
Hunter-Gatherer Childhoods in the Congo Basin

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Introduction

Children represent about 40 percent of Congo Basin hunter-gatherer communities, but the vast majority of studies are conducted with adults. Only 13 percent of the 345 entries in a bibliography on Congo Basin hunter-gatherers (Hewlett and Fancher 2010) concentrate on children. Bird-David (2005) and Hirschfeld (2002) reflect on some of the reasons why children are so invisible in hunter-gatherer and anthropological studies. They describe how the status and conceptions of children in the West as well the fact that researchers seldom have children of their own when they conduct their PhD research contribute to the limited research with children. Studies of Congo Basin forager children are important for a variety of reasons. How can one characterize a forager culture without talking with or attempting to understand how almost half of the population thinks and feels about particular issues? How do individuals acquire the egalitarianism, autonomy, and extensive giving described in other chapters in this book? At what age do individuals learn particular forest skills and knowledge, from whom do individuals learn, and how do they learn (e.g., observation, imitation, teaching, stories) the skills and knowledge essential to survive in the rainforest? What special skills and knowledge do children have that are essential to dealing with other children (i.e., children's culture)? These and other questions are addressed in this chapter.

The chapter is divided into three parts. The first part describes general features of Congo Basin forager childhood that are relatively distinct from their farming neighbors. The second part examines cultural diversity in childcare patterns, both between and within forager ethnic groups. The final part identifies and discusses the anthropological, developmental psychology and evolutionary biology theories that researchers used to guide their studies with Congo Basin hunter-gatherer children.

Studies in the Overview

The chapter reviews 77 studies of forager children; 46 from the Hewlett and Fancher bibliography mentioned above and 31 more recent child-focused publications. All of the child-focused research has been conducted with four ethnic groups—the Aka, Baka, Mbuti and Efe—so the discussion of intercultural and intracultural variability is limited to these groups. The Aka, Bofi, and Mbendjele of the Central African Republic (CAR) and Republic of Congo (ROC) are considered together. The Bofi foragers were Aka net hunters until about fifty years ago when they started to associate with Bofi farmers and over time adopted the Bofi language and began to view themselves as different from Aka foragers (e.g., have fewer forest spirit powers), although they seldom farm and continue to net hunt. The Mbendjele speak a dialect of the same C10 Bantu language as the Aka, regularly interact with Aka, and both groups refer to themselves BaYaka or BiAka.

Table 9.1 lists the first authors of the child-focused publications on Congo Basin forager children within particular ages. Several biases and limitations exist in the Congo Basin hunter-gatherer childhood literature. The vast majority of studies have been conducted with infants and young children (59 percent of all studies); relatively few studies exist on middle-aged children (12 percent) and adolescents (16 percent). The remaining studies (14 percent) included children from several age groups. The Efe do not have any studies on children over age three, and the Mbuti lack any child-focused studies until adolescence.

The published sample is also biased toward studies with the Aka/Bofi/Mbendjele (66 percent of studies); relatively few child-focused studies have been conducted with Baka (14 percent), Mbuti (4 percent), and Efe (16 percent). The ethnic group bias is due, in part, to the fact that Hewlett has conducted research with Aka infants for over forty years, has trained several graduate students to work with Aka/Bofi, and they in turn have published articles on the same ethnic group. Few studies exist with Mbuti and Efe because of political instability and the termination of field research in the Democratic Republic of Congo (DRC) since the mid-1980s. Japanese researchers started child-focused research with Baka children about ten years ago.

Most of the Congo Basin foragers in this review were relatively “traditional” (i.e., high mobility, temporary shelters, regular foraging, and limited use of guns) at the time the research was conducted. The Efe and Mbuti were the most mobile and traditional, in part, because data were collected in the 1950s (Mbuti studies) or 1980s (Efe studies). Aka experienced intermediate levels of acculturation, depending on the year of study and location, while the Baka encountered the greatest number of acculturation forces because of government sedentarization programs and formal schooling.

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Table 9.1. First authors of published works on child-centered research on Congo Basin hunter-gatherers.

Ethnic Group	Infancy (0–1 year)	Early Childhood (2–5 years)	Middle Childhood (6–12 years)	Adolescence (13–18 years)
<i>Aka/Bofi/Mbendjele</i>	B. S. Hewlett, Meehan	Fouts	Berry, Boyette, Neuwelt-Trunzler, van de Koppel	B. L. Hewlett, Lewis, Takeuchi
<i>Baka</i>	Hirasawa	Avis	Kamei, Sonoda	Hagino, Hayashi
<i>Efe</i>	Ivey Henry, Tronick, Winn,	Morelli		
<i>Mbuti</i>				Turnbull

Note: See references cited for a list of the authors' publications.

Common and Distinctive Features of Forager Childhood

This section of the chapter describes features of Congo Basin hunter-gatherer childhoods that are (1) common to ethnic groups with data at various ages and (2) relatively distinct from childhood in neighboring farmer groups. Although pronounced limitations and gaps exist in the literature, some consistent and distinct patterns have emerged from child-focused studies with Congo Basin foragers. Some of the features reflect common physical and social settings of hunter-gather life (e.g., camps with 10–35 individuals) or similar cultural values, such as respecting the autonomy of others. Brad Schore (1998) calls these core values foundational schema—ways of thinking and feeling that pervade and cut across many domains of social-emotional life. It is important to briefly describe some of the foundational schema of both the forest foragers and their farming neighbors because they profoundly influence features of childhood in both groups.

The four forager groups share foundational schema that are associated with hunters and gatherers in many parts of the world—egalitarianism, autonomy and giving/sharing (Lee and Daly 1979). Lewis (chapter 8) explains how forest-forager egalitarianism is transmitted and maintained, but in general it is a way of thinking where individuals respect each other's strengths and weaknesses and it is not appropriate to draw attention to oneself or judge someone as better or worse than another. Men and women, young and old, are viewed as relatively equal and have similar access to resources.

Respect for an individual's autonomy is also a foundational schema among foragers. One does not coerce others, including children. Men and women, young and old, are generally free to do what they want. If an infant wants to play with a machete, she is allowed to do so. Finally, a giving or sharing way of thinking also pervades Congo Basin forager life. Individuals often share 50–80

percent of foraged foods with others. They share their food with most everyone in camp and do this on a daily basis. This foundational schema also applies to childcare and information. Individuals regularly provide allomaternal care and share forest information and knowledge with anyone who is interested.

Congo Basin farmers have foundational schema that are relatively distinct from those of the foragers: gender and age hierarchy, communalism, and material/economic dimensions to social relations (Turnbull 1965; Vansina 1990). Village women are expected to defer to the requests of men, and the young should be respectful of elders, whether they are older siblings or parents. Communalism refers to the cultural value placed on putting the needs of the group, generally clan members or the extended family, over the needs of an individual and the importance of relying upon and expecting support from these specific others. The third foundational schema refers to the thoughts and feelings that interpersonal relations have economic or material components. Material and economic dimensions of relationships are embedded within the social and emotional aspects of relationships.

The common and relatively distinct (i.e., statistically distinguishable from farmers) features of forager childhood described below are often based on systematic observational studies, with both forest forager and farmer children living in association with each other. For instance, studies with the following Congo Basin forager and farmer ethnic groups were conducted simultaneously: Efe foragers and Lese farmers, Bofi foragers and Bofi farmers, Aka foragers and Ngandu farmers, and Baka foragers and Bombong farmers. The forager and farmer communities often have similar fertility and mortality rates and are exposed to similar infectious and parasitic diseases.

