			hebt B leicht an	(3)
110	> nach vorne			Jetzt geht’s?
111		((WN))		A::ch jeh
112	> Boden	Vok	> Kind	Machen wir’n da? (2)
113				↑Mm:h?
114			legt B über Schulter	(7) ((Stöhnt))
115	> Raum	VOK		Was machen wir denn da?
116			hebt B hoch	(5)
117	> Mutter			↑Lau:ra
118		((WN))	> B runzelt Stirn	(3)
119			setzt B auf den Schoß	((stöhnt)) (3)
120		((WN))	> Kind	↑Na:?
121				Was is los?

164				Bist du ↑müde? (2)
165		VOK		Kann auch sein(.) ne? (1)
166			wisch B's Mund ab	↓Ja:
167		niest		(1 Satz unverständlich)
168	windet sich	((CR))		(5)
169				Mmh? (1)
170				(bittet Kamerafrau, ihr einen Schnuller zu bringen)
171	> Raum	VOK	> B, wippt B	Vielleicht bist du mü:de, mh?
172	rudert mit Armen	VOK, ((WN))		(4)
173	windet sich			↑Mmh? (.) Laura?
174		((WN))		(3)
175				>↓Hey, du<
176		((CR))		(9)
177		((WN))	Steck Schnuller in B’s Mund	
178	> Mutter/nach oben		> B	°↓Ja:°
179			streichelt B’s Gesicht	(6)
180				Ich glaub, du bist ein bisschen mü:de
181				(.) Kann das sein?
182	schließt Augen		streichelt B's Füße	(10)
183	öffnet Augen			Mhm, ich glaub, das war's
184	schließt Augen			

Example 02: Muenster06_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	Bewegt Arme, streckt sich	((WN))		(Stu:mba machen) Ne:, noch nich?
2				(1)
3		((WN))		Hm?
4		((WN))	hebt B leicht hoch und stützt seinen Rücken	
5		((stoppt))		Ja! Ist es so besser? (1)
6		((WN))		Hm?
7		((WN))		(1)
8		((WN, voc))		Ne:?
9				Awu:h-wu:h? ((imitiert B))
10		((WN))		Na, es stimmt noch nicht. Wir machen das mal ´n bisschen steiler, mein Freund.
11			setzt B höher	(1)
12		((stoppt))		So:. ↑H:m?
13		((WN))		Is das so besser?
14			Schüttelt Kopf	↑Ne: (.)
15		((CR))		noch nich?
16		((CR))	Hebt B hoch	Oder is es (.)
17		((stoppt))	Setzt B auf Schoß	so besser? (1)

18				↑H:m? (1)
19	Blickt umher			↑Ja? (2)
20				↑So is es besser, a::ha!
21				Warum denn? (.) H:m?

1		((GR))		°Guck mal! Kannst du mich denn mal angucken?° Hm?
2		((WN))		
3				Wir ham doch heut Morgen schon geshakert, hm?
4		((CR))		Is nix? (1) Ängä:h?
5			((nimmt B in den Arm, rückt B’s Beine zurecht))	(2) °Mein Schatz° (.) Hm? (1) So is es besser?
6		((WN))		
7		((CR))		↑Auch nich?
8		((CR))	((nimmt Schnuller und steckt ihn B in den Mund))	So und wie is es mit de:m Trick?
9	((spuckt Schnuller aus))		((steckt Schnuller wieder in Mund))	↓Hu@! ↓Hi:@lfe. Hm? So!Biste jetzt zu Friedenverhandlungen bereit?
10		((WN))		
11				Auch nich?
12		((WN))		
13				↑Hm? °Is jetzt besser?°
14		((WH))		
15		((hechelt))		A:ha! <Ich glaube du drückst.> ↑Hm:?
16		((hechelt))		
17				°Äh° ((imitiert B)) A:ha!

