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Is the Mother Essential for Attachment?

Models of Care in Different Cultures

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Abstract

Attachment theory is predicated on the assumption of dyadic relationships between a child and one or a few significant others. Despite its recognition of alloparenting in some cultural environments, current attachment research is heavily biased toward the mother as the major attachment figure in the life of the developing child. This chapter presents evidence that diverse childcare arrangements exist in cultures that differ from Western norms and shows how these are equally normative in their respective cultural contexts. In these settings, alloparenting is neither chaotic nor unstable; it is the norm, not the exception. In all environments, infant care is far more than just an isolated, biopsychological phenomenon: it is an activity deeply imbued with cultural meanings, values, and practices. To account for these multiple levels, the construct of attachment must shift its emphasis away from an individual child toward the network of relationships surrounding a child. Overwhelming evidence on diverse childcare arrangements in non-Western cultures calls the putatively universal model of attachment (derived from the Bowlby-Ainsworth paradigm and still widely applied today) into question. In support of future research, this chapter proposes an inclusive reconceptualization of attachment, informed by research from non-Western cultural settings.

Introduction

Attachment theory, as formulated in the 1960s and 1970s, was based on notions of family life and relationship dynamics within a circumscribed cultural context. Does this view of “family” apply to every cultural setting? What does research from various cultures tell us about the environment in which infants are raised? How can we confirm whether infants develop best under the care of one stable adult who has specific behavioral features? What can we learn from

recent work on different primate species living under varied conditions, captive or wild? How do fields of research such as primatology, anthropology, and cultural psychology contribute to expand our knowledge of infant-caregiver relationships?

Despite advancements in the study of human behavior, core tenets of attachment theory have not been altered and are still widely in place in ongoing research. If this theory is to have validity, these core constructs need to be re-examined to ensure that its basic premise reflects contemporary research and understanding. In this chapter, we revisit attachment theory to scrutinize the role it ascribes to the mother: Is the biological mother essential for attachment? What role does the mother play in diverse ecocultural contexts?

We review the core claims of attachment theory, provide background into the basic processes under discussion (child care, family life, and social relationships), and examine the emergence and expansion of attachment theory. Following this, a comprehensive critique of the theory is advanced based on examples from different childcare settings.

Centrality of the Mother

Without doubt, mothers play a special role in the lives of their children. In addition to endowing a child with genetic material, mothers make a substantial physical investment through intrauterine pregnancy, delivery, and possibly lactation. No other person in a child's life can match the maternal investment that a mother makes in offspring, and although all cultures recognize the central role that a mother plays in a child's life, the mother-child relationship is subject to varying ecological factors and cultural traditions. As Bronfenbrenner proposed (National Scientific Council on the Developing Child 2004:1):

A child requires progressively more complex joint activity with one or more adults who have an irrational, emotional relationship with the child. Somebody's got to be crazy about that kid. That's number one. First, last, and always.

This "irrational" attitude toward a child is the foundation upon which increasingly complex activities form between children and their social partners. Stable and caring relationships are the foundation of human development the world over. For millennia, infants have survived under the caring organization of the social setting, where constraints, threats, and uncertainty are managed to enable the child to reach maturity. The solutions that get worked out in real contexts provide evidence of a wide variety of care arrangements: from the unpredictable environments of the hunter-gatherer communities to the relatively predictable lives of technologically advanced societies. Alloparenting, multiple caretaking arrangements, and distributed care (e.g., Weisner 2014) have been described in many different cultural groups in East Africa, West sub-Saharan Africa, Southeast Asia, and South America (for summaries, see Keller 2013c, 2015; Lancy 2015). These child-rearing behaviors are, however, not

exclusively a non-Western phenomenon. Caregiving by siblings is common in economically challenged families in the United States. In many Western middle-class families, infants and small children are exposed to people other than just the mother and father. Social network theory (Kahn and Antonucci 1980; Lewis 1994; Takahashi 2004) argues that each individual has simultaneous close relationships with multiple significant others, from infancy to old age.

The diversity of the human condition throughout history and context must be taken seriously and accounted for as we explore children's relationships with others. The centrality of the mother, however, does not mean that investments by other caregivers are not similarly important to a child (Chaudhary 2011). Relationships between the child and one or more social others are key to growth and well-being, both during childhood as well as later in life.

Mother and Child: Monotropy in Attachment Theory

Western childcare philosophy assumes, both implicitly and explicitly, that the psychological bond between mother and child is a natural consequence of biological connectedness. As the prototype of Western childcare philosophy, attachment theory (Bowlby 1969; Ainsworth et al. 1978; Cassidy 2008) grants the mother a special and unique role in a child's development. Attachment theory is also predicated on a psychoanalytic model of the psyche. The abiding importance of the first human relationships and the early years of life for later social and emotional functioning is clearly psychoanalytic in orientation, even though Bowlby departed somewhat from the Freudian formulation of psychic energy-seeking release (Harwood et al. 1995). While investigating the nature of these interactions, observations of Ugandan mothers and babies guided Ainsworth to assume that it was not maternal warmth that accounted for different attachment qualities. Instead, the amount of caregiving and the knowledge of the baby determined the quality of care, as measured by proximity, availability, interest in and perceptiveness about, as well as promptness in responding to the baby (Mesman et al. 2016b). Despite the fact that these features were initiated through field work with Ugandan mothers and babies, we argue that each of these features assumes a culturally specific way of understanding the care of children.

Irrespective of the composition, stability, and size of a group, Bowlby claimed that there is always a special, unchangeable bond between a mother and her children (Bowlby 1969, 1988b). Yet he also acknowledged that caring for a baby or a small child can become so demanding that the mother needs to be supported by the father, a grandmother, or an older daughter (Bowlby 1980).

Ainsworth wrote that family security served as the basis from which an individual can work out other relationships later in life (Salter 1940:45). She did not mean, however, to detract from the basic premise of attachment: "there is a strong bias for attachment behavior to become directed mainly toward one particular person and for a child to become strongly possessive of that person"

(Bowlby 1973:368). Indeed, the relative mapping of others around the mother, who may play significant roles in the lives of children, received much less attention from Bowlby, Ainsworth, and their followers.

Since the original work of Bowlby and Ainsworth, the role of the mother has become more pronounced and ingrained in academic thinking. Although the possible importance of others, particularly fathers, has been recognized (e.g., Bretherton 2010), the bulk of attachment studies still focuses solely on the mother-child relationship (Cassidy and Shaver 2008, 2016).

Primary Claims of Attachment Theory

Attachment theory proposes that children develop an internal working model of relationships based on early experiences. It also holds that the mother plays a unique and central role in the attachment process as well as in subsequent developmental trajectories of a child (Main 1999; Cassidy 2008). Even when multiple caretaking is acknowledged, the central role of the mother is not disputed (Mesman et al. 2016b).

Attachment research aims at demonstrating the uniqueness of the mother-child bond, even within multiple caregiving settings. Attachment theory assumes that the mother-child bond is qualitatively different from all other relationships that the child may form: it is a specific emotional connection that the infant develops during the first year of life, embodying spatial closeness and timely extension (Ainsworth et al. 1974). Problems encountered by the child, during the initiation or maintenance of an attachment relationship with the mother, are assumed to lead to serious negative consequences and psychopathology. Attachment relationships, therefore, can express different qualities and outcomes, depending on the nature of the social experiences with the primary attachment figure. A secure attachment relationship—the golden standard for a healthy, happy, and competent developmental trajectory—can emerge when the child experiences unconditional, dyadic, and exclusive attention. Even the slightest of signals emitted from an infant must be answered responsively and sensitively (assumption of contingency) for the child to develop a sense of agency and predictability (Ainsworth et al. 1974).

