

IN: CULTURAL DIVERSITY
 AMONG TROPHICALLY-
 CENTRIC FORESTERS: AN
 AFRICAN PERSPECTIVE.
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9 Cultural diversity among African Pygmies

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Turnbull's work provides exceptionally lucid, sensitive, and rich ethnographic accounts of Mbuti Pygmies. His book, *The Forest People* (1961), and the more detailed ethnographic monograph, *Wayward Servants* (1965b), have been so popular that no comparable ethnography has come along to replace them. As a result, most individuals, including anthropologists, view Mbuti culture as synonymous with African Pygmy culture, just as !Kung culture has become synonymous with "Bushman" culture. Several monographs on other African Pygmy populations (e.g., Bailey 1991; Bahuchet 1985; Hewlett 1991) have recently been published but they are more problem-oriented and specialized. However, the recent work has contributed significantly to our understanding of African Pygmy populations and therefore enables us to place the Mbuti within a comparative perspective. This chapter utilizes the recent research to describe some of the differences and similarities between four African Pygmy populations (Figure 9.1), and offers preliminary hypotheses to explain the diversity and commonalities.

Unfortunately, no term has emerged to replace "Pygmy," a derogatory term that emphasizes short stature. For the remainder of this chapter, "forest forager" is utilized rather than "Pygmy." African tropical forest foragers generally have the following characteristics: (1) they spend at least four months of the year in the tropical forest hunting and gathering; (2) they have a strong identity with and preference for forest life; (3) they maintain many-stranded social and economic relations with neighboring farming populations; and (4) they practice important ritual activities associated with elephant hunting. There are at least ten ethnolinguistically distinct populations of forest foragers in central Africa and they are unevenly distributed throughout the Congo-Zaire basin: the Efe, Mbuti, Aka, and Tswa are found in northeastern Zaire (see Ichikawa and Terashima, chapter 11, this volume, for discussion of Mbuti and Efe); the Aka, Bofi, and Benzéle live in northern Congo and southwestern Central African Republic; the Baka are in southeastern

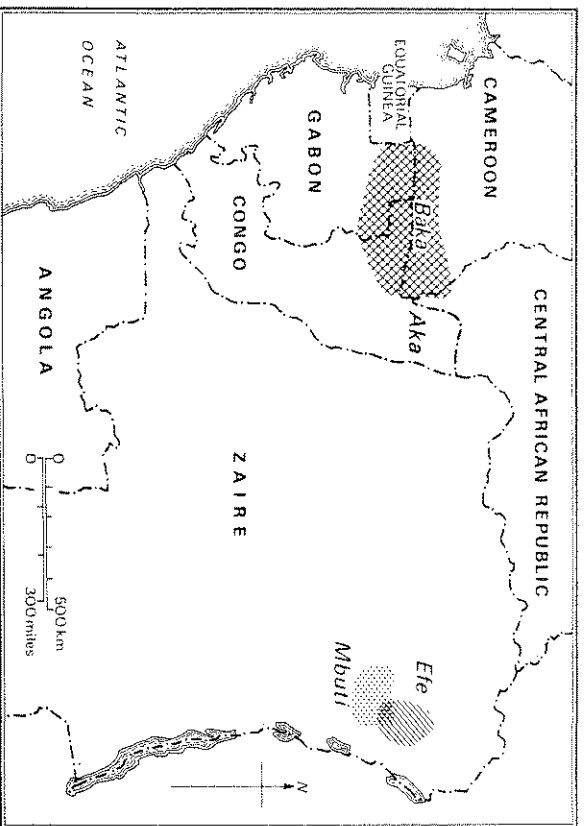


Figure 9.1 Location of the four African tropical forest foraging populations discussed in chapter 9

Cameroon, northern Gabon and northern Congo (see Jorits, chapter 10, this volume, for discussion of this group); the Gyelli and Tikar are smaller groups in western Cameroon; and the Bongo are in southeastern Gabon and central Congo.

While there are cultural commonalities between these foraging populations, the cultural differences are dramatic and striking. I have selected the Aka, Baka, Mbuti, and Efe for comparison because they are some of the largest and best documented populations of forest foragers. They also provide equal representation of the eastern and western Congo-Zaire basin: the Baka and Aka are from the western Congo-Zaire basin while the Efe and Mbuti are from the Ituri Forest in the eastern Congo-Zaire basin.

There are methodological problems with most comparative studies and this one is no different (see Silberbauer, chapter 2, this volume, and Bird-David, chapter 12, this volume, for excellent discussions of problems with comparative research). First, the ethnographic data for the four groups were collected at different times in history. Turnbull collected the Mbuti data in the late 1950s and early 1960s, whereas Bailey, Peacock and other members of the Ituri Project collected the Efe data in the mid-1980s. Most of the Baka data reported in this chapter were