The first five features occur across all ages—from infancy through adolescence—the sixth and seventh features are specific to infancy and early childhood, the eighth is specific to middle childhood, and the final feature is specific to adolescence.

Physical and Emotional Intimacy throughout Childhood

Physical and emotional proximity are particularly important to forest hunter-gatherers. Forager camps are generally very dense, often occupying a space the size of a large dining and living room in the United States or the space of one or two farmer houses. When hunter-gatherers sit down in the camp, they are usually touching someone. In terms of holding during infancy and early childhood, figure 9.1 shows that Aka three- and four-month-old infants were held 91 percent of the day and farmer infants were held substantially less frequently at 54 percent of the day (Hewlett et al. 2000). Bofi forager two-, three-, and four-year-olds were held 44 percent, 27 percent, and 8 percent of daylight hours, while farmer children of the same age were held only 18 percent, 2 percent and 0 percent of the day (Fouts et al. 2005). Longer breastfeeding among the Bofi foragers was not the sole factor that

influenced holding in young childhood; fully weaned Bofi foragers were held 30 percent of daylight hours, which is ten times more than fully weaned young Bofi farmer children and more than Bofi farming children were held even while still breastfeeding (Fouts et al. 2005). During middle childhood, Boyette (2012) found that Aka forager children were significantly more likely than Ngandu farmer children to be in physical contact with (1) others, (2) more individuals, (3) a greater age range of individuals, and (4) children of the opposite sex.

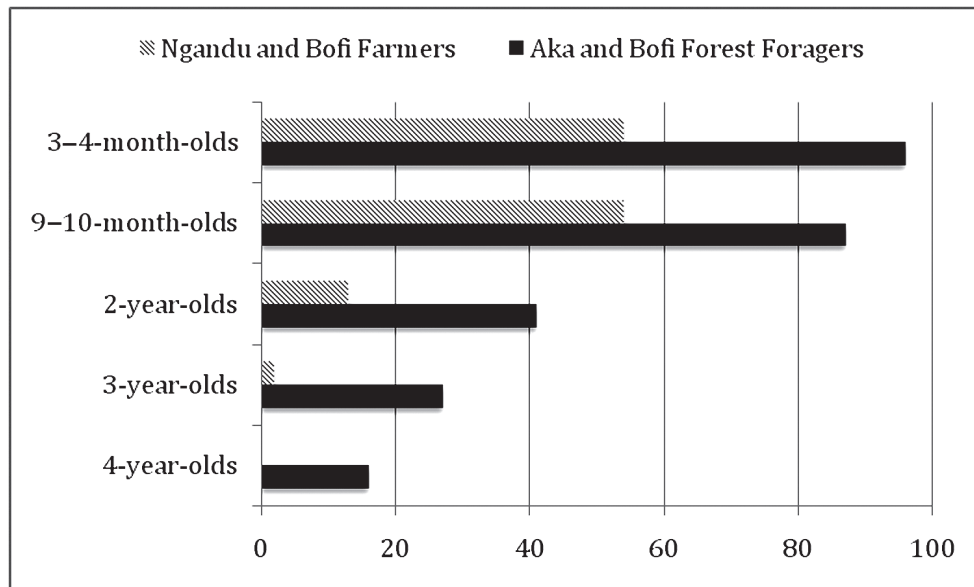


Figure 9.1. Percentage of time forager and farmer infants and young children are held.

Among the Efe, infants are constantly held (Tronick et al. 1987; Ivey 2000), but holding and touching decreases in early childhood, in part, because weaning occurs earlier among the Efe than it does among the Aka or Bofi (18–24 months for Efe versus 3–4 years of age for Aka and Bofi) foragers (Morelli 1987; Morelli and Tronick 1992). Among the more sedentary Baka, young infants are held 85 percent of the day, which was significantly more time than neighboring Bombong farmers held their young infants (Hirasawa 2005).

The proximal relations continue into the night. Aka forager children are less likely than Ngandu farmer children to sleep alone at night, especially in adolescence, and Aka beds are much smaller and have more people per bed than do neighboring farmers (Hewlett and Roulette, in press).

The importance of physical as well as emotional proximity to others is illustrated in two studies. In a study of conflicts between toddlers and older juveniles among Bofi hunter-gatherers and farmers, Fouts and Lamb (2009)

found that Bofi forager toddlers were substantially more likely to have conflicts over staying close to juveniles (38 percent of conflicts among forager toddlers versus 2 percent of conflicts among farmer toddlers), while Bofi farmer toddlers were more likely to have conflicts with juveniles over competition for objects (48 percent of farmer toddler conflicts versus 14 percent of forager toddler conflicts) or over the juvenile hitting the toddler, which never occurred among the Bofi hunter-gatherer toddlers. This study illustrates early acquisition and manifestation of foundational schema—emotional proximity to others among the forest hunter-gatherers and the economic-material dimensions of social relations among the farmers.

In another study, Aka forager and Ngandu farmer adolescents were asked about their experiences and feelings about the death and loss of friends and relatives (B. L. Hewlett 2005). Forager expressions of grief emphasized their love and emotional connections to the person, while farmer adolescents' expressions of grief focused on the material objects the child received upon the death of a relative.

Autonomy throughout Childhood

Congo Basin hunter-gatherer children are granted autonomy in their daily lives, while farmer children are subject to the control of parents and older children. For instance, Hewlett found that Aka forager three- and four-month-old infants took the breast on their own to nurse during 58 percent of feeding bouts by comparison to only 2 percent of feeding bouts among farmers. Ngandu farmer mothers decided when to nurse, not the infant. At weaning, Bofi forager mothers said the child decided when she or he wanted to wean, while Bofi farmer mothers said they decided when to wean the child. The forager mothers said that if they initiated the weaning it would cause the child to get sick, whereas the farmers said nursing too long causes the child to become lazy (Fouts et al. 2001). In a study of cosleeping among the Aka foragers and Ngandu farmers (Hewlett and Roulette, in press), forager parents indicated their children slept wherever they wanted, whereas farmer parents said they told their children where to sleep.

Mixed-age Groups throughout Childhood

Adult-child groups. Time with parents and other adults, generally grandparents, gradually declines with age in most cultures, but by comparison to farmers, foragers spend considerably less time in child-only groups. Figure 9.2 summarizes Fouts's data on who is proximal (i.e., within arm's reach) to young Bofi forager and farmer children; forager children were much more likely to be proximal to more categories of people and parents and other adults than were farmers. By ages four to five, Bofi foragers are still proximal to parents and adults 33 percent of the time, while farmer children are proximal to them only 6 percent of the day. Bofi farmer children at this

age spent 59 percent of their day in child-only groups, while Bofi hunter-gatherer children spent only 18 percent of their day in proximity to child-only groups. Boyette (2013) found that four- to sixteen-year-old Aka forager children spent considerable time in mixed-aged child groups, but they were still within visual range of an adult 64 percent of the day and within six meters of parents or other adults 45 percent of the day.