Recognizing that a child may receive attention and care from multiple caregivers, Mesman et al. (2016a) propose that the sensitivity received by an infant be measured instead of the sensitivity expressed by a single caregiver. This proposal, however, does not go far enough, because it fails to account for the different modes and qualities of caregiving: “sensitivity” can be understood differently in various cultural contexts, as can the various functions that different caregivers may potentially fulfill (e.g., Yovsi et al. 2009; Lancy 2015; LeVine and LeVine 2016).

Attachment theory considers emotional expressiveness to be part of the attachment system, and social exchanges are geared toward the expression of positive emotionality. The expression of negative emotions, such as an infant’s

fussing or crying during duress (e.g., when separated from the mother), is thus interpreted as being indicative of a secure attachment relationship. Emotions are generally viewed as important regulatory mechanisms within attachment relationships (Cassidy 2008).

Because the bulk of attachment studies utilize between-family designs, comparisons of attachment qualities that a mother may exhibit toward her different children can easily be overlooked. This neglect is based on the assumption that the maternal state of mind regarding attachment (internal working models; George and Solomon 1989) is generally stable by adulthood; thus, mothers can be expected to interact similarly with their children and share a similar quality of attachment with each child (O'Connor et al. 2000; van IJzendoorn et al. 2000). Attachment research that addresses siblings and their mothers has concentrated on the concordance of attachment classifications (with very modest success) instead of on the variability and placement of the relationships of different children in one family within a family systems or network approach.

Monotropy Revisited

While examining the care of children across time and space, it becomes evident that the exclusiveness of dyadic relationships is predicated on several conditions. Unless these conditions are fulfilled, it is impossible for an exclusive, intimate relationship to emerge between a single adult and a single child, as assumed by attachment theory. For a mother to invest exclusive attention in a single child, she must be assured of her own safety and survival, the child's survival, a stable environment free of imminent dangers, food security, and moderate temperature. In a modern urban setting, other conditions may also be necessary to render the adult free from other life-saving or life-sustaining tasks.

Henrich et al. (2010) argue that dyadic exclusivity is a benefit of a WEIRD (white, educated, industrialized, rich, democratic) environment. In a hunter-gatherer society, by contrast, exclusive engagement with a baby at the expense of other environmental cues could endanger the lives of both the mother and the child. Scarcity of resources and ecological uncertainty are essential considerations for which there is biological and social adaptation (Morelli et al. 2014).

Like other areas of family and community life, child care is a cooperative activity that relies on the participation of kin and other group members. Childcare arrangements are thus sensitive to the environmental conditions under which families live. Dyadic exclusivity can be argued to be an adjustment to the secure surroundings of a technologically advanced and affluent society that facilitates intimate attention between mother and child. Free from subsistence activity, nuclear families in relatively affluent environments are a necessary but insufficient condition for caregiver-infant exclusivity to be expressed. Even when these conditions are met, a mother may be unable or unwilling to attend to her child exclusively.

Infant Attachment as Adaptation

Attachment theory emphasizes a strong orientation toward adaptation to the environment. Bowlby assumed that the attachment system emerged in the African savannah where our ancestors lived as hunter-gatherers. Thus, human psychology should be adapted to an “environment of evolutionary adaptedness (EEA).”

By contrast, neo-Darwinian evolutionary theory (Wilson 1975; Alexander 1979; Tooby and Cosmides 1990; see Chisholm, this volume) places genetic variability in the center, with contextual information being crucial for defining adaptation. Accordingly, in the Pleistocene EEA, it is unlikely that only one behavioral strategy—the secure attachment quality—would have been selected to be adaptive. Family life, in early human societies, was too fragile and uncertain to provide a stable context for sustaining singular and focused attention between a mother and her child. Apart from ecological and social contexts, fertility rates would have further confounded the development of a one-mother–one-child bond. Certainly it would have been more adaptable to permit as well as encourage babies to develop the capacity to bond with multiple caregivers. Correspondingly, due to high infant mortality rates, a heavy investment in a single baby would have been maladaptive for the mother, given the high risk of losing her baby (Scheper-Hughes 2014). Thus under conditions of environmental uncertainty, high mortality, greater mobility, and mortality risk, we argue that exclusive dyadic relationships would be maladaptive, both for the mother as well as for the baby (see also Morelli et al., this volume).

In 1984, Lamb et al. questioned Bowlby’s premise of the adaptability of one evolutionary strategy, citing this as a misunderstanding of evolutionary principles and natural selection. They stated (Lamb et al. 1984b:146) that:

Evolutionary biology, however, demands an evaluation not only of biologically influenced predispositions but also of the contingencies provided by the specific environments or “niches” in which the individuals must manifest these predispositions.

Further, if variation and diversity in structure better predicts survival of life forms, the same argument could apply to human behavior. The more diversity we retain in the nature-culture dialectics, the greater our chance of survival will be in the future.

To many attachment researchers, attachment theory represents a universally applicable account of the bond between caregivers and infants based on evolutionary and ethological considerations (Bowlby 1969; Mesman et al. 2015; Mesman et al. 2016b). This assumes that the definition of attachment and its qualities, its emergence, and consequences must be universally similar. Even the discussion of the Japanese conception of *amae*¹ has not found

¹ *Amae* is a verb which Doi (2014) uses to describe the behavior of a person who attempts to

its way into attachment theory and research. This assumption has been challenged substantially from cultural, historical, and cross-cultural perspectives (for summaries, see Quinn and Mageo 2013; Vicedo 2013; Otto and Keller 2014). The basic argument is that attachment theory, like any other theory, rests on a specific, culturally bound conceptualization of an individual, with corollary assumptions about the family and relationships. In addition, family is a symbolic construction or an ideological conception with its own history and politics (Arendell 1997).

Attachment theory itself is a product of history (Vicedo 2013 and Vicedo, this volume) and must be situated in historical time. For instance, children who grew up during the Great Depression in the United States married at a much younger age and had significantly more children than their parents' generation (Stearns 2003; Nicolas et al. 2015). German Reunification offers another example. After Reunification in 1990, the birth rate in the former German Democratic Republic dropped by almost 50% over a three-year period before stabilizing (Chevalier and Marie 2013). Major changes in family life and child-rearing attitudes accompanied the sociodemographic changes (Otto and Keller 2015). Worldwide, fertility rates are intimately linked to infant mortality rates: when child survival increases and infant mortality is minimal in a society, people tend to have fewer children. Better quality health care and literacy have been additional factors in slowing down population growth in the Global South.

Attachment Theory: A Culturally Specific View of Relationship Formation

Attachment theory rests upon the model of the Western middle-class nuclear family as it was perceived to exist around the middle of the twentieth century (LeVine and Norman 2001; Vicedo 2013; Sear 2016). In this cultural setting, parenthood would begin relatively late during the individual biography to ensure a stable economic setting. For women, first-time births would occur by the time they were in their late 20s. For men, parenthood would begin by the time they were in their late 30s, after achieving a formal education and becoming established in a profession. Despite public discourse on gender equality and shared household responsibilities at the time, mothers were viewed as the primary caretakers of infants (Georgas 2006). Depending on the availability of government support and parenthood programs, women prioritized child care over profession, while fathers remained fully engaged in their professional lives. Accordingly, the mother generally spent most of the time with the baby.

solicit care from an authority figure. The behavior of children toward their parents is perhaps the most common example of *amae*. Doi argues that child-rearing practices in the West aim to prevent this kind of dependence, whereas in Japan it continues into adulthood.