Example 03: Muenster08_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1		((hechelt))	spielt mit B’s Hand	Jam=jam=jam=jam=jam. Sag nich', du hast schon wieder Hunger!
2		((voc))		(1)
3		((voc))		Papa hat gesagt, du hast deine Ration schon weg!
4		((WN))		(2)
5			führt B’s Hand zum Mund	Dann musst Du den Daumen ess'n. So!
6	Wendet Kopf ab	((WN))		
7			führt anderen Daumen zum Mund	Nimm' mal diesen Daumen!°
8		((WN))		Nimm' mal den da!

Example 04: Muenster16_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1		((CR))	> geradeaus	He :y ! (1)
2	Bewegt Arme			Lu ::cas :!
3		((CR))		(2)
4			> B	Lu :::cas :!(1)
5		((CR))	nimmt B in den Arm	↑Ja:: wenn du müde wirst dann wirst du auch immer ´n bisschen schwierig, ´ne?
6				↓Ja:: (1)
7		((WN))	Klopft leicht auf B’s Bauch	He:, hey, hey, hey.
8		((WN))	Wischt B’s Mund ab	Hey, hey, hey. Lass mich das noch mal abputzen
9		((CR))		↑Hm:?
10		((CR))	Klopft leicht auf B’s Bauch	>Hey!<
11	dreht Kopf zu M’s Brust	((WN))	> B	(4)
12		((WN))	Schwenkt B hin und her	Nö::, das musst du gar nicht trinken, Du hast doch grad was getrunken.
13		((CR))		(1)
14			> B	↑Hm:? Hm::?
15				(2)
16			Steckt Finger in B’s Mund	Nimm mal meinen Finger, hm? °(Saugst Du)’n bischen am Finger, hm?°
17		((CR))	> B	Ne::! (.) <Nein!> (.) <NEIN!>

(…).

22		((CR))		↓Och (Zau:berbär) (Zau::berbär)
23		((CR))		<Nein.>
24		((CR))		<Nein.> Du musst jetzt nichts// (.) nicht trinken, weil du müde bist.
25		((CR))	Streicht B’s Kopf	Nein, nein, nein, nein, nein.
26		((CR))	schaukelt B leicht	Nein=nein=nein=nein=nein.
27		((CR))		↑Nein=nein=nein=nein=nein.
28		((CR))		Nein=nein=nein=nein=nein.

Example 05: Muenster17_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1		((WN))		Was denn? Man kann doch nicht so (.) plötzlich so seine Laune ä-ändern (2) so mir nichts, dir nichts, ohne daß was pas↑siert! (.) Das ↑GIBT'S DOCH GAR NICHT
2		((CR))	((zieht B hoch))	(1) >Komm' ma' her< (1) Mama zieht dich nochma' hoch.
3		((stops))		

Example 06: Muenster17_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
233	Dreht Kopf > M	((WN))		Und jetzt willst du noch weinen? Nö, nö, nö! (.)
234			bewegt B’s Beine	((in spielerischem Tonfall)) NÖ, NÖ, NÖ, NÖ:!(.) NÖ, NÖ, NÖ NÖ:!
235		((GR))		(.)Das woll'n wir ja gar nicht!= >nö, nö, nö< nö:! (1)
236			beugt B’s Beine an und streckt sie wieder	OH NE::! (1) ↑*NE::!* (1) ↑*NE::* (1) ↑*NE::!* (.)*ne::* (1)
237			beugt sich über B und lächelt	
238	bewegt Hände	Voc	geht wieder zurück	°°Oh, hast du gepupst? Hast du einen Pups gemacht?°°
239		((GR))		
240		Voc		(2)
241			beugt sich langsam über B	Macht nix! (.) Darfst du ja!
242			schüttelt B leicht	Du darfst ja alles, was du willst (.) außer weinen °°Das findet die Mama nicht gut (.) Das Weinen ist nicht schön!°°

(a) announcing what is happening with the child, e.g.,:

„Jetzt setzen wir uns wieder, ne? Sonst wird das zu anstrengend für Dich, ne? (Muenster18_t12_a)

„(Komm), wir setzen Dich mal so hin“ (Muenster18_t12_b)