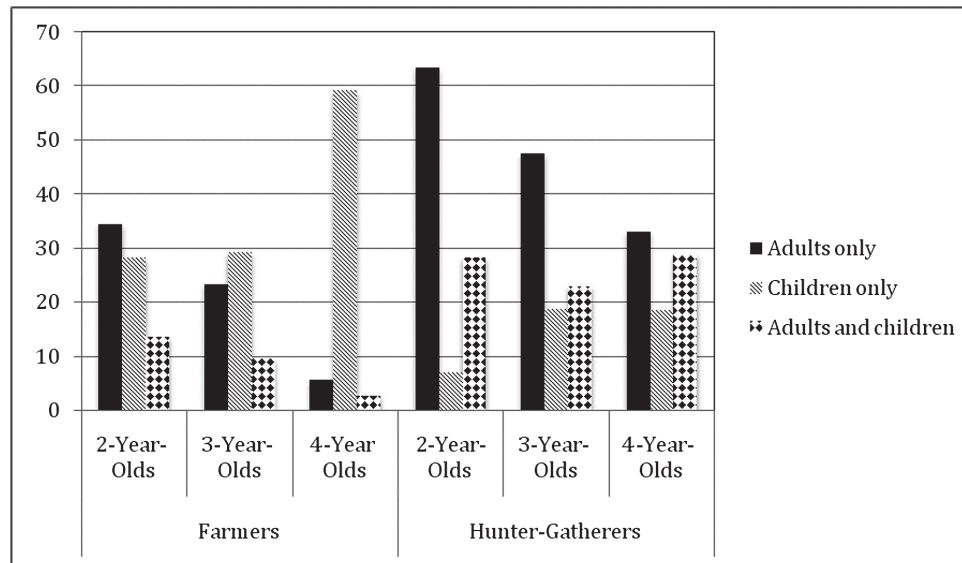


Figure 9.2. Percentage of time Bofi hunter-gatherer and young Bofi farmer children are in proximity of adults and other children.

Source: Data from Fouts, modified from Hewlett et al. 2011.

An early behavioral study of Aka children by Neuwelt-Trunzler (1981) found a similar pattern: middle-childhood Aka spent 40 percent of their day in mixed adult-child proximity groups (defined as the three closest individuals to child) and 30 percent of their day in child-only proximity groups while in a camp setting. Outside of the camp, these children spent 70 percent of their time with an adult social or work group and 30 percent of their time with a child-only social or work group. This is also consistent with Boyette's (2013) recent finding that children are more likely to spend time with adults in the forest and less likely to spend time with younger children in camp. Neuwelt-Trunzler (1981) found that this pattern continued into Aka adolescence.

The pattern of greater time near adults continues beyond daylight hours. The cosleeping study (Hewlett and Roulette, in press) found that Aka forager children and adolescents were more than three times more likely than Ngandu farmer children of similar age to sleep with parents or other adults.

Mixed-age child groups. Turnbull (1965a) described multiage play groups of Mbuti children long ago, and several studies since that time have confirmed this pattern among the Aka (Neuwelt-Trunzer 1981; Boyette 2013), Efe (Morelli 1987; Rogoff et al. 2010), and Baka (Kamei 2005). Adults are still relatively close-by, generally within visual or hearing distance. Boyette indicates that substantial social learning occurs in these mixed-age play groups, and Kamei shows how the different activities of children in mixed-age groups pertain to dealing and interacting with other children (i.e., child culture).

These patterns are generally different from those among farmer children, who are more likely to play in similar-aged groups. The differences are often a matter of demography; forager camps have about twenty-five individuals, half of which are children, which limits the opportunities for similar-aged children to interact. Likewise, farmer communities are larger, often having a population size in the hundreds, which increases opportunities to interact with peers. Farmer children often go to school, which amplifies age segregation even further.

Play throughout Childhood

Play is highly valued and occurs at all ages. The frequency declines from middle childhood to adolescence (Boyette 2013), but it is a regular feature of both child and adult life among Congo Basin hunter-gatherers. Several researchers have reported that hunter-gatherer children spend most of the day playing and are not expected to contribute much to subsistence or maintenance (Konner 2005, 2010; Kamei 2005). By comparison, children in farming communities are more likely to be given responsibilities for childcare and other tasks (Barry et al. 1959). Boyette found that forager four- to sixteen-year-old children spent a considerable amount of time playing (26 percent of the day) and lying around (resting 28 percent of day). Aka forager play is relatively equally divided between solitary play, social play, and imitation of work in play (Boyette 2013). Kamei's (2005) study of types of play among seven- to fifteen-year-old Baka hunter-gatherers identified eighty-five different types of games, the majority (61 percent) dealing with hunting and gathering, camp life (cooking and childcare), and singing and dancing. All of this play takes place in multiage child groups, and most of the play involves learning about making a living as a hunter and gatherer as well as learning about the modern world (e.g., making wooden trucks, playing soccer).

Quantitative studies of Aka (Hewlett et al. 1998), Bofi (Fouts 2009), and Efe (Morelli 1987) infants and young children demonstrate that play occurs early and regularly in Congo Basin forager life. Quantitative and qualitative studies of play in middle childhood and adolescence among the Mbuti (Turnbull 1965a), Mbendjele (Lewis 2002), and Aka (Boyette 2013; B. L. Hewlett 2013) provide rich descriptions of how social play contributes to learning subsistence skills, cooperation, sharing, and nonviolence. Research on children's play in

all three forager groups shows that children often have an area next to or just outside camp (e.g., a place where they make a swing) where the multiage play group imitates adult dances, subsistence activities, and spirit-ritual activities. Boyette (ibid) indicates that social play is particularly important for learning foundational schema, such as sharing and cooperation.

Learning Environments throughout Childhood That Are Conducive to Early and Rapid Acquisition of Knowledge and Skills

Studies have shown that forest foragers learn how to share, take care of infants, and hunt and gather by age ten (Hewlett and Cavalli Sforza 1986). Features of the forager learning environment that enhance early and rapid learning include security and trust in others, tolerant instructors (i.e., adults do not push children away if they want to learn something), freedom to explore the natural and social environment, highly self-motivated learners, learning through highly valued play content, easy access to material artifacts and multiple skilled models, collaborative learning in multiage child groups from infancy through childhood, and plenty of time to practice and innovate.

Children in farming communities also have rich learning environments, but they are different from those of foragers in several ways. First, farming parents or anyone older than a child regularly gives commands to children, and children are expected to listen and obey parents, older siblings, and elders. Parents and older children have higher social status, and they frequently direct learning. The status differences contribute to less autonomy, less freedom to explore, and lower tolerance of potential instructors (parents and older children). The social-emotional environment of farming children is less sensitive and secure than that of foragers. As described below, children in farming communities are held and touched less frequently than forager children, and fussing and crying are responded to less rapidly or ignored by farming caregivers. Farmers often live in larger villages, but homes are farther apart from each other than they are in forager camps, which means access to others with knowledge and skills may more difficult and costly. While knowledgeable others may not be close-by, children in farming communities have access to a larger number of individuals.