The low fertility rate of that time (between 1.3 and 1.9 in European countries) allowed child centeredness to emerge as an educational credo, expressed in exclusive attention to the baby and prompt responsiveness to all the subtle communication cues. Babies develop expectancies through contingency experiences. In this way, the environment becomes predictable and trustworthy. High formal education is associated with voluminous conversations and an inclination to mental states embodied in extensive face-to-face encounters.² Positive emotionality and praise stress the individuality and uniqueness of the infant while reinforcing the relationship with the mother, as the primary caregiver (Keller 2007, 2015)—the unique and unchangeable bond, which attachment theory assumes to be universal. Relationships are genuinely dyadic, and all relationships are assumed to be constructed according to the same principles, and hierarchically subordinated to the primary relationship (Main 1999; Cassidy 2008). Attachment theory also holds that adults have to be the significant relational and educational partners of children. Together, the assumptions made about adult-child relationships in attachment theory attest to it being viewed as a culturally specific phenomenon—one best adapted to white, middle-class Western families. As such, attachment theory provides a model of “neontocracy” (i.e., infants are treated as cherubs) rather than a gerontocratic model, where children are viewed as chattels (Lancy 2015).

Exporting Attachment Theory

With its emphasis on the nuclear family and the mother-child bond, attachment theory addresses a specific and narrow aspect of relationships (Takahashi 2005). It does not account for the attachment process in the environment in which children are born and raised (Chisholm 1996). Ample evidence in the anthropological and cultural/cross-cultural literature attests to the fact that children’s learning environments and socialization strategies vary substantially (e.g., Lancy 2015) across cultures as well as within cultures and across time.

Despite this evidence, attachment researchers argue that cultural variability was incorporated in attachment theory, citing Ainsworth’s (1967) empirical study of attachment in Uganda as evidence. However, Ainsworth adapted her Uganda experiences to fit the Euro-American middle-class context in Baltimore using the Strange Situation Procedure. The distress that she observed in the Ugandan homes when infants were separated from their mothers did not occur in the Baltimore homes. Therefore, Ainsworth relocated the observational situation into a laboratory (strange environment) and included

² We note that the Western version of face-to-face routine encounters appears very different to the close physical interactions observed among Trobrianders, Himbas, and Yamonamis (The Human Ecology Archives). In these communities, babies are fondled, rocked, repeatedly kissed, and caressed during repeated contacts between the caregiver and the child. This version of the face-to-face encounter, which is accompanied by vocalizations, is very different in character from the Western model.

a stranger (strange person) to increase the stress on the infant, so that the attachment system would be activated and attachment behaviors would become visible. This U.S. middle-class adaptation was then exported by others to diverse cultural environments—from the Gusii in Kenya (Kermorian and Leiderman 1986) and Hausa in Nigeria (Marvin et al. 1977) to Western and non-Western middle-class families (for a summary, see van IJzendoorn and Sagi-Schwartz 2008; Mesman et al. 2016b)—without further questioning or verifying the cultural validity of the Strange Situation. Ainsworth was obviously not happy with this practice as she expressed disappointment “that so many attachment researchers have gone on to do research with the Strange Situation rather than looking at what happens in the home or in other natural settings....it marks a turning away from ‘field work,’ and I don’t think it’s wise” (Ainsworth 1995:12). A more field-based approach is available through the Attachment Q-sort method (Vaughn and Waters 1990), where an observer spends several hours in a family setting (with a one- to two-year-old child) before evaluating the attachment security of the child using a large number of predefined behavioral descriptions (written on cards). These descriptions “can be used as a standard vocabulary to describe the behavior of a child in the natural home setting, with special emphasis on secure-base behavior” (van IJzendoorn et al. 2004:1189). These descriptions, however, almost exclusively address the mothers’ behavior and are thus bound up with issues related to sensitivity responsiveness described above.

Today, cultural differences are only acknowledged with respect to different distributions of attachment qualities—i.e., deviations from the “American Standard Distribution” as assessed in the Baltimore study (Ainsworth et al. 1978)—with 66% securely, 12% insecurely avoidant, and 22% as insecurely resistant attached children (for a discussion, see Keller 2013c). The differences were defined *ex post facto* as cultural deviations, a practice that attachment researcher Inge Bretherton (1992) found persuasive on the surface, but not based on systematic assessments of parental beliefs and culturally guided practices. Bretherton recognized the need for systematic studies of cultural differences and stressed that attachment researchers need to develop ecologically valid, theory-driven measures, tailored to specific cultures and based on a deeper knowledge of parents’ and children’s folk theories about family relationships. In current practice, theory and method are deeply confounded (Gaskins 2013). In a recent analysis of different cultural groups that are mainly equated with countries, Mesman et al. (2016b) argue that very little research exists to permit a systematic appraisal of attachment theory across cultures. Further, they emphasize that researchers are inadequately trained and conditions are not favorable, with researchers neglecting to consider whether methodology may be invalid or inappropriate in certain settings.

The ethnocentrism of the conclusion reached by Mesman et al. (2016b), “to support attachment theory as it stands,” is a testimony to the way in which attachment theory has been applied in different cultural settings. We propose that

attachment relationships need to be contextualized to reflect the diverse ecologies that impact child-rearing.

Developing an Ecological Framework

If research is to move beyond the ethnocentrism inherent in attachment theory, it must relinquish its blind commitment to the theory as it stands. Instead of working to maintain the traditional framework by adjusting interpretations of diverse cultural realities to fit the attachment model proliferated within this tradition (van IJzendoorn and Sagi-Schwartz 2008; Mesman et al. 2016b), attachment theory must be grounded in an inclusive understanding of attachment relationships that exist in diverse settings. Thus, we purposefully shift the discussion away from the centrality of the mother and focus instead on alloparenting, because this fundamental behavior is observed in diverse primate societies. Using wide-ranging examples of child-rearing, we lay the groundwork for the construction of a new ecological framework within which attachment can be better understood.

Alloparenting as the Human Condition

By assuming a central role for the mother, attachment theory has seriously disregarded other significant relationships in a child's early development. The importance of alloparenting—its meaning, patterns, structure, and impact on the emergence of attachment relationships and children's development—has received far too little attention in attachment research. Yet the involvement of others (e.g., grandmothers, older siblings, fathers, but also unrelated kin) in child care on a routine basis can be regarded as a human universal, extending back to the appearance of *Homo erectus* (Hrdy 1999, 2009; Burkart and van Schaik 2010). Cooperative breeding (Hrdy 2009; Morelli et al. 2014) allows mothers to reproduce and raise children successfully. If the task of raising children would have been the sole responsibility of the biological mother, humankind would not have survived (Hrdy 1999, 2009). Next to mothers, older siblings have the largest impact on infant survival, followed by maternal and paternal grandmothers, then fathers; even grandfathers exert a 20% effect on child survival (Sear and Mace 2008).

Extensive allomaternal care can account for higher birth rates (reducing birth intervals), earlier weaning of humans (relative to the other great apes), enhanced cooperation within social units organized by cultural norms and values, and the social and cognitive capacities for social regulations. The cooperative breeding hypothesis assumes the emergence of prosocial psychology affecting social regulations. Cooperative breeding/allomaternal care requires motivational and cognitive processes that may also lead to cognitive and social capacities which are not directly related to breeding (Burkart and van Schaik

2010). It emerged early during the history of humankind, possibly with the *H. erectus*. During the course of phylogeny, it contributed to larger brain development and a large array of prosocial and cognitive competencies necessary to cope with the complexities of human life (van Schaik and Burkart 2010:484):

Chimpanzees, and perhaps all great apes, meet many of the relevant cognitive preconditions for the evolution of human cognitive potential, [yet] lack the motivational preconditions. In humans alone, these two components have come together, the cognitive component due to common descent, and the motivational component, resulting from the selection pressures associated with cooperative breeding.