„(Komm) wir versuchen noch mal deinen schönen Sitz“ (Muenster06_t11)

„Der Kopf ist so schwer geworden? (1) Dann legen=wa dich `mal wieder hin. DANN=LEGEN=WA=DICH=MA'=WIEDER=HIN“ (Muenster17_t12)

(b) importing an activity-related transition, e.g.,:

„Woll'n wa noch einmal turnen? Woll'n wir beide noch einmal turnen?< (Muenster17_t12a)

„Soll'n wa noch ein anderes Spielzeug holen, m:h? Was du von Heike geschenkt gekriegt hast?“ (Muenster07_t12_3)

“Hey! (2) Soll'n wir mal wieder das Kindchen auf dem Thron machen, du mh? Woll'n wir das mal machen?“ (Muenster09_t12)

Example 07: Muenster19_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1		((WN))	((grinst))	
2		((CR))		((in ironischem Tonfall))O::h! oh-oh-o:h (2)
3				Was gibt’s denn? Hm? Was gibt’s den zu meckern?
4	Spielt mit M’s Hand			(6) °(unverständlich)°
5				(4)
6		((WN))		
7		((CR))		O:::ch (.) Och=och=och=och
8		((WN)) ((CR))		Und sie weinte bitterlich
9				e-de:de:? Deydeydeydey? He? Eydeydeydey?
10	lächelt		lächelt	H@ Du weißt auch nicht, ob Du lachen oder weinen sollst.
11		((WN))		He@he@he@he (.) deydeydey

(...)

14		((CR))		O::h
15				↑Ye:y (1) ↑Yey ↑o::h ((ironischer Tonfall))
16		((WN))		
17		((CR))		↑Armes Mädchen
18				He@he@he@he (2) (unverständlich) is gemein, ne@? h@h@h@ Das is ge:mei:n
19		((voc))		
20			nickt	Ja! (2) Ja! Nu schimpf mal! (1) Nu schimpf mal!

(...)

6		((CR))		O::h ((ironischer Tonfall))
7				(2)
8				O:::h! Du armes Kind! (1) Ne?
9	lacht	((voc))		
10				He@ Musst Du Hunger leiden? Hm?

(...)

12				Aber Du kriegst gleich was zu futtern. (.) Ja? (.) Versprochen. (.) mh hm.

Example 13: Muenster01_t12

	BABY ONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
2	bewegt Hände und Beine	@Vok@[1]		
3			legt B’s Kopf zurecht	Ja:(.) geba:det (1)
4	Stopt, > Mutter	VOK	legt Bein zurecht	Heute war's gut (.), ne?
5		VOK	> B	(2)
6				((schnieft)) Heute war's gut das Bad, mh?
7			streichelt über B’s Gesicht	(2)
8	> Mutter			Ohne Tauchen (.) h@
9	bewegt Finger	°Vok°		(1)
10			Stoppt, lächelt, > B	Mhh?
11	> Mutter	VOK		(4)
12	> Mutter		nickt	↓Ja:
13				(6)
14				Heute war's gut, oder?
15				(2)
16	bewegt Hände			Hat Spaß gemacht, ne? (4)
17			lächelt	↑Ja?
18				(7)
19				War das gut?(.) ja?
20				(4)
21				Mmh?
22				(5)
23				Erzähl!
24			legt Finger in B's Hand und bewegt sie	(11)
25				°Schatz°
26				(2)
27				Erzähl' doch mal was!
28				(2)
29			parallele Fingerbewegung	Sag mal: Lau::ra!
30	bewegt Hände und Beine		nimmt Hand beiseite, lächelt	(1,5) h@
31				Lau::ra!

(...)