Giving and Responsiveness in Infancy and Early Childhood

Studies that have compared Congo Basin forager and farmer infant and early childhood consistently indicate that the foragers are more giving and responsive to their infants and young children than their neighboring farmers. The Western child development literature sometimes refers to this high responsiveness as “indulgence,” which tends to imply that parents are “child-centered” and indulge (and potentially spoil) the child in whatever he or she wants. Congo Basin forager childcare is not child-focused, and parents are not trying to spoil the child. The term “giving” is used instead of “indulgence”

because childcare is similar to giving and sharing food. Caregivers give to infants or young children who need or request care just as they would give and share food with others.

One measure of giving and responsiveness is frequency and nature of breastfeeding. Aka infants and young children were breastfed on demand about four times per hour, whereas farmers averaged about two times per hour (Hewlett et al. 2000). Fouts et al. (2011) examined breastfeeding among Aka and Bofi forager and Ngandu and Bofi farmer three- and four-month-olds, nine- and ten-month-olds, and one- to four-year-olds and found that at all ages forest foragers breastfed more frequently, had more breast-feeding bouts per hour, and were more likely to be holding infants when nursing than did neighboring farmers. Hirasawa (2005) found similar differences between Baka foragers and Bombong farmers. Forest foragers breastfed a greater percentage of the day, had more nursing bouts per hour, and breast-fed a shorter time per nursing bout than did farmers. This is particularly interesting because Baka are more sedentary and farm more frequently than Aka and Bofi foragers, but they maintain the giving and responsiveness of breastfeeding.

Aka and Baka forager caregivers are also significantly more likely than Ngandu and Bombong farmer caregivers to respond to infant crying and fussing. Farmer infants cried significantly longer and more frequently than did forager infants in both groups (Hewlett et al. 2000; Hirasawa 2005). Forager caregivers responded to fussy or crying infants much more quickly than farmer caregivers and responded to most every fuss and cry event, while farmer caregivers did not respond to about one-third of the fuss and cry events, and it took them much longer to respond when they did. Efe caregivers also respond to infants' cries or fussing rapidly—within ten seconds of a fuss over 85 percent of the time at three and seven weeks of age and over 75 percent of the time at eighteen weeks of age (Winn et al. 1987; Morelli et al. 2013). Foragers give and are responsive when infants are hungry, desire physical contact, want help walking, want attention, do not feel well, and so on. Foragers tend to feel secure and trust their social environments because responses to distress are rapid and come from many individuals in the camp (see below).

Allomaternal Care in Infancy and Early Childhood

Tronick et al. (1987) were the first to provide quantitative evidence of allo-maternal care in Congo Basin forager early infancy (one to four months of age). They found that Efe mothers were not the first to nurse a newborn; four-month-olds spent only 40 percent of their time with their mothers, infants were transferred to alternative caregivers 8.3 times per hour on average, and infants were cared for by 14.2 different people on average during an eight-hour period. Hewlett (1989) examined his data on young Aka infants and identified a similar pattern. Meehan (2009) found that older (nine- to ten-month-old) Aka infants received some form of allocare (from holding to checking infant)

from twenty different caregivers on average during nine hours of observation, while Ivey (2000) found that older (twelve- to fifteen-month-old) Efe infants had interactions with eleven different caregivers on average during two hours of observation. Morelli et al. (in press) calculate that Efe infants and young children spend, on average, a change in social partners every three minutes, regardless of age. Most of the allocaregivers in these studies are the infant's genetic kin (i.e., fathers, grandmothers, aunts, sisters).

Hewlett's (1991) research with one category of Aka allomothers—fathers—indicated that fathers were more involved with their infants than fathers in any other known culture. Aka fathers held or were within an arm's reach of their infants 51 percent of a twenty-four-hour period, did 22 percent of the caregiving with four-month-old infants in the camp setting, were the second most active caregivers after mothers, and were more likely than mothers to kiss and show affection to infants while holding. Some fathers offered their breast to fussy infants.

Considerable variability between the four forager ethnic groups in father involvement exists (next section), but the forager fathers consistently provided more direct care to infants and young children than did fathers among neighboring farmers (Hewlett 1991; Fouts et al. 2005; Fouts 2010). Farming fathers may help with caregiving on occasion, but they see their role as disciplinarians and providers of resources, such as paying for school fees or medical care.

Several researchers demonstrate that maternal care increases and allomaternal care decreases from early to late infancy (Hewlett 1991), which is consistent with attachment theory, but maternal care decreases and allomaternal care increases and remains steady in early childhood (Tronick et al. 1987; Meehan 2010; Morelli et al., in press).

Allomaternal nursing is also normative in the Congo Basin hunter-gatherer ethnic groups with data on early infancy—that is, among the Aka and Efe (Hewlett and Winn, in press). Young infants (one to four months) receive, on average, 15–25 percent of their total breastfeeding time from allomothers, and, in some cases, an infant spends up to half or more of his or her nursing time with an allomother. Allomaternal nursing in these groups disappears by late infancy, and it does not or rarely occurs among neighboring farming groups.

The studies mentioned above are based upon quantitative behavioral observations, but they are consistent with more qualitative accounts from Congo Basin hunter-gatherer ethnographers. For instance, Colin Turnbull (1978) describes allomaternal care among the Mbuti:

The mother emerges and presents the child to the camp . . . and she hands the boy to a few of her closest friends and family, not just for them to look at but for them to hold him close to their bodies. . . . In this way an initial model of predictability and security becomes multiplied and so it is throughout the educational process: vital lessons, such as non-aggressivity, are learned through a plurality of models.

Few Gender Differences in Middle-Childhood Caregiving

Extensive research with farmers around the world indicates that middle-childhood-aged females are particularly important allomaternal caregivers of infants and young children (Weisner and Gallimore 1977; Whiting and Edwards 1992). Farming mothers assign middle-aged girls more childcare tasks than boys, and cultural models expect girls to help more with childcare than boys. This gender bias with middle-childhood caregivers does not exist with Congo Basin foragers. Systematic research with Efe (Ivey Henry et al. 2005) and Aka (Hewlett 1991; Boyette 2013) foragers indicates both males and females in middle childhood contribute similar amounts of caregiving to infants and young children.

Male and Female Initiation during Adolescence

Congo Basin hunter-gatherers are relatively distinct from neighboring farmers in that both male and female adolescents are initiated into forest spirit associations. Farmers, by contrast, often have adolescent initiation ceremonies for males, generally associated with circumcision, but seldom for females. Congo Basin forager boys and girls acquire knowledge about powerful forest spirits and appropriate forager conduct, especially about foundational schema such as sharing and giving, and learn about the mythical power and solidarity of their gender (i.e., how men or women used to be able to reproduce on their own, how they used to have all the spiritual powers of the forest) during initiation. Circumcision is generally not a part of Congo Basin forager initiations among the Aka, Efe, and Mbuti, but males are often circumcised in middle childhood, either as part of a farmer initiation ceremony (e.g., *Nkumbi* among Mbuti) or individually without any ceremony.

Among the Mbendjele, Lewis (2002) describes boys' initiation into *Ejengi* and girls' initiation into *Ngoku*. *Ejengi* initiation occurs when elders feel boys have the cognitive abilities to keep spirit secrets and the courage to go through the dangerous ceremony; the initiation often takes place after age seven or eight. A group of two to four boys are taken to a special location (*njanga* path) outside of camp where their bodies are painted red and they reside with other males for three days to learn about the mythical past, *Ejengi* forest spirit secrets, elephant hunting, and honey collecting. The *Ejengi* initiation also occurs among the Baka, Aka, and Kola.