This view stands in sharp contrast to Bowlby's evolutionary understanding. He derived the monotropic conception of human attachment from the caregiving system of the rhesus macaques, in which the mother plays a unique role for the upbringing of the offspring. Bowlby took the rhesus macaque system (studied by his ethologist friend, Robert Hinde) to be representative of the entire primate world (cf. Lancaster et al. 2000; Clutton-Brock 2002). However, in over 300 primate species, parenting behavior manifests itself in very different ways (Fairbanks 2000), in terms of social systems, parenting strategies, and systems of distributed caretaking (for an example, consider cotton-top tamarins; Blum 2002). Moreover, parenting behavior in the same species varies according to their living ecology (Boesch 2012). As Suomi (2008:177) commented: "One wonders how Bowlby's attachment theory would have looked if Hinde had been studying capuchin rather than rhesus monkeys!"

Context, therefore, matters. Women who are not situated in middle-class affluence cannot afford to spend substantial parts of their day exclusively attending to a baby. Child care is thus organized mainly as a co-occurring activity (Saraswathi and Pai 1997): Carrying a baby on the hips or the back allows freedom of movement and hand use, permitting women to engage in other activities while caring for a child. Carrying also involves other channels of communication, so that interactional regulations (e.g., behavioral contingencies) are primarily proximal (Chapin 2013a). However, since mothers cannot carry infants all the time, due to the necessary balance of energy investment and domestic activities, other people's motivation to carry infants is crucial: leaving an infant alone would pose too much of a risk (e.g., from predators). Reciprocity provides such a motivational source: Women take turns in caring for babies or trade caretaking for other provisioning, like food (Crittenden and Marlowe 2008). Unrelated caregivers may also be occasionally coerced by a mother when she needs support in child minding (Hrdy 2005b).

Alloparenting, in general, benefits the mother, the child, and the alloparents. For the mother, alloparenting enhances reproductive fitness and helps her maintain domestic and economic activities (Sear 2016); it also may enhance quality of life satisfaction and maternal well-being. Allomothering facilitates caregiving as it helps first-time mothers learn to be a parent. Weisner (2005)

argues that older children who are caregivers to younger children learn aspects of nurturance, dominance, and responsibility—skills that serve them well later in life.

Allomaternal care increases children's survival, growth, and lasting effects on health (Hawkes et al. 1997; Mace and Sear 2005). Multiple caregivers in larger households are able to attend to infant cries more quickly than single caregivers (Munroe and Munroe 1971). In general, alloparented children receive more physical, social, and emotional investment. The frequency of allomaternal child contact encourages the formation of strong and trusting relationships with others, and thus increases a child's sense of security (Meehan and Hawks 2013).

It is essential to understand that these practices are neither chaotic nor unpredictable. Multiple caregiving is a stable manifestation of cooperation as well as a fundamental social practice in many cultures. We make a clear separation between multiple caregiving as a normative practice and the social neglect of children in disadvantaged contexts (e.g., institutional care, war, extreme poverty, or any situation where care is constantly changing and disconnected), where children are likely to face ignorance, aggression, or abuse. Children who grow up under conditions of multiple care, as a normative practice, experience stable, shared, and sustained nurturing from several different adults and/or children because they are valued. When these practices are viewed from the perspective of dyadic exclusivity, multiple caregiving practices may appear disorderly, since children and mothers are rarely alone, and a child is passed from one person to another. Caregiving activities are performed by different people, and the infant may be frequently cared for by other children as well. We wish to stress that not all multiple caregiving settings are always child friendly: even within cooperative care, children may face difficulties as a result of individual, familial, social or collective factors. Context, again, is important.

Exactly how multiple caregiving impacts the attachment process is not well understood. Although there is plenty of ethnographic material to suggest that children in these societies are happy, playful, and curious within the prevailing range of within-group difference, limited research has been conducted on how early relationships develop in contexts of normative multiple care. Focused studies are needed on the attachment process in these settings. Importantly, methods must be derived to measure and confirm beneficial attachment behavior under different ecologies.

Examples from the Field

In general, in communities where alloparenting is encouraged, *children are actively encouraged to engage with others*. In fact, “sticking to” the mother is discouraged: others will quickly engage and playfully interact with the child, pretend to take the child away, or tease the child for “attaching” to the mother. To illustrate, consider the following example taken from a study conducted

among the urban poor in Noida, a city in the national capital region of Northern India (Chaudhary 2015). A child who was reluctant to detach from the mother received the following treatment: It was midday on a hot summer's afternoon; three women were seated on the floor of a small room that comprised the home of one of them. They were chatting and grooming their babies, while some toddlers played around them. Suddenly, one of the women turned to her companion and snatched up the companion's baby (around 10 months of age), allowing the baby in her arms to crawl away. She said aloud, playfully, that the baby was "sticking too much" to the mother. She briskly lifted up her shirt and made an attempt to breastfeed the child, laughing heartily and teasing the baby when she turned her face away, fussing. The exchange was followed by a chorus of teasing of the infant by all of the women, much to the distress of the baby.

Such playful actions by women, the exchanging of babies, and the teasing of young children who are viewed as too close to the biological mother all seem to indicate that the exclusive mother-child bonding is being discouraged in this cultural setting, putatively for the well-being of the mother and the baby, in case something goes wrong. Correspondingly, babies are encouraged, playfully, to engage in several social games of exchange and interaction with others, among family members as well as neighbors. Fictive kinship terms are always used for such relationships. In India, there is ample evidence of similar exchanges, which hark back to an enduring tradition of distributed care and multiple mothering practices, in other cultural settings. For example, in Tamil Nadu (Southern India), the sharing of children among women is an ancient custom, as evidenced in Tamil Sangam poetry from almost two millennia ago (Trawick 1990:155).

Multiple caregiving may involve varying arrangements between caretakers and responsibilities. The mother may play a special role among other caregivers, be equal to others, or may not be a special caretaker at all. Moreover, these arrangements can vary over time. An example of this can be seen in the cultures of the Aka and Efe hunter-gatherers. In an assessment made with four-month-old children, these infants were passed on to different people seven to eight times per hour and held by 7–14 different individuals during the eight-hour observation periods. Overall, Aka children showed attachment behaviors to about six people out of 20 who they encountered daily (Meehan and Hawks 2013). Scheidecker (2017) offers another example of the socialization experiences of village children in southern Madagascar. Here, mothers play a special role in an infant's life during the first two years but it disappears thereafter. From then onward, children are not exposed to adults but rather develop their psychology in the context of peer groups (Scheidecker 2017). The abrupt change of the caregiving environment has also been described by Du Bois (1944) for the Alorese community in Indonesia. In this case, the nurturing relationship between mother and child during the first year of life declines suddenly to complete inattention by the mother, even to the point of potential food deprivation—a condition that attachment theory would consider as a major

precursor of psychopathology (Cassidy 2008). The opposite may also occur. Hewlett (1991) describes a dramatic decline in allomothering over the first year of age for the Aka. By eight months of age, Aka infants receive substantially less care from others and relatively more care from the mother.

The primary attachment figure may not be the biological mother at all. In the Nigerian Hausa, mothers live together and share childcare responsibilities. Hausa infants seem to become attached to the person who interacted most with them, which in 8 of 14 observed cases was not the mother (Marvin et al. 1977).

From the moment of birth, infants are passed on to other caretakers in many cultural environments. In the Efe, the mother may not be the first to nurse an infant and others participate in nursing during early infancy (Tronick et al. 1987). Aka mothers are not the first to touch and hold an infant. An older female-in-law cleans the infant and takes it to the hut until the mother arrives, since Aka women give birth outside their camps (Hewlett 1991). Multiple attachment relationships may develop simultaneously that are similar in importance and significance (Morelli 2015). Multiple caregiving may thus be the dominant mode under certain conditions (e.g., when Aka hunter-gatherers are in a camp) whereas in others (e.g., during foraging activities such as net hunting), the mother may be the dominant caretaker (Hewlett 1991).