49				(5)
50			streicht K über den Kopf	Mh, träumst du n'bisschen?
51				(3)

Example 14: Muenster13_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1		((VO:C))		
2				JA::!
3				Erzähl's mir doch! Erzähl's mir doch! ↑Ji °Erzähl's mir doch!°
4		((VO::C))		
5				Ja! Ja,dann er↑zähl's mir doch! Erzähl's mir doch!
6		((voc))		(1)
7				↑Tu's doch! (1) Ja. Kannst doch sonst so schön erzähl'n.
8				Wollst heut morgen nicht? Wollst heut morgen nicht? Hm?
9				Nein? Wollst heut morgen nicht?
10		((voc))		
11				Hö:h ((imitiert B))
12				<Noch zu müde?> Biste noch zu müde? Hm? Bist noch zu müde?

Example 15: Muenster20_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1		((voc))		
2				Hui::!
3		((GR))		
4	> camera		> B	(4)
5				↑Hu-hu! (1)
6				°↑He::::y!° Na:? Willst du mir nich' noch 'was er↑zählen?
7	> M			(1)
8	Moves arms			↑Hallo: Mäuschen! (.) Mmh? (.)
9				Na:? (.)
10			Bents over B	<Na: du?>

(13 Sekunden später:)

11	> M		> B	Erzähl' mal was!
12	Moves arms	((GR))		
13				Mh hm
14				Was ↑passt dir nicht? °°Was passt dir denn nicht?°° ↑Mh?
15		((voc voc ↑vo:c))		
16			nickt	↑J:a. (1)
			nickt	So einiges?
17	Moves arms	((GR))		
18				Ja! (.) °Gibt's einiges auszusetzen?° (1) °°Ja!°°
19	Moves arms	((voc))		
20				Ja:?
21	stretches	((vo::c))		
22				Ja::: (.) (Das) is aber auch was!
23	Moves arms	((GR)) ((CR))		
24	Moves arms			Ochh! (2) So ↑vie:l? (1) °Das hast du mir ja noch gar nicht gesagt°
25		((voc))		
26			nickt zustimmend	°J:a, das is' aber allerhand!° (.) °Das is' allerhand.°
27		((voc))		
28			nickt	Ja! (.) Das is' ja auch 'ne Frechheit, ne?
29		((hechelt))		
30			nickt	Mj:a (.) Mh ja (1) Mm:?

Example 16: Muenster08_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	(Was) hast Du denn gemacht (.) heute?
2				↑Mh?
3	bewegt Arme	((hechelt))		Haste mir doch schon alles erzählt.
4				.hh hhh ((imitiert B))
5				.hh hhh
6				(2)
7			Krault B’s Füße	Chrchrchrchrchrchrchr
8				(2)
9				Chrchrchrchrchr
10				(1)
11	bewegt Arme		Krault B’s Bauch	Wo war’n wir eben? Hab’n wir ,nen Spaziergang ge↑macht?
12		((voc))		

13				Ja:?
14				Gestern Abend hast du Mama zweimal angepischert, ne?
15				(1)
16				Hast du Mama zweimal angepischert?
17	bewegt Arme	((voc))		(2)
				Ja:?
				Konnte Mama gar nich’ so schnell wegsaus’n, ne?
		((voc))		(1)
				Das war gut, ne?
				(2)
				Ja:?

Example 17: Muenster15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		> B streichelt B’s Hände	Heut morgen haben wir im Bett schon eineinhalb Stunden zusammen gespielt.(.)
2				↑Boh, ↑das war toll!

Example 18: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				Ja: gestern haben wir noch//
2			((vo:c))	
3				Gestern ham wir zusammen ein Lied gesungen, ne? Jippijeijeijei konntest du schon, ne?
4				(2)
5				Wollen wir das noch mal ↑singen?