Less is known about the Mbendjele female's *Ngoku* forest spirit initiation at puberty, but it is for girls only and focuses on learning female power and solidarity, female reproductive skills, and the mythical past when women owned all the forest spirits and obtained their babies from *Ejengi*. *Ngoku* dancers tease (we want young men, not old men!) and ridicule (not providing enough sex or food, chasing other women) men. Among the Aka (Takeuchi 2013), there is a spirit dance ritual, called *Waya*, that adult females organize when a girl reaches menarche.

Turnbull (1957, 1965a, 1965b) describes similar patterns among Mbuti adolescents; boys are initiated into the *Molimo* (called *Lusumba* in Turnbull's 1957 publication), and girls are initiated into the *Elima*. Wilkie and Morelli (1991) describe a similar girls' puberty ceremony, called *Ima*, among the Efe. In the *Elima*, a girl moves into a special hut with selected friends (*bamelima*) for a month or two shortly after she has her first menstruation. The special hut is in the care of an older female who is in charge of the instruction in *Elima* songs for the forest and the arts of motherhood and sexual life. Instruction takes place both in the hut and in the forest. The initiate invites boys to come visit her in the hut, but the boys must fight to get past women guarding the hut. The women have vines and pieces of wood and use them to whip or throw wood at boys trying to enter. The initiates are looking for potential spouses, but the process also emphasizes female power and solidarity.

With the *Molimo*, boys cannot be initiated until they have proved their prowess and strength as hunters. Turnbull (1965b) indicates most boys enter the forest spiritual association by age fourteen. As with *Ejengi*, boys learn songs and dances to the Spirit of the Forest as well as knowledge and skills about forest life. Turnbull (1965b) points out that Mbuti boys are circumcised in the neighboring farmers' *Nkumbi* adolescent ceremony, but that the entry into the *Molimo* is not contingent upon circumcision or participation in the *Nkumbi* initiation.

Discussion of Distinctive Features

The features of childcare described above are not unique to Congo Basin forest foragers; many exist in hunter-gatherers in other parts of the world (Konner 2005). The feature that appears to be particularly pronounced in Congo Basin hunter-gatherer childhoods is the nature and frequency of allomaternal care. Aka fathers provide more direct care to their infants than fathers in any known culture, whether farmers, hunter-gatherers, or urban industrialists. The number of different caregivers and frequency of allomaternal care in Aka and Efe infancy and early childhood has not been documented in other hunter-gatherers. Allomaternal nursing exists with Efe and Aka but does not occur among the Hadza or !Kung foragers in other parts of Africa.

Finally, before moving on to discuss diversity between and within groups, it is important to mention a few ways in which Congo Basin forager and farmer children are similar because childhood in foragers and farmers is more similar than is, for instance, Congo Basin foragers and Euro-American childhoods. First, table 9.2 summarizes the results of one of our studies (Hewlett et al. 1998) that compared Aka forager and Ngandu farmer infant development. Forager and farmer caregivers did not significantly differ from each other in a wide range of behaviors: frequency of face-to-face interaction with their infants, how often they watched their infants, showed affect to their infants, soothed their infants, and vocalized to their infants.

Hunter-Gatherers of the Congo Basin

Table 9.2. Similarities and differences between Aka forager and Ngandu farmer infancy.

No Significant Differences between Aka Foragers and Ngandu Farmers	Aka Foragers Do Significantly More Often Than Do Ngandu Farmers	Ngandu Farmers Do Significantly More Often Than Do Aka Foragers
Caregiver and infant in face-to-face interaction	Caregiver holds infant	Caregiver grooms, dresses, cleans infant
Caregiver and infant watch something at same time	Caregiver is within arm's length of infant	Caregiver stimulates or arouses infant
Caregiver watches or checks on infant	Caregiver feeds infant	Infant fusses or cries
Caregiver shows physical affect toward infant	Infant sleeps	Infant is alone
Caregiver shows nonphysical affect toward infant		Infant smiles
Caregiver physically soothes infant		Infant vocalizes
Caregiver nonphysically soothes infant		Infant plays alone
Caregiver vocalizes to infant		Infant plays with objects
Infant looks at caregiver		

Source: Summarized from Hewlett et al. 1998.

Second, both foragers and farmers in the Congo Basin experience high mortality and divorce rates (Hewlett 1991, 1996). These two factors mean that most forager and farmer children in middle childhood and adolescence live with single parents or stepparents. Among the Aka, 42 percent of eleven- to fifteen-year-old children live with a stepparent or a single parent. Forager children decide which parent to live with, the other parent lives some distance away at his or her parents' camp, and the child often visits the other parent. At the time an Aka selects his or her spouse, he or she is living with both natural parents only 29 percent of the time. Ivey (2000) reports that 27 percent of Efe children do not have parents in camp because both parents have died, their parents divorced and live separately from either parent, or they are living temporarily away from their parents. Comparable demographic data do not exist among forest farmers, but observations and household data indicate that the frequency of stepparenting or single parenting is similar, if not higher.

Cultural Diversity between and within Ethnic Groups

Extensive diversity in childcare exists between ethnic groups. Table 9.3 summarizes some of the demographic, subsistence, and settlement variability between the four forager ethnic groups. Given the diversity in these limited parameters, it is not surprising that extensive diversity exists in how children grow up in these groups. In this section, we examine culture variability in two domains: father involvement and allomaternal care.

Table 9.3. Cultural diversity in demography, subsistence, and settlement patterns of the four forager ethnic groups with data on children.

	Efe ^a	Mbuti ^b	Aka ^c	Baka ^d
Estimated population	10,000	26,000	30–50,000	30–40,000
Total fertility rate	2.6	5.5	6.2	ND
Infant mortality rate	12.0	33.0	20.0	ND
Percentage of population under age fifteen	24.0	52.9	48.0	42.0–53.7
Polygyny rate	3.0	14.0	17.5	19.5
Frequency forager females marry village males	Common (13–28%)	Rare (<1%)	Rare (<1%)	Occurs (3–6%)
Number of farming ethnic groups living in association	3	4	15	19
Primary hunting technique	Bow	Net	Net	Spears and traps
Percentage of calories provided by meat or fish	13–27%	35–86%	36%	10%
Distance to most forest camps	4–5 km	5–15 km	8–40 km	4–8 km
Number of months/year in forest camps	5	8	7–8	4–5
Mean camp size	17.8	37.4	25.5	31.7

^a Bailey 1991; Peacock 1985; Bailey and Peacock 1988; Hill 1982; Harako 1976; Tereshima 1987.

^b Turnbull 1965a and b; Hart 1978; Ichikawa 1978; Hill 1982.

^c Bahuchet 1985, 1988; Hewlett 1989, 1991.

^d Vallois and Marquer 1976; Yamauchi et al. 2000; Dodd 1987; Takanori personal communication.

Father Involvement

Efe hunter-gatherer fathers held their infants 2.6 percent of the time in the camp setting (Winn 1989, personal communication) in comparison to the

22 percent of the time among the Aka fathers mentioned above. Bailey (1991) found that Efe men actively engaged in childcare only 0.7 percent (about five minutes per day) of daylight hours and indicated that “strong father-child attachments among the Efe were uncommon.” Efe fathers were also not the secondary or even tertiary caregivers of their infants; several other females (older siblings, grandmother, mother’s sister) provided more care than fathers. Efe are different from Aka in substantial ways: Efe do not cooperatively net hunt (men hunt with bows and arrows or small traps, while Aka men and women net hunt), which means Efe men and women go their separate ways most of the day. And as is evident in table 9.3, Efe have very high infertility rates, so several other adult women without children are potentially available to help with childcare.