Alloparenting cultures utilize fictive kinship. Kin terms, including “mother,” may be awarded to different people and go beyond blood ties. The designation of “mother,” for example, can be accorded as a term of affection to an aunt, a grandmother, or any other female relative. It is also used as a term of respect to nonrelated elderly women, such as a senior researcher. This phenomenon has been recorded in several cultures, especially where the ideology of relationality prevails. For instance, in conversations with young children, Indian mothers most often use kin terms to refer to other people, even when they are not related to the child (Chaudhary 2004). In a particular example in Hindi (a northern Indian language), the kin term for a mother’s sister is “Masi,” or “like-mother.” Among many Hindu communities, the relationship between a man and his wife’s sister is a “joking relationship,” one that generates social tension, usually released by socially accepted forms of teasing (Radcliffe-Brown 1940). This can be explained by the fact that the relationship has potential, practical, and maternal implications for the offspring, such as in the case of a sororate marriage (i.e., marriage to a wife’s sister, usually upon her death).

Different caregivers may all perform the same responsibilities. With the exception of maternal breastfeeding, this phenomenon has been observed in the Nso farming community in Cameroon. *Alternatively, caregiver roles may be differentiated,* as has been observed by Scheidecker (2017) while observing the roles of mother and siblings in South Madagascan villages. Both would certainly impact the formation of internal working models. In contrast to the model of primary attachment to a single mother, which is subsequently conveyed to other social partners, these experiences may promote the simultaneous

formation of different styles of attachment and eventually conceptions of the self (Scheidecker, pers. comm.).

Let us continue by looking at the most common caregivers across cultures: grandparents (both paternal and maternal), siblings, and fathers. Although the influence and significance of day care is not denied, discussion is focused on home-based multiple caregiving.

Grandparents as Caregivers

Grandparenting is probably the most common mode of alloparenting. Grandparents may adopt divergent roles in infant care, sometimes substituting, sometimes supplementing the mother. Grandmaternal involvement is usually higher than grandpaternal involvement because the maternal grandmother is sure that it is her genetic offspring in which she is investing, whereas grandfathers can never be certain, due to paternity insecurity (Voland et al. 2005). Grandmothering is most plausibly an adaptation through which aging females achieve better fitness returns after they have produced and reared their own children (Hawkes et al. 1998). The extended lifespan beyond the reproductive years is assumed to allow older women to assist in the effective rearing of their grandchildren (Lancy 2015).

Although evolutionary considerations apply to all grandmothers, this does not imply that there are no contextual variations. The involvement of grandmothers is obviously bound to availability, which is closely related to life expectancy. Moreover, birth order of the grandchildren may play a role. Grandmaternal involvement is dependent on settlement patterns, family structure, family relationships, and cultural dimensions. In the Apiao (southern Chile), for instance, grandmothers raise the children of their daughters, while the daughters are expected to learn and collect experiences in faraway cities (Bacchiddu 2012). In many Chinese families the involvement of grandparents in caregiving is highly valued (Mjelde-Mossey 2007), especially with respect to child-feeding practices (Xie and Xia 2011). Due to labor migration, Chinese couples live and work for most of the year in big cities or abroad, while their children are raised in the grandparent's household (e.g., Xie and Xia 2011). Grandmothers also play a special role in the upbringing of Nso farmer children in northwestern Cameroon. Grandmothers are among the most preferred caretakers during a child's first three years, while the mother is not. Eight out of nine children who changed households at about two years of age, changed to their grandparental home (Lamm and Keller, in preparation). Direct involvement is also common in rural Turkish farming families, where grandmothers raise children alongside mothers. By contrast, grandmothers in Western middle-class families understand their role as being fun partners for their grandchildren to spend leisurely time with them. They do not consider themselves as educational authorities (Lamm and Teiser 2013).

Sibling Caregivers: Playful Partners and Powerful Protectors

Sibling or polymatric caregiving may contribute over 90% of the infant care that is not provided by the mother. Siblings offer care to infants that are older than two months of age. In Nigerian families, small children were observed to interact with other children 48% of the time, compared to 10–15% interaction with the mother, leading to strong and enduring attachment bonds between siblings (Weisner 1997). In a study on alloparenting in the Hadza hunter-gatherers in Tanzania, Crittenden and Marlowe (2008) found that children between 1,5 and 17,9 years of age³ spent up to 20% of their time holding related as well as unrelated kin, and that this was beneficial to both the caregivers as well as the babies.

In a study involving 58 families living in and around Delhi (Northern India) across social class and ecological settings, it was found that older children were expected to be caring and nurturing toward younger siblings and cousins (Chaudhary 2015). Based on long sessions of play among children in the absence of adults, several mutual benefits of these interactions were observed that look very different from adult-child interactions:

- Older siblings were caring, but not always so. Unlike adults, they would place demands on younger children, even with a bit of bossing, sometimes allowing other children to tease the younger one playfully when they were in a group.
- Younger children seemed to learn quickly that older siblings would be on their side, caring for their needs, but not always.
- Older siblings would also extract compliance in play from the younger siblings.

In one rural joint⁴ family, two sisters (5,2 and 3,1 years of age) were playing by themselves in a courtyard on a pile of gunny sacks filled with grain. The girls were always together, and the older one took care of the younger one's every need when the mother and other adults were not available. During one play sequence, the older child acted out a session at school: she ensured that the younger one would comply with her every demand to act, to run about creating the perfect scene, opening imaginary gates, sitting quietly like a student, answering questions when demanded. A gentle rap on the arm was also delivered to the younger sister when something was not in order. The sheer awe that the younger child displayed toward her older sibling was dramatic. Sometime

³ Notation refers to year, month: 1 year, 5 months.

⁴ A joint family constitutes multiple generations of kin members residing together: a couple, their married sons along with their families, and unmarried daughters would constitute a joint family. This should not be confused with an "extended" family, which refers to additional kin members who may reside with a couple and their children on a temporary or long-term basis (e.g., an unmarried aunt).

later, the younger sister spilt some buttermilk while opening the refrigerator, just out of view of the several women who were chatting in the courtyard, weaving baskets or caring for their babies. Both sisters were in the adjoining room with the spilt buttermilk; when the mother looked up and realized what had happened, she scolded and spanked the older daughter. Quietly, the older sister took the punishment, not even once declaring her noninvolvement in the accident. She took the rap for the act, protecting the younger one in a silent commitment. This pattern of complementarity could be evaluated as adaptive for both partners. The younger ones were assisted, and they also accessed a world about which even the adults may have little knowledge, the world of the street, school, or playmates. For this privilege they had to adapt to the demands of a sometimes dominating older sibling during play. The older siblings for their part were protective and nurturing toward younger ones, but not always; not when, for instance, it interfered with their activities with friends or their own desires during play. The older ones seemed to learn quite effectively how to take care of a younger child in the absence of an adult without abandoning their playful endeavors.

Sibling care has been found to be nuanced and ubiquitous, providing both partners with essential ingredients of social life and mature participation (Weisner 2014). The dismissal of these interactions as being only playful and not amounting to emotional attachments is an underestimation of the possible bonding that is likely to develop. Any theory or paradigm that attempts to represent infant relationships cannot ignore these relationships: they persist from childhood to adulthood and are found in almost all communities, in Western and non-Western families. To assume that the built-in mechanism of an infant searches only for one specific and major figure for security and protection grossly underestimates the fluidity and flexibility inherent in human relationships.

Fathers

Attachment theory has increasingly considered the role of fathers as attachment figures for infants (e.g., Bretherton 2010; Palm 2014). Yet, the father-infant attachment bond is assumed to serve purposes different to the mother-infant attachment relationship: play and excitement versus nurturance and consoling. Father-infant attachment is assumed to develop according to the same principles as the infant-mother relationship, based on the quality of dyadic social encounters in everyday interactions. An important assumption in attachment theory is that the fathering role is consistent across cultures (Sear 2016).