Example 19: Muenster08_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	((gähnt))			
2	> Decke			Ohh! Müde bis' du.
3				(5)
4				°°Müde bis' du, ja?°°
				(3)
5			Schüttelt B’s Hand	°°Hast Du den ganzen Tag mit deinem Pluto gespielt, dass du so müde bist?°°
6	> M			(1)

7	> Decke			Hast Du gespi:elt mit deinem Pluto? Mh? Pluto?
8			Bewegt B’s Hand parallel	Hast du immer dong dong dong den gehauen? (1) °Dong, dong, dong°

Example 20: Muenster13_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	°Heut’ Nachmittag kommt die Oma.°
2		((vo:c))		(2)
3	Bewegt Arme		nickend	Ja@:, heut’ Nachmittag kommt die Oma. Ja, die passt heut’ Nachmittag auf dich auf.
4			nickend	↑Ja:.
5		((voc))		
6			nickend	Geht mit dir spazieren.
7				Geht mit dir spazieren, ↑ja::.
8				↑Hm mh. Im Schnee.

Example 21: Muenster17_t12a

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M bewegt Arme		> B	Weißt du, wo du gleich rein kommst? In deinen neuen Fahrradanhänger.
2		((voc))		
3			streichelt B’s bauch	Papa und Opa wollen gleich noch einkaufen. (Dann) is’ vorbei mit dem gemütlichen Leben im ↑Kinderwagen.
4			beugt sich über B Streichelt B’s Bauch	Das is’ vorb↑e:i:! (.)
5				Das is’ vorb↑e:i:!

Example 22: Muenster17_t12b

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	Nachher fahr’ n wir zu Oma.
2	Bewegt Arme			(1)
3				Und Torsten ist da (.)
4			beugt sich über B	Torsten hat heut’ Ge↑burtstag.
5	lächelt			(1)
				°Ja!°

Example 23: Muenster15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B, kitzelt B	>>°hallo=hallo°=hallo=hallo<<
2	Bewegt Arme	((GR))		(.)
3				>>hallo=hallo=hallo=hallo<<
4			nickend	Heute Nachmittag kommen ganz viele Kinder hierher
5		((voc))		↑>>hallo=hallo=hallo=hallo<<

Example 24: Muenster02_t12_2

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B hält B’s Hand	Geh’n wir morgen zum ↑Doktor?
2				(1)
3			Schüttelt B’s Hand	Der piekt dich morgen. (.) Der piekt dich morgen.

Example 25: Muenster14_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				Komm mal her, (ich) zieh dich mal hoch!
2			zieht B hoch	(…)
3				↓Ja:.
4				Und jetzt wieder zu↑rü:ck!
			lässt B wieder zurückfallen	

Example 26: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				°Noch einmal°? >Na, komm!<
2			zieht B hoch	Oh::::hhh! (1)
3				°Da bist du schon wieder?°
				(1)
				°°Ja?°°
				↑Und wieder zurück.
			lässt B zurückfallen	Bwr::::::::t

Example 27: Muenster05_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1				Ich stell dich da mal ganz kurz hin
2			zieht B hoch	

Example 28: Muenster18_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1				[Komm], wir setzen Dich mal so hin.
2			setzt B anders hin	
3				

Example 29: Muenster03_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	bewegt Arme/Beine	hechelt	beugt sich über B	Wo ist denn der kleine Tim?
2				(1,5)
3				°Sag' mal!°
4				(2)
5			> B	
6	bewegt Arme		beugt sich weiter über B	Wo is'n der kleine, liebe Tim?
7	> M lächelt		lächelt	(2)
8				Hä:h?
9	lächelt			(1)
10				H@h
11				HA@HA
12				(.)
13	lacht, bewegt Arme/Beine	Vok		↑Mm::h
14		hechelt		(2)
15				Ja (.) da: is=er
16			legt Finger in B’s Hand und schüttelt sie	Wo war'n wir denn heute?
17	> Kamera			(3.5)
18				Im Park?
19				(6.5)
20		((GR))	tippt auf B’s Bauch	Wo war'n wir denn heute?
21				(6)
22	strampelt	((GR))		
23		hechelt		
24				Dödödö
25	hält kurz inne		tippt auf B’s Bauch	(2)