Although precise data do not exist for the Mbendjele, the forager group just south of the Aka who speak a dialect of the Aka language, father involvement appears to be substantially lower than the Aka because Mbendjele men use traps, spears, and guns to hunt rather than nets, which limits Mbendjele men’s availability to their children during the day. Baka father involvement is likely to be similar to the Mbendjele because men also use traps to hunt, while among the net-hunting Mbuti, Turnbull (1965a) gives the impression fathers are very involved in childcare.

In terms of within cultural variability, Aka are generally very involved fathers, but remarkable variability exists between fathers. Some Aka fathers hold their infants 2 percent of the time, while others hold their infants about 20 percent of daylight hours. Hewlett’s (1991) study found that highly involved fathers tended to have the following characteristics: no brothers, a wife from a distant clan, a small hunting net, greater reliance on individual hunting techniques rather than nets, and a close relationship with Ngandu farmers. Fathers with lower involvement had the opposite features. Hewlett suggested that kinship resources were important for understanding intracultural variability in paternal care.

Meehan (2005) and Fouts (2008) also demonstrate that fathers are more likely to be involved with infant care when the family is living patrilocally rather than matrilocally, and Fouts (2008) shows that the father holds the child less and proximity declines as the child gets older.

Allomaternal Care

Allomaternal care is common among Congo Basin hunter-gatherers, but how frequently it occurs, how many allomothers provide care, and who provides the care vary substantially between ethnic groups. Observational studies indicate that Aka infants receive allocare from an average of 20 different caregivers (Meehan 2005) while Baka infants receive allocare from 5.3 (Hirasawa 2005) and Efe infants receive care from 14.2 (Tronick et al. 1987) different caregivers. In terms of who provides allocare, Aka fathers are

secondary and grandmothers the tertiary infant caregivers (Hewlett 1991; Meehan 2005), while among the Efe, adult females provide the majority of the allocare (Tronick et al. 1987; Ivey 2000). Among the Baka, older middle childhood-aged siblings, both male and female, are the second most important allomaternal caregivers, with fathers and grandmothers the secondary and tertiary caregivers (Hirasawa 2005). In terms of allomaternal nursing in early infancy, Efe infants receive more allonursing in comparison to Aka infants (60 percent of infants among the Aka versus 78 percent of Efe) (Hewlett and Winn, in press).

A variety of factors contribute to the observed diversity: demography, subsistence pattern, and sedentism. Table 9.3 indicates Efe have low total fertility rates, and a high percentage of Efe women (47 percent) have one child or less, primarily because of gonorrhea and other sexually transmitted infections (Bailey and Peacock 1988). As mentioned, Efe have more adult females without children in camp than do Aka or Baka to help provide allocare or allomaternal nursing. The Aka are net hunters where men, women, and children hunt together, while Baka and Efe men hunt and women gather and farm. Aka fathers are available to their infants for a longer part of the day than the Baka and Efe fathers. Carrying infants for long distances on the net hunt is also energetically demanding, which helps to explain why Aka brothers and sisters in middle childhood are not involved more in infant care. The Baka are relatively sedentary, hunt less, and more acculturated in comparison to the Aka and Efe.

In terms of cultural variability in allomaternal care, figures in the classic Tronick et al. (1987) paper illustrate pronounced variability between infants in the amount of time they spent in allomaternal care and the frequency they were transferred between caregivers. Of eight infants in the study, one received no allocare (was with mother all of the time) while another spent 80 percent of her time in allocare. Winn (1989) analyzed intracultural variability in Efe infant care and found that fussier infants spent more time with mothers and had fewer caregivers, and Efe infants in larger groups were less likely to spend less time with their mothers, were transferred more often, and encountered a greater number of different caretakers. Along similar lines, Fouts and Lamb (2005) found that young Bofi children were more likely to cry in the presence of their mothers and less likely to cry under the care of allomothers when their mothers were absent.

Meehan's (2005) research on allomaternal care among the Aka demonstrates pronounced intracultural variability in who provides the care, but not the amount of time an infant receives allomaternal care. When the family lives matrilocally, the mother's female relatives provide allocare, but when living in a patrilocal setting, the father and his relatives provide more care.

Extensive culture diversity also exists in the frequency infants receive allomaternal nursing (Hewlett and Winn, in press). In the study, twelve Aka

three- and four-month-old infants received allomaternal nursing during observations, and eight Aka infants did not. The two groups were compared on a wide range of variables—from the frequency infants fussed or cried to the amount of time the mothers worked. Frequency of fussing and crying and frequency of the mothers' work did not matter, but how long an allomaternal caregiver held an infant during the day was a significant predictor of the allomaternal nursing and helped to explain intracultural diversity. The amount of time an allomother held an infant during the day was a good predictor of the frequency she allonursed the infant.

Theoretical Contributions

Research with Congo Basin hunter-gatherer children was often initiated to test theories and hypothesis in anthropology, developmental psychology, and evolutionary biology. This section briefly reviews a select few of the hypotheses and their results to demonstrate how research with Congo Basin hunter-gatherers has contributed significantly to our understanding of human nature, biases in Western conceptions of child development, how children learn, and the importance of fathers and others for child survival and healthy social-emotional and cognitive child development.

Development Psychology

Do differences in cognitive styles exist between hunter-gatherers and farmers? A multinational, multidisciplinary team conducted research in the Central African Republic for three years (1975–1977) to test Herman (Hy) Witkin's theory of psychological differentiation (Witkin et al. 1962) among Aka foragers and Ngandu farmers (Berry et al. 1986; van de Koppel 1983). The basic hypothesis was that the hunter-gatherer social ecology (mobility, flexibility, low population density) should contribute to the development of a "field independent" cognitive style (e.g., individuals perceive self and objects as separate and independent), while the farming lifestyle should lead to a "field dependent" way of thinking and perceiving the world (i.e., individuals view self and objects as embedded in a network). Parents in the different social ecologies should socialize their children in these different ways of thinking and perceiving the world. The psychologists developed a battery of tests for both adults and children (e.g., embedded pictures test, body adjustment test, draw a person test) to try and measure how well Aka and Ngandu could evaluate their position in space, how many embedded triangles they could identify in a picture, how parents socialized children, and how individuals viewed self with others. Overall, the tests supported the predictions of the theory; the Aka foragers were generally more field independent and autonomous, while the Ngandu were generally more field sensitive/dependent in their cognitive style. The results fit nicely with the forager and farmer foundational schema previously described.

Do infants become attached to their fathers through vigorous play? Hewlett's research (1991) with Aka infants focused on evaluating Lamb's (1981) hypothesis regarding the role of rough-and-tumble play in an infant's attachment to father. The prevailing hypothesis was that infants become attached to their fathers, who are not around their children as often as mothers, through their vigorous play and interactions, whereas infants become attached to their mothers via their regular and sensitive care. Studies in urban industrial societies in many parts of the world indicated that vigorous play was a distinctive feature of fathers' versus mothers' style of interaction with infants. Unlike fathers in urban-industrial cultures, Aka fathers were frequently with their infants and rarely engaged with them in vigorous play. Fathers engaged in physical play only once in 264 hours of systematic naturalistic father and infant focal observations. Fathers were also more likely to kiss and hug an infant while holding than were mothers.