From an evolutionary perspective, women and men pursue different reproductive interests (Møller and Thornhill 1998). Genuine paternal investment has been found to be much lower than that of mothers (female gametes are big, rare, and valuable whereas paternal sperm cells are small and abundant). Also,

fathers cannot be certain that they are the biological genitors due to paternal insecurity. It is in the interest of women to select reproductive partners who demonstrate the readiness and competence to engage in enduring investments. Therefore, paternal child care is not only part of paternal investment but also of mating effort. Except for breastfeeding, fathers have the same evolutionary predispositions for infant care, including the formation of attachment relationships (for overviews, see Shwalb et al. 2013; Roopnarine 2015). Paternal involvement in child care, however, varies considerably across cultural environments, depending on a variety of contextual factors. For example, Gusii farmers in Kenya are almost never in close vicinity to their infants (LeVine et al. 1994). Fulani herder fathers in southwestern Africa keep an emotional distance from their own offspring; fathers are supposed to be the primary authority figures in the family, and emotional distance is the means used to build respect and obedience, maybe even anxiety in the children (LeVine et al. 1994; Lamm and Keller 2012). Beng fathers at the Ivory Coast and Kipsigis fathers in Kenya do not participate in infant care at all since they believe that the power of the paternal eye could harm the infant. Kipsigis also believe that the “dirtiness” of the baby could compromise the masculinity and reproductive capacity of the father. Kipsigis fathers as well as Cameroonian Nso farmers and many other sub-Saharan fathers view their role as supplying material goods. Caring for food, clothing, potential medical treatment, and school fees later in life are seen as the primary responsibilities of fathers. In addition to economic responsibility, the induction and maintenance of obedience and respect exacted by the paternal figure are viewed as core values in these hierarchically organized social systems (Lamm and Keller 2012).

By contrast, Western middle-class fathers are understood to be emotional partners of their infants, equal to mothers, and providers of cognitive stimulation and play experiences. Their participation in infant care has increased since the middle of the twentieth century, although much less than public discussions of the “new father” would suggest. In Germany, for instance, time budget studies reveal that the amount of time that fathers participate in the care of their children has increased an hour per week, with daily contact time averaging 83 minutes (Friedrich Ebert Stiftung 2009). At the same time, professional working hours per week increased by one hour after the birth of a child!

On a global scale, paternal investment is higher when there is low accumulation of material resources, absence of wars, low population density, monogamous family organization, and regular cooperation of men and women in domestic and economic activities. These characteristics are typical for hunter-gatherer communities, where paternal investment is generally higher than in herder groups or farming families (Hewlett 2004). A particularly impressive paternal investment has been demonstrated in the Aka Pygmies: babies spend 47% of their waking time with their fathers, who entertain affectionate relationships with their infants, even permitting them to suck on their fathers’

nipples (Hewlett 1991). The Aka hunter-gatherers practice complete, but not permanent, role reversal with women and men doing the same activities.

Household structure substantially influences paternal participation in child care. In extended families, less than 1% of children's interactional efforts are directed toward the father, whereas the father-child interaction increases in nuclear families (Whiting and Whiting 1975). Fathers participate more in child care when marital relationships are egalitarian and cooperative, and when the child is developing normally and healthily. They participate less when post-menopausal relatives are available in patrilocal households (Fouts 2005). In India, this trend has also been observed in urban, middle-class, educated, nuclear families when fathers are actively involved in all tasks of caregiving and no other family members reside in the household (Roopnarine et al. 1992).

Among Northern Indian families, men (fathers, grandfathers, uncles) usually play with children differently: they may take them in turns for piggy-back rides, encourage them in play, or walk around with babies in their arms while the women work (e.g., tending cattle or completing household chores). Although men are frequently seen carrying babies, especially during peak working hours in the household, their interaction decreases when a researcher enters a home. It seems that matters related to children are to be discussed solely with the women: some men might stand around and listen, but only a few engage with the researcher (Shwalb et al. 2013). This might explain why the participation of men in child care in general, and fathers in particular, is frequently underrepresented and underestimated (Chaudhary 2012).

Fathers are certainly important for the development of their children, even if they are not present in the daily family life, as a result of extensive and long hunting trips (Hill and Hurtado 1996). Their role as attachment figures varies considerably according to context. Understanding the role of the father in attachment theory is equal to that of the mother based on nuclear family life. Any attempt to represent infant relationships must incorporate the wide variety of roles that fathers can manifest in different cultural settings.

Cradles of Care: A 2 × 2 Paradigm

To analyze the diverse contexts of care that research has evinced, a paradigm is needed to account for the different possibilities in child-rearing conditions that may exist in any geographical place and for any age group. We propose the use of the “cradles of care” model (Figure 5.1). Best imagined as a dynamic system, the model can account for a single child moving through different care settings and does not prescribe definitive categorization. It can, however, indicate a dominant mode of care for a particular family setting.

The model emerged out of a 2010–2012 study of 58 families who live in and around Delhi, India (Chaudhary 2013, 2015, 2018). This study focused on child-rearing in diverse family settings that were illustrative of the different

	One child	Many children
One adult	One adult, one child	One adult, many children
Many adults	Many adults, one child	Many adults, many children

Figure 5.1 Cradles of care: a 2×2 model that can account for diverse child-rearing conditions in any culture and for any age group. All family settings that involve two or more adult caregivers and two or more children are termed “many.”

ecological contexts of the region: rural areas, a small town community, the urban middle class, and the urban poor. As the study progressed, it became evident that only a handful of the families matched the textbook version of a one-mother–one-child exclusive dyadic relationship. While examining the various settings, patterns in family relationships became apparent that were based on numbers of children and adults in the home who came into direct contact with the target child on a daily basis. Other research studies also report these same patterns (Trawick 1990; Seymour 1999). After thorough review of the video data, it became evident that the observed diversity of settings could not be fully accounted for by simply separating caregivers (single mother vs. multiple caregivers). Some settings were made up of many children with one adult, and the corresponding interactions appeared substantially different.

This model emerged to demonstrate four independent possibilities. Assessing the observed interactions according to this model provided an analysis framework for other dimensions of caregiving, such as attention and focus. It also showed that the care received by a child and the attention given by a caregiver did not always coincide. In the setting of multiple caregivers, for example, the attention received by the child proved different in quality and quantity from the setting of a single adult. Thus, dimensions of caregiving (e.g., attention, focus, contingency, trust) must be assessed according to the setting in which they occur. Using a one-mother–one-child format is only adequate and appropriate in one of four possible settings:

- *One child, one adult*: This setting matches the textbook template for the care of children: the child spends most time with a single adult caregiver, usually the mother, and forms an exclusive, close bond with this person. Urban educated middle-class families in the study had such an arrangement with their first child, although it should be noted that the child was exposed to many other adults, who always interacted with the child while in the home. This additional exposure deviates from the traditional experience of a Western home (see Figure 5.2).
- *One child, many adults*: This setting was observed in homes where other adult caregivers (e.g., a grandparent, aunt or uncle) lived with the child’s parents in an extended household. In this setting, firstborn children were cared for under the constant gaze of several adults who regularly interacted with the child, substituting and supplementing each



Figure 5.2 A mother holds her firstborn son at a temple, where she has gone to express her gratitude to the gods.

other's care (see Figure 5.3). In fact, the assignment of child-minding tasks to others, especially the elderly, is considered important, as it strategically includes older family members in child care and reinforces the family unit (Tuli and Chaudhary 2010). Many nuanced details of caregiving arrangements came to light once the cradles of care model was used to analyze the families (see Figure 5.3).