26	strampelt weiter			Stimme bilden (.) hat doch die Meike gesacht
27			tippt auf B’s Bauch	1)
28				Stimme bilden
29				(1.5)
30				Ja:!
31				(1)
32				Mal so'n bisschen: *u:::::h=öh* (1)
33				Mach!
34		VOK		(2)
35				Öh!
36				(2)
37	hört auf zu strampeln		streichelt B’s Bauch	Die Meike arbeitet mit Behinderten (.) zurzeit, (1) im Praktikum (1.5)
38			spielt mit B's Hand	Und da heißt das (1) Stimme ((stößt auf)) °bilden°
39	bewegt Hände/Füße			(2)
40	hält still			Ha@hik ((lacht))
41			tippt auf B’s Bauch	Mmh? (0.5)
42		((stößt auf))		(1)
43				>Mach!<
44			tippt auf B’s Bauch	(2.5)
45	bewegt Hände/Füße			
46				↑*Lölölölölö::*
47				(3)
48		((GR))	greift nach B’s Arm, spielt mit B's Händen	Bö::p!
49		hechelt		(9)
50			lehnt sich zurück	.hhh hhh((seufzt))mmh. (1)
51			spielt mit B's Hand	Erzähl' mir mal was mit Stimme!
52				(3)
53			> B	
54			spielt mit B’s Fingern	Rörö. (2)
55			tippt B auf Brust	Mmh? (2.5)
56				(1 Wort nicht verstanden)
57	bewegt Hände/Füße	Vok		(1)
58				h=h@=h=h@
59				(1.5)
60	> M			M:::::::::h
61	atmet tief ein			(2)
62				Pf::::.(0.5) pf ((imitiert B))
63				(3)
64			tippt auf B’s Bauch	Wo fahren wir hin in Urlaub?
65	strampelt		lächelt	(3)
66	hält inne			Na? (.) na:ch?
67				(1.5)
68			tippt auf B’s Bauch	Juist. (1.5)
69				für eine Woche

Example 30: Muenster13_t12a

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1				°Strampel, strampel.°
2				°Strampel, strampel.°
3		((B voc))		
4				Ja:::! Ha@hahihi@
5				Strampel, strampel.
6				Das ist toll, ne?
7				Das ist toll, hm?
8				Hm@h@h@h
9	Bewegt Arme und Beine		> B	Das ist auch deine Lieblingsbeschäftigung hier,
10				alles zu bewe:gen,
11				alles zu bewegen,
12				ja@ha.
13				°Heut' Nachmittag kommt die Oma.°
14		((voc))		Ja:, heut' Nachmittag kommt die Oma.
15				Ja, die passt heut' Nachmittag auf dich auf.
16				↑Ja:.
17		((voc))		geht mit dir spazieren,
18				geht mit dir spazieren, ja::

Example 31: Muenster 15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
45			Tupft B's Mund ab	Guckt da ein kleiner (Gruss) an dieser Seite raus? (.) Tüt-tüt-tüt-tüt
46		((GR))		(.)
47			Tupft B's Mund ab	Tüt-tüt-tüt-tüt-tüt (2)
48		Vok		Tüt-tüt-tüt-tüt (.) Ja:? (.)
49				↑Tüt-tüt-tüt-tüt

Example32: Muenster 17_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M		> B	Nochmal turnen?
2			nimmt Beine des Kindes	(1.5)
3		GR	und bewegt sie rhythmisch über Kreuz	Tschu:tschu:tschu:tschu:tschu:tschu: Tschu:tschu:tschu:tschu:tschu:tschu=Ja-a. Tsch. Ja@a:

Example 33: Muenster 15_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
91	> M		> B	Soll'n wa wieder unser Uhrenspiel machen? (1)
92			bewegt B im gleichen Rhythmus hin und her	*<Große Uhren machen tick tack tick tack>.* *Kleine Uhren machen ticketacke ticketacke.* *Und die kleinen Taschenuhren >>ticketacketicketacketicketacke ticke tacke<<*

Examples 34: Muenster08_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	Starrt zur Decke		Stubst B an die Wange	Pr, pr, pr, pr, pr
2				(1)
3			Stubst B an die Wange	Pr, pr, pr, pr, pr
4			Stubst B’s Arm	°°Hey°° °°Hey°°
5			Stubst B’s Kinn	°°Pr (.) pr (.) pr pr pr°°
6			Läuft mit Fingern über B’s Bauch und stupst B’s Kinn	°Kommt ein Mann (.) die Treppe hoch.
7			Rüttelt B’s Nase	Klingelt (.)
8			Klopft auf B’s Wange	klopft an.
9			Rüttelt parallel dazu B’s Arme	"Guten Tag, junger Mann!" "Guten Tag, junger Mann!"