Hewlett suggested that Aka fathers were not vigorous because they intimately knew their infants through their extensive care. Because Aka fathers knew their infants so well, they did not have to use vigorous play to initiate communication or interaction with their infants. Aka fathers are often around their infants because men, women, and children participate together in net hunting. Net hunting, in part, contributed to regular husband-wife cooperation and the fathers' intimate knowledge of their infants (1992a).

Do infants become attached to one primary caregiver? How important are mothers? John Bowlby (1980) hypothesized that infants become attached to a primary caregiver, usually the mother, because it enhanced their survival; infants that became attached to a primary caregiver and regularly reached for, fussed for, or crawled toward the primary attachment figure to maintain proximity were more likely to be protected from predators or aggressive others by the caregiver and therefore more likely to survive. Attachment theory (1980) is one of the leading psychological theories of social-emotional development. According to the theory, this dimension of human caretaking has biological component because they evolved in the long period of the hunting-gathering environment of evolutionary adaptation, and the infant had a primary attachment to the person who provided most of his or her care, usually the mother. The theory developed at a time when research showed that mothers were the primary caregivers in most primate species, and Konner's (2005) research with !Kung foragers supported the idea that mothers were primary. Bowlby actually indicated that infants could be attached to others, but the vast majority of research that followed focused on mothers and infants. Tronick et al. (1987) went to the Ituri Forest to test the continuous contact and care from the mother component of attachment theory with Efe foragers. Their study demonstrated that multiple caregivers provided more than 50 percent of the total early infant care and several other dimensions of care

described above. More recent studies by Morelli et al. (in press) and Ivey (2000) provide greater detail on the multiple attachments of Efe infants and young children.

Meehan and her colleagues (Meehan 2005; Meehan and Hawks, in press) are also interested in the impact of allomaternal care on attachment and have found that Aka forager children demonstrate attachment behaviors to six different allomaternal caregivers, on average, and that allomaternal caregivers (both juveniles and adults) are just as responsive and sensitive to the fusses and cries of infants and young children as the mothers. They also report that young children with more allomaternal caregivers are, on average, taller and heavier than young children with fewer allomaternal caregivers, suggesting a reproductive advantage to having multiple caregivers.

Research with the Efe and Aka infants and young children demonstrate the importance of allomaternal care for child growth and survival and has contributed significantly to our understanding of humans as cooperative breeders (Hrdy 2009).

Is theory of mind a human universal? Theory of mind refers to the cognitive capacity of individuals to take on the perceptions and intentions of others. Many have suggested this is part of human nature and a critical cognitive ability that enables children to learn from others, feel empathy, and give and share extensively with others (Tomasello 1999). This emerges in late infancy and becomes clear in urban industrial children by four years of age. Avis and Harris (1991) evaluated this theory among Baka foragers in Cameroon and found support for the universal nature of theory of mind. This study is the only study of theory of mind in a hunter-gatherer community.

Evolutionary Biology

Who provides allomaternal care? Why do particular individuals provide allomaternal care? Tronick et al. (1987) pointed out the high frequency of allomaternal care among the Efe, and Paula Ivey Henry (2000) returned to their study site to test three evolutionary predications about who should provide allomaternal care: (a) genetic kin, (b) women who could share food or infant care (reciprocity), and (c) young adolescent girls wanting to learn how to parent. She found both males and females (males provided 46 percent of all allocare), young and old (juveniles provided 56 percent of allocare), provided allomaternal care but that genetic kin provided twice as much allocare as nonkin. Reciprocity did not explain much of the variability, nor did the learning to mother hypothesis because both male and prereproductive female individuals provided relatively equal allocare. This is also one of the few studies to demonstrate that allomaternal care enhances infant survivorship. She found that the number of allocaregivers an Efe infant had at one year of age was positively associated with survivorship of that child at three years of age.

Is the time of weaning characterized by parent-offspring conflict (fussing, crying, temper tantrums)? Evolutionary theory (Trivers 1974) indicates that reproductive interests of parents and children may conflict when parents want to have another baby and the existing child wants continued parental attention and resources. Mothers often wean their child because they want to have another child or are already pregnant, which leads to parent-offspring conflict. Fouts et al. (2005) evaluated this hypothesis among Bofi foragers and farmers and found that the farmers conformed to the predicted theory: mothers decided when to wean, they used dramatic steps to wean the child (e.g., use of hot pepper on nipples), and toddlers fussed and cried during this period. By contrast, parent-offspring conflicts among the Bofi foragers were minimal: the toddlers decided when to wean, and the toddlers did not fuss and cry during the process, in part because of an increase of involvement by allomaternal caregivers.

What are the modes and processes of cultural transmission? Luca Cavalli Sforza (1986) conducted some of the earliest systematic and comparative biomedical and demographic studies of Congo Basin hunter-gatherers. He and Marc Feldman (Cavalli Sforza and Feldman 1981) provided innovative theoretical contributions to evolutionary approaches to culture. They suggested that different modes of cultural transmission—that is, acquiring knowledge from parents (called vertical), similar-aged peers (called horizontal), or older children and adults (called oblique)—influenced how fast or slow a trait would change or the intracultural variability for a cultural trait. Hewlett wanted to understand the roles of parents versus others in a foraging community because some cultural anthropologists said parents were important while others suggested everyone in camp contributed equally. In an early interview-based test of these models, Aka adults and children (Hewlett and Cavalli Sforza 1986) indicated their parents (i.e., vertical transmission) were the primary transmitters of about 80 percent of the fifty cultural items they had learned.

Among the Baka, Hattori's interview-based study with adults (2006, in press) found that women learned about the uses of ninety plants from their mothers 80 percent of the time, fathers 15 percent of the time, and others 5 percent of the time; Baka men said they learned about the plants from their mothers 10 percent of the time, fathers 65 percent of the time, siblings 11 percent of the time, and others 13 percent of the time. Hayashi et al. (2012) also found that 61 percent of Baka men learned how to make metal spear points from their fathers (vertical transmission), and 11 percent learned from their grandfathers (oblique). B. L. Hewlett's interview-based qualitative study (2012) of Aka forager adolescents is replete with expressions of vertical transmission. One adolescent boy explained, "Father showed me how to care for younger brothers and sisters and to have a good character. He showed me how to hunt and find honey. [My mother] showed me how to guard the baby and how to wash and comfort the babies."

When asked, forager adults and children tend to identify parents as primary transmitters of culture, but Boyette's (2013) recent observational-based study of Aka cultural transmission indicates older children and adults (i.e., oblique transmission) are much more important at this age than the parents. This is consistent with Aunger's study (2000) of how Efe foragers acquire food taboos; he found that adults said that they learned food taboos from their parents, but when he systematically looked at who actually shared food taboos, peers and nonparental adults were more important than parents. Hewlett et al. (2011) suggest that vertical transmission is particularly important up to age four or five, but horizontal and oblique transmission are favored in middle childhood and adolescence.