- *Many children, one adult:* The setting of a single adult caregiver with many children in a home was infrequent. It occurred, for example, when a mother had more than one child to care for and the father or mother were the only adults available to the family for most of the day (see Figure 5.4).
- *Many children, many adults:* The most commonly occurring setting among the families studied was one in which many adults cared for many children. In this dynamic caregiving environment, children experienced a variety of input from adult caregivers (may also include care by siblings), who assumed different tasks and shared responsibilities. In general, supervision was also less rigid, and caregiving was supplemental in nature: people just took over tasks if they were around, with



Figure 5.3 An infant enjoys care by many: mother, aunt, grandmother, and siblings.



Figure 5.4 Soaking in the warm winter sunshine, a father looks after the family's children.

very little (if any) specific assignment of responsibility. Much of the interaction with the child seemed to move seamlessly from one adult to another. Another feature of the many children context (both with one adult as well as with many adult caregivers) was the observed caregiver-like behavior among the children: older children often assumed responsibilities for their siblings and cousins. The greater the age difference among the children, the more alloparenting among siblings/cousins was observed, with adults actively encouraging grouping and mutuality in their interactions (see Figure 5.5).

After settings are delineated, it becomes possible to disentangle two different dimensions in the caregiving process: the attention that a child receives and the focus of the adult. These two features coincide in the one-child–one-adult setting, but they do not in other settings. For instance, when a mother in a one-child–one-adult setting exhibits co-occurring or concurrent care (e.g., did other things around the home while caring for the child), the child receives distributed attention from the adult because the adult is focusing on the child as well as on other things (Saraswathi and Pai 1997). Under the two settings where “many adults” are involved, a child could receive concentrated attention from another adult (e.g., a grandmother) during the time in which the primary caregiver focuses on other activities.



Figure 5.5 Yours, mine, ours, and a few others: A group of mothers and children at a village health camp.

	One child	Many children	Total
One adult	7	7	14
Many adults	10	20	30
Total	17	27	44

Figure 5.6 Distribution of caregivers and children in families, based on the cradle of care model for contexts of care.

A follow-up study (Chaudhary 2015) tracked the distribution of caregivers and children (Figure 5.6). Results show that it is far more commonplace for “many” adults to care for children (30 cases) than for a single adult to do so (14 cases). A similar pattern was found in the number of children per family: homes with more than one child (27) were more frequently encountered than homes with single children (17). These results further highlight the serious inadequacy of using the one-child–one-adult template as normative and universal. It also questions a simple dichotomy of single versus multiple caregiving, since the setting with one adult and many children was distinguishable from the setting of many adults and one child or many adults and many children.

Attachment Relationships in Different Child-Rearing Settings

Attachment has been defined by Bowlby and his followers as the emotional bond between an infant and caregiver, a psychological construct expressed in mentalistic terms of cognitions and emotions. This definition is rooted in the conception of the self as a separate individual and a mental agent who “owns” cognitions and emotions that are distinct from those of others. This conception of self has been found to characterize Western middle-class individuals (for a discussion, see Keller and Kärtner 2013).

Mind-mindedness, defined as a measure of the caregiver’s proclivity to treat the young child as an individual with a mind, has become a major dimension of parenting quality. It is considered to be more closely related to attachment security than sensitivity and has become more of an umbrella term. In interactions with babies, Western caregivers are expected to verbalize the infant’s inner world of intentions, cognitions, emotions, and preferences. “Mind-mindedness focuses on the caregiver’s willingness or ability to read the child’s behaviour with reference to the likely internal states that might be governing it” (Meins and Fernyhough 2006:2).

However, there are other conceptions of self, mind, and relationships. For example, the “opacity doctrine” offers a different perspective since it defines the human psyche as a “private place” (Duranti 2008:485), which includes an indifference toward others’ mental states (see also Mead 1934; Ochs 1988). Also, Everett’s principle of the immediacy of experiences represents a different conception of the mind. The Pirahã Indians in the southwestern

area of the Brazilian State of Amazonas value talk of concrete immediate experiences instead of abstract, unwitnessed, non-immediate topics (Everett 2009, 2014).

Mind-mindedness is a recent phenomenon in the Western world. It is related to the concept of “inward turn,” which is seen as a consequence of the decline of fixed traditions and the loss of power of societal institutions. Thus, as a consequence of the “disembedding” of society’s ways of life, identities can no longer be defined to the same extent by social group membership (Taylor 1989).

What is defined as an attachment relationship in a particular cultural environment needs to be based on the prevalent conceptions of self and mind. If we take the development of security and trust as the essence of forming attachment relationships, it certainly makes a difference whether these developmental processes are co-constructed in an exclusive dyadic relationship or embodied in a relational network. We would also need to qualify how the network operates. The development of trust to a larger social network extends the range of trusting relationships and thus promotes security as a contextual/environmental dimension and not a personality characteristic or an interactive process between two individuals. The construct of attachment then moves from within the individual child and into the relationships. It is the social network that invokes a secure foundation and not only a person, the mother, which is an instance of a specific context. Attention in those caregiving networks is wide-angled and abiding with the diffusion of a single focus, but it does not imply disorganization and neglect. Perhaps in socially dense settings, a singular focus would be maladaptive, for contingencies (mother absence, work outside the home) as well as inclusion (active participation of older family members in the next generation). Such multiplicity is likely to have consequences for the developing relationships. The wide attention distribution on the part of the caregivers is mirrored in infants’ learning of being attentively monitored so that they do not need to seek for attention actively and explicitly (Gaskins 2013). At the same time there is the production of the diffusion of affect, so that the psychological balance and well-being is not concentrated and dependent on one single person (Gaskins 2015). This condition may imply more stability and equilibrium than fragile emotional bonds that need permanently to be negotiated (Keller 2013c). This view definitely departs from attachment theory’s implicit understanding that diffusion of affect may compromise the one important relationship (Bowlby 1973). Almost the reverse of this ideology is apparent in folk wisdom regarding the care of young children in Indian homes. More specifically, a child who is capable of getting along with, and seeking out, several adults is regularly applauded and rewarded by others as well as by the mother. A mother who reserves exclusive rights over her baby is also likely to receive much criticism (Chaudhary 2004).

Obviously the socialization agenda with multiple caregivers emphasizes a different model of personhood and paints a picture of a child and childhood

that is different to the exclusive dyadic caregiver (mother)-child relationship. With multiple caregivers, individual uniqueness and self-enhancement are not fostered but rather harmony and proper demeanor to fit in with the social surround. Children are believed to belong to the wider social network, and anyone can approach them to engage with them, even if it is a fleeting interaction.

During their field work on the subject of public health, Nichter and Nichter (2010) were traveling through Southern India with their young child, Simeon, collecting data. Apart from the research on pregnancy and child-birth, the Nichters kept extensive notes about the way in which their baby was received by the local community. They provide a rich account of the constant presence, social games, and active interaction that people had with Simeon (Nichter and Nichter 2010:75):

Adults subjected Simeon to constant teasing, offering him something to play with and then, moments later, asking for it back, citing a kinship term: "I'm your mothers' brother, mava, can't I have it now?....We came to understand that teasing a child and then observing the response was a way villagers could evaluate a child's character and personality.

In such situations, the concept of the self that is promoted centers on hierarchical relatedness: the positioning of the self in the family hierarchy with corresponding obligations and responsibilities. Here, conversations do not revolve around the child's wishes and intentions but on clear instructions, moral obligations, and social roles and responsibilities. It is not mental-state talk addressing the future and the past, but the behavior in the here and now (for an example from the Amazonian Pirahã Indians, see Everett 2009). Toys or play objects are not in evidence; instead, real-world utensils, including sharp knives or machetes, can be found in children's hands (Lancy 2016). Nevertheless, autonomy and individual agency is highly valued: not in terms of the mental way of being, but rather of independent functioning (i.e., early motor independence) and action competence. Self-perception is thus mediated through social relationships.