Example 35: Muenster07_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	Greift nach	((GR))		*Schmetter*(.)*ling du kleines Ding suchst dir eine Tänzerin*
2	Rassel			(3)
3				*Schmetter*(.)*ling, du kleines Ding*
4				(1.5)
5				↑*suchst dir eine Tänzerin.*
6			rasselt	
7	> Rassel		hebt Rassel hoch	*Fiderallalla, fiderallalla* (1)
8	bewegt Arme/Beine		und runter	*oh, wie lustig tanzt man da:ha* (1)
9			Stupst B’s Nase mit Rassel	*Lustig,lustig wie der Wind* *wie ein kleines Blumenkind*

Example 36: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> M	VOK	> B	
2	bewegt Arme			Ja gestern haben wir noch//
3	reckt sich	VOK		Gestern haben wir zusammen ein Lied gesungen, ne?
4	bewegt sich		nickt	Jippijeijeijei konntest du schon, ne?
5	strampelt			Wollen wir das noch mal singen?
6		VOK	nickt	Ja?
7			bewegt	*Wenn die In-di-an-er rei-ten*
8			B’s	*dann rei-ten al-le so*
9			Füße	Ktk-ktk-ktk-ktk-ktk.
10	führt Hände	((GR))	im Takt	*Wenn die In-di-an-er rei-ten*
11	zum Mund			*dann rei-ten al-le so*
12				Ktk-ktk-ktk-ktk-ktk.
13				Jetzt musst du mitsingen!
14				*Jippiejeijeijei jippiejojojo*
15				*dann rei-ten alle so-o-o.*
16	strampelt	VOK	nimmt B’s	*Jippiejeijeijei jippiejojojo*
17	windet sich		Hände	*dann rei-ten alle so!*
18	reckt sich			Du willst lieber hier turnen, ne?

Example 54: Muenster07_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> eigene Finger		hält Rassel fest > B	°Musst DU Dir Deine Hände wieder angucken, ne?°
2	Bewegt Finger			°hhh@° (2)
3	Steckt Hände in Mund			Aber die schmecken jetzt nicht (.) die haben wir nämlich grade eingecremt.
4			rasselt	(durch) die Rassel hier (...) werden die nämlich ganz wund.

1	reckt sich		zieht B hoch	Du willst lieber hier turnen, ne?
2				Ohhhhhh! Ho@ho@ho@h.
3	schaut um sich			↑Huijuijuijuijui! Wen ha'm wir denn da?
4			lässt B zurückfallen	Bwr::::::::t!
5	reckt sich			(2)
6				°Noch einmal?°
7			zieht B wieder hoch	>Na, komm!< Oh::::hhh!
8	> M			°Da bist du schon wieder?°
9				(1)
10				°°Ja?°°
11			lässt B zurückfallen	↑Und wieder zurück. Bw:::::::t.