Most anthropologists indicate that forest foragers primarily learn by observation and imitation (Turnbull 1965b; Hayashi et al. 2012). Boyette's study (2013) is one of the few to systematically examine several processes of social learning, such as imitation, observation, and teaching, among Aka forest foragers in middle childhood and finds that social play and some direct instruction (teaching) are particularly important for learning foundational schema, such as sharing and cooperation. Hewlett's (2013) research with Aka infants indicates various forms of teaching exist; e.g., parents use pointing, demonstration, and negative feedback to transmit a range of subsistence (e.g., how to dig for roots) and technology skills (e.g., how to use a machete). Sonada (2013) also describes how very subtle teaching (e.g., simple comment or body language) occurs with the transmission of knowledge to Baka children.

Sociocultural Anthropology

How do children learn about the giving environment? Hunter-gatherer researchers have tried to understand why foragers do not store food and tend to stop hunting and gathering as soon they have enough food. Bird-David (1991) hypothesized that forager economic behavior is linked to metaphors (i.e., cultural models) that contribute to a trusting, giving, and generous view of the environment. Foragers trust that the forest will provide and give just as other foragers share extensively with them. Hewlett et al. (2000) wondered how hunter-gatherers in diverse (i.e., from forests to deserts) environments develop trusting views of the environment. Using attachment theory, they hypothesize that children in responsive and sensitive caregiving environments develop internal working models (a type of cultural model) where the individual trusts self and others. The study compared Aka forager and Ngandu farmer patterns of infant care, and as described above, Aka caregivers are more responsive and sensitive than Ngandu caregivers, which according to attachment theory means Aka children should be more likely to trust others and the environment as giving. The study also looked at data from 10 other hunter-gatherer and 168 farmer groups and found that foragers were generally more likely to hold and respond to fussing and crying children than farmers. The study supported

Bird-David's hypothesis and identifies a mechanism by which "the giving environment" was transmitted to hunter-gatherer children in diverse natural environments.

How do forager children learn to be nonaggressive and nonviolent? Several studies indicate that hunter-gatherers are generally more peaceful, nonviolent or nonaggressive by comparison to farmers and peoples in other modes of production (see Fry and Soderberg 2013 for a recent review). Social-cultural anthropologists have been interested in how this way of life is transmitted to children. Turnbull (1978) examined how Mbuti children learn nonaggression and identifies four mechanisms as being particularly important. First, children are highly desired; they are brought into a joyous forest world where they are loved; many people provide children with food, support, and knowledge; children call several people mother and father; and children are indulged (e.g., breastfeeding on demand, immediate response to fussing, lots of physical contact, left to explore the environment when they want). According to Turnbull (*ibid*), children feel that life is predictable and secure. Young Mbuti children are secure and are not afraid of the world and therefore not suspicious or hostile to others. During middle childhood, children play in the *bopi* area next to camp, learn to play noncompetitive games, and develop trust with many other children of both sexes and several ages.

Second, children learn how to avoid conflict and aggression by moving away from contentious situations, at first by crawling away and later by staying away from places with lots of *akami* or noise (e.g., yelling at each other), which is associated with the farming way of life. Third, Mbuti tend to ostracize and stay away from aggressive and assertive individuals. Finally, Mbuti have an array of stories, primarily for youth, that describe interpersonal and human-nature conflicts and the negative consequences of violence and killing.

A quantitative study of aggression among Aka children (Hess et al. 2009) found no sex differences in physical aggression between adult men and women, but did find that male children and adolescents were generally more aggressive than females. Several researchers have indicated that Congo Basin forager parents rarely if ever use corporal punishment to discipline children, whereas it is common among farming populations in the Congo Basin (Hewlett 1991; Kamei 2005; Boyette 2013). Cross-cultural studies (Ember and Ember 2008) indicate a statistical relationship between corporal punishment and the frequency of violence and social stratification in a society.

How do forest forager children learn about religion? As mentioned in the introduction to this book, ecological issues have dominated Congo Basin forager research. Studies of forager religion are particularly limited, but Lewis (2002) provides one of the few ethnographic accounts of how Mbendjele forager children acquire an understanding of the forest spirit world. He indicates that a variety of *massana* activities—communal activities that involve

plenty of fun and laughter—among children are particularly important. One type of children's *massana*, called *Bolu*, is used to call boys' forest spirits (*mokondi*). Boys sing *Bolu* songs, go to a special place (forbidden to girls and adults) in the forest near camp, and use tree branches to make clothes for the *Bolu* spirit. Girls sing and dance in the middle of the camp to entice the *Bolu* spirit to come out. Adults will give explicit instructions to the girls about how to improve their performance. The *Bolu* spirit enters the camp surrounded by the boys, and the singing and dancing of both boys and girls enable *Bolu* to empower everyone present. Lewis (ibid) indicates that *Bolu* is just one example of how children begin to learn about the much more complex and diverse forms of adult *mokondi massana*.

Children begin to learn about the spirit world in infancy and early childhood through lived experiences of dance and song, but Lewis (2008) demonstrates how physical and biological maturity contribute to a more complex understanding of the supernatural. *Ekila* is a complex set of beliefs, often associated with blood, that influence Mbendjele relations with animals and each other (the same term and similar beliefs also exist among Aka and Baka foragers). Children learn about some cultural practices associated with *ekila*—for example, food taboos, how menstruation impacts hunting and practices—in early childhood, but it is not until adolescence when girls start to menstruate and boys and girls start to have sex that Mbendjele become curious about and learn more extensively about the complex cosmological, supernatural, and political nature of *ekila*.

Summary

This chapter provided a brief overview of child-centered studies of Congo Basin hunter-gatherers. The overview is limited and biased because only 13 percent of all studies with Congo Basin hunter-gatherers have focused on children, only four out of the fifteen Congo Basin forager ethnic groups have child-centered research, and almost 70 percent of the published child studies have been conducted with one of those four ethnic groups. We have a long way to go, and substantially more research is needed before it is possible to provide a comprehensive and realistic understanding of hunter-gatherer children in the Congo Basin.

Given what is known, the chapter identifies some general features of Congo Basin forager childhoods that are somewhat distinct from their farming neighbors, describes some of the cultural diversity within and between ethnic groups, and discusses a limited number of theories that researchers have used to guide their child-centered research in the Congo Basin. Physical and emotional intimacy, autonomy, allomaternal care, play, mixed-aged groups, female initiation, and early and rapid social learning are characteristic features of Congo Basin forager childhoods. The commonalities exist because of similar foundational schema and the demography of mobile hunter-gatherers. The

frequency and scope of allomaternal care seems to a particularly distinctive feature of Congo Basin hunter-gatherer childhoods. It exists in other hunter-gatherers, such as the Hadza, !Kung, and Australian Aborigines, but the number of different caregivers, the level of father involvement, and the high frequency of allomaternal care are much less pronounced among these foragers. Of course, enormous intercultural and intracultural variability exists in patterns of Congo Basin hunter-gatherer childhood because of differences in history, relations with farming neighbors, ecology, and demography. It is my impression that most researchers who conduct child-centered field research with forest foragers are more impressed by the pronounced diversity than they are with the commonalities. Finally, research with Congo Basin hunter-gatherer children has contributed substantially to a better understanding of human nature and of biases in Western ideas of children and appropriate ways for children to learn and develop.

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