When clearly differentiated roles are linked with multiple relationships during the early years of development, such that each of these relationships serves distinct functions, it is possible that a child develops simultaneous modes of multiple attachments. When a child's care is systematically broken up into multiple, differentiated forms and aspects of care, such an outcome is easy to imagine. Perhaps the consequences of multiple relationships seamlessly performing the same roles (e.g., grandmother, mother, aunt) would be different. Further research is thus necessary to investigate such nuanced investigations.

Future Directions in Researching Attachment Relationships

Researchers have recognized for a while the need to utilize a relational approach in the study of attachment relationships. For example, van IJzendoorn

and Sagi-Schwartz (2008) stressed the need to expand the study of attachment to include multiple relationships as well as to incorporate conceptions and assessments of the child's and caretaker's modes of relationships. They also acknowledged contextual variations found in their review of non-Western attachment studies. Similarly, Heinicke (1995:307) stated "that the study of attachment needs to be expanded...to include multiple relationships." These positions align with our fundamental position: attachment research needs to move radically away from a dyadic perspective toward a network approach.

Still, many researchers appear reluctant to relinquish a commitment to attachment theory, even after its deficits have long been recognized. This may reflect, in part, a fundamental lack of understanding regarding the role that culture plays in children's development, including attachment relationships. It may also reflect the fact that cultural/cross-cultural attachment studies lack a clear conception of culture, which is often equated with country or ethnic groups, without specifying the contextual differences that exist within and between these groups. Contextual conditions provide frameworks for the development of norms, values, and beliefs as well as behavioral conventions; that is, culture (Keller 2015). Therefore, context and culture are fundamentally interconnected. Thus, assessing middle-class families in different countries cannot represent a test of cultural differences or universality (e.g., Posada et al. 1995). Mesman et al. (2015) have assessed important sociodemographic information; however, they do not use it systematically to define cultural groups. They include samples with multiple caregiving arrangements but assess only conceptions of maternal sensitivity from mothers using the Q-sort method. This standardized instrument, if valid at all, can only produce a partial picture, at best. Other dimensions of sensitivity may well exist that are not listed in the Q-sort cards.

Universality and cultural specificity are profoundly intertwined. What universal predispositions exist to acquire contextual information to solve equally universal developmental tasks? The development of attachment relationships is certainly a universal developmental task (Keller 2013c, 2015). No child would survive infancy without a caring environment and the development of trust in others as well as itself. This is important for the development of competence in all environments. Therefore, the core assumptions of attachment theory can certainly claim universality:

1. **Universality:** When given an opportunity, all infants will become attached to one or more specific caregivers. However, the definition of attachment and the definition of caregiver need to be culturally defined.
2. **Normativity:** The majority of infants are securely attached, yet the definition of security varies across cultural contexts (see Chapter 8, this volume).

3. Sensitivity: Attachment security is dependent on child-rearing antecedents, particularly sensitive and prompt responses to infants' attachment signals. However, responses can come from distributed sources, and with varying content.
4. Child-rearing patterns vary tremendously across cultures with respect to structure and content. Sensitivity may mean completely different things in different environments and highly valued practices in one cultural context may be regarded as abusive or pathological in another culture.
5. Competency: Secure attachment leads to positive child outcomes in a variety of developmental domains. Yes, but what constitutes a "positive child outcome" is largely culture specific. Moreover, the same developmental achievement may be predicted by different precursors in different cultures.

Culture is all about meaning. Assessing cultural meaning systems for each of these core assumptions is of utmost importance, before claims of universality or cultural specificity can be studied. Field work and multi-method approaches are crucial. To apply the same method with the same coding and analysis systems in different cultural environments with different shared beliefs and practices distorts different realities.

Thus far, attachment researchers seem to take universality and cultural specificity for two distinct dimensions, which are geared to confirm and reconfirm universality. However, universality is not interpreted in terms of predispositions but as fixed phenotypes. This practice contradicts evolutionary as well as cultural and cross-cultural theories.

In the face of such strong evidence of diversity and plurality in care arrangements, better designs for culturally informed research on attachment processes need to be developed. For this to happen, we first need to broaden our conceptual and theoretical framework: we need designs that are able to capture what is critical for security and trust in young children under diverse situations. It will be necessary to use integrated mixed methods (Hay 2015; Chapters 8 and 13, this volume) that can incorporate and isolate context. Further, we also need to identify outcome measures that reflect the adaptive contexts in which children are developing. One place to start would be with the suite of methods necessary to truly understand attachment and trust within the family and ecocultural context. Such tools include ethnography, naturalistic observation, qualitative interviews, locally developed scales to assess constructs such as "trust," "security," "sensitivity" of care, "emotionally appropriate" child behaviors at different ages, and so forth.

By including culture, family context, beliefs, and experiences of parents and others in the designs and methods of attachment studies, better science will result. This does not require those in the attachment field now to change their core assumptions and identities (whether or not they should consider doing so). It simply asks them to do better science.

Conclusion

To understand any developmental process, it is important to adopt a culturally informed perspective that accounts for the history and diversity of humankind. As researchers, our cultural affiliations predispose us to advance our own “normative framework” as a standard by which to evaluate differences (Harwood et al. 1995). This is similar to thinking locally yet acting globally (Gergen et al. 1996). As Cole (1996) wrote about cultural experiences: like fish in water that fail to perceive their surroundings, attachment theorists have failed to notice the cultural specificity of the single-child–single-adult template, even when multiple caregiving has been recognized.

Researchers can no longer ignore the resounding evidence of diversity in the care of children. Evidence that clearly shows sharply divergent cultural settings in the care of children must be incorporated into the academic mainstream. Any theoretical proposal about children’s development must be culturally informed. Such a framework needs to provide for the study of any dimension of children’s care throughout history, across cultures, and species. The cradle of care model proposed in this chapter offers one possible framework: it is inclusive and thorough, allowing for different care settings (i.e., from a single child with a single mother to many adults with many children). In addition, results from multiple methods (e.g., ethnography, interviews, observations, and assessments) need to be consolidated as this will enable a more detailed examination of early attachment relationships in different settings. Utilizing an expanded historical and cultural perspective, it can be argued that attachment theory, as it is understood to this day, represents a folk theory from an anthropological perspective (Bretherton 1991), or a model of virtue with strong normative assumptions and implications (LeVine and Norman 2001).

Evaluating one culture based on the normative framework of another is not only invalid, it is unethical. The implications of this are far reaching. For instance, in a recent study, Gernhardt et al. (2016) evaluated children’s drawings of their family with attachment-based coding systems deemed to be valid in different cultures and found that the majority of middle-class children in Berlin, Germany, would be classified as securely attached, whereas the majority of West Cameroonian farmer children would be classified as insecurely attached. Because attachment theory is widely applied in clinical and educational work—in particular for children and families who come from cultural backgrounds other than the Western middle class—the use of inappropriate frameworks can result in discrimination and exclusion, instead of the intended facilitation and integration.

Psychology’s original sin is to look for a single idealized developmental trajectory (Levinson and Gray 2012). Although the original reference was made to cognition, it applies to all psychological domains.

Is the mother essential for attachment?

Our position is that the mother fulfills a biological necessity, but that “mothering” (or caring for a child) is an attitude and activity that is not necessarily bound to biological function. Other nonbiological roles can be and are fulfilled by others: mothering can be distributed, supplemented, and substituted by one or several other individuals. This understanding necessitates a major revision of attachment theory and requires better science.

Acknowledgments

We would like to thank Gilda Morelli and Tom Weisner for their extensive and most helpful reviews. We greatly appreciate the comments from Robert LeVine, Akemi Tomoda, Abraham Sagi-Schwartz, Kim Bard, Elfriede Kalcher-Sommersguter, David Butler, Alma Gottlieb, and Gabriel Scheidecker. Thanks are also due to several participants of this Forum, who helped us refine our arguments and develop this chapter.