12	strampelt			(2)
13				↑°Gu:t, ne?°
14	reckt sich > Seite	hechelt	lässt B los	(4)
15	Dreht sich zurück zu M			
16			nimmt B’s Hände	Noch einmal?
17			lässt kurz los	(3)
18	reckt sich		nimmt B’s Hände	Noch einmal? >(Na), komm!<
19		°Vok°	zieht an Händen	
20	liegt		Lässt locker	Äh! ((imitiert B))
21	ruhig			Keine Kraft mehr?
22				Äh! ((imitiert B))
23			schüttelt Kopf	Keine Kraft mehr?
24		°Vok°		(2)
25		hechelt	nickt	°Mh?°
26			schüttelt Kopf	(2)
27				°Keine Kraft mehr?°
28				(2)
29				.hhh hhh ((imitiert B))
30				(1)
31				.hhh hhh ((imitiert B))
32				(2)
33			nickt	°°Erst mal ’n bißchen ausruhn, ne?°°
34			bewegt B’s Hand	(3)
35				°°Alles so anstrengend°°
36				(2)
37				.hh hhh ((imitiert B))
38				(4)
39				°Träum,trä@um,trä@um@°
40	> M	bewegt Beine		(1)
41			zieht B hoch	Ja komm! Ja:hhh!
42				(1)
43				↑Hallo, hallo!
44			lässt B zurückfallen	°Und wieder zurück? ↑Gl:::::ps°
45		hechelt		(2)
46				G↑u:t machst du das!
47				(1)
48			nickt wiederholt	↑Ganz toll!
49				(4)
50	> M			°Mhm. ↑Ganz toll!°
51				(4)
52				°°↑Hm? Ich glaub' krabbeln willst du nicht so gerne später, ne?
53	streckt Beine nach oben			Lieber steh'n sofort glaub' ich°°
54			zieht B hoch	↑Wiwiwiwiwiwi
55		hechelt		(2)
56				hhh@h@h@h@h@h@
57				(2)
58				Und zurück?
59	> M	hechelt	lässt B zurückfallen	°°Ja-Ja-Ja-Ja-Ja!°°
60				Hr::hh (1)
61				°So ungerne, ne?°

62	strampelt	hechelt	lässt B los	(3)
63				Hah:! ((imitiert B))
64				(1)
65				So ungerne?

Example 55: Muenster15_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> Kamera		> B	(6)
2				°°Jetzt hat die sich da hingekniet. Was ist das denn?°°
3				(1)
4				°°Was ist das?°°
5				(3)
6			> Kamera	°Komisch, ´ne? (.)
7			> B	Komisch, ´ne?°

Example 56: Muenster09_t12

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	> camera		> B	((lacht)) Boah, ist das alles spannend, ne?
2				Wer ist das?
3				Wer ist das?
4			Schüttelt Kopf	Die kennst du noch gar nicht? (.)
5				Doch ne? Oder nich'?
6				Mhm?

Example 57: Muenster08_t2

	BABY NONVERBAL	**BABY VOCAL**	**MOTHER NONVERBAL**	**MOTHER VERBAL**
1	Dreht Kopf zur Kamera		> B	(3)
2	> seitlich		Schüttelt B’s Hand	Irgendwas is' anders hier, ne?
3				Irgendwas is' anders.
4				Du hast doch sonst nie so viel geschlaf'n.
5				Die kenn ich gar nich'.
6				Immer nur dienstags h@h@h

Example 58: Muenster09_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	> Kamera		> B	°°He?°°
			küsst B am Hals	((lacht))
2				↑*Stinkerchen*! Guck mich ma’ an!
3			Dreht Kopf etwas in B’s Blickrichtung	(1)
4				Du denkst gar nicht dran, ne?
5				Das is' nich' spannend, ne?
6				Mich kennste schon, ne?
			nickt	Das hab' ich gerne.

Example 59: Muenster10_t12

	BABY NONVERBAL	BABY VOCAL	MOTHER NONVERBAL	MOTHER VERBAL
1	> Wand		> B	Hallo!
2		voc	> Wand und wieder zu B	
3				Hmm? Was gibt´s denn da Interessantes außer der weißen Wand?
4		((WH))		
5				°Ja!°
6		((WH))		
				Jä:jä:jä ((imitiert B))
			Beugt sich seitlich, stellt Blickkontakt her	↑Hallo! Kuckuck!
			Richtet sich wieder auf	Die Mutter is nicht interessant für dich.
			Schüttelt B’s Hände	
			Schüttelt Kopf	Is gar nicht Interessant scheint mir!

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