collected by Vallois and Marquet in the mid-1940s while the Aka data were collected by myself and Bahuchet in the late 1970s and early 1980s. All of the above-mentioned studies took place before the forest foragers adopted farming to any great extent. Second, comparative studies emphasize general or the most frequent cultural patterns of an ethnic group rather than the variability in cultural patterns found within an ethnic group. This can be problematic as there may be just as much variability within an ethnic group as there is between groups. For instance, Table 9.2 lists the Aka as having forest camps more than one day's walk from the village, while Efe camps are listed as within a four-hour walk of the village. These refer to general patterns, but it is of course true that some Aka groups like to live near villages and some Efe groups live deep in the forest. This intracultural variability is just as interesting as the study of intercultural variability, but given the page limitations of this chapter, emphasis is placed upon cross-cultural diversity and only a few pages in the final section are devoted to intracultural variation (see Jorits, chapter 10, this volume, and Barnard and Widlök, chapter 4, this volume, for discussions of intracultural variability). Finally, the anthropologists who conducted the research on the four foraging groups collected most of their data with a limited subpopulation (generally 200–400 individuals). The study of one subpopulation is utilized to make generalizations about the whole ethnic group. This is problematic as there are over 20,000 individuals in three of the ethnic groups and over 6,000 individuals among the Efe (see Table 9.1). Although there are problems with comparative studies, this does not mean that they should be abandoned: rather, it implies that one should be aware of the limitations of these studies and interpret the results cautiously. Examining diversity is vital to prevent stereotyping; my own field experiences with each of the four groups and the ethnographic descriptions of others indicate that dramatic differences between these groups do exist.

Linguistic diversity

Table 9.1 summarizes the linguistic distinctions between the four foraging groups and their farming neighbors. The Efe are the most distinct linguistically as their language comes from a language phylum totally different from that of the other three. The Aka and Mbuti are the most similar, even though they are hundreds of miles apart, in that they both speak Bantu languages. Conventional practice in ethnography is to drop a Bantu prefix when writing about the population. Consequently, BaAka are called Aka and BaMbuti are called Mbuti in the literature. The

Table 9.1. *Linguistic affiliations*

	Forager group			
	Efe	Mbuti	Baka	Aka
Phylum	Nilo-Saharan	Niger-Kord	Niger-Kord	Niger-Kord
Family	Chari-Nile	Benue-Congo	Adamawa-Oubanguiian	Benue-Congo
Number of principal farming groups living in association	3	4	15	19
Linguistic families of these groups	Chari-Nile	Benue-Congo	Benue-Congo (13) Adamawa-Oubanguiian (2)	Benue-Congo (11) Adamawa-Oubanguiian (8)
Closest farming ethno-linguistic group	Lese	Bira	Ngbaka	Ngando
Estimated population	6,000	27,000	25,000	30,000

Baka, who live just across the Sangha River from the Bantu-speaking Aka, speak a language from a completely different linguistic family (i.e., Oubanguiian). Some people tend to group Aka and Baka altogether as their ethnic designations sound so similar and their territories are contiguous. For instance, anthropologists who have read my book on the Aka have said that they show the National Geographic film *Baka: People of the Forest* to illustrate Aka parent-child relations. While the intimate parent-child relations implicit in the film are reasonable representations of Aka parent-child relations, the Baka are linguistically and culturally (see following sections) very different. For instance, Bantu languages require singular and plural prefixes for nouns (e.g., BaAka or BiAka are plural and MouAka is singular), whereas the Baka's Oubanguiian language does not require singular and plural prefixes for nouns.

There is some evidence for an original forest forager language (Bahuchet 1989), yet all forest foragers who are known to the ethnographic record have adopted languages of their current or previous farming neighbors. The Efe usually live in association with Lese, Mannvu, and Mangbetu, all of whom speak languages from the same linguistic family as the Efe; the Mbuti usually live in association with the Ndaka, Bila, and Budu farmers, all of whom speak languages from the same language family as the Mbuti. In the western Congo-Zaire basin, a very different pattern exists. Baka are unique by comparison to the three other forager groups as only two of the fifteen ethnic groups with whom Baka have social and economic relations speak languages from the same linguistic family. This, of course, does not limit Baka communication since they are fluent in the language of their farming neighbors. Yet the reverse is seldom true in that their farming neighbors infrequently speak the Baka language. Consequently, the Baka and Aka are often described as speaking their own language, which is unintelligible to their farming neighbors, while the Mbuti and Efe are often said not to have a language of their own, which means they speak the same language as their farming neighbors, or one similar to it.

Explaining the linguistic diversity among forest foragers is beyond the scope of this chapter. Bahuchet's (1993) recent three-volume study of this topic is a significant contribution, but several questions remain.

Diversity in subsistence and settlement patterns

Table 9.2 summarizes differences and similarities in selected features of subsistence and settlement (see Vierich and Hitchcock, chapter 5, this volume, and Barnard and Widdlok, chapter 4, this volume, for discussions of cultural diversity in Basarwa subsistence and settlement). The

Table 9.2. *Subsistence and settlement*

	Efe ^a	Mbuti ^b	Baka ^c	Aka ^d
<i>Subsistence</i>				
Primary hunting technique	bow	net	spear	net
Net hunters only – males or females as beaters?		females		males
% daily calories provided by meat	13.3–27.0	35.0–86.0	ND	36.0
Time allocation – men only				
% of time hunting-gathering while in forest camp	44.6	ND	ND	67.2
% of time hunting-gathering while in village camp	23.4	ND	ND	0.0
% of time working for villagers while in village camp	7.8	ND	ND	17.8
% of diet from cultivated foods/% of diet from wild foods	63.5/36.5			55.0/45.0
% of calories from females	6.5	50	ND	4.5
Collection of fish and shellfish by women	important	not important	important	not important
<i>Settlement</i>				
Distance to most forest camps	4–5 km	5–15 km	4–8 km	15–40 km
No. of months/year in forest	5	8	4–5	7–8
Mean camp size	17.8	37.4	31.7	25.5

References:

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

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

^c Vallois and Marquer 1976.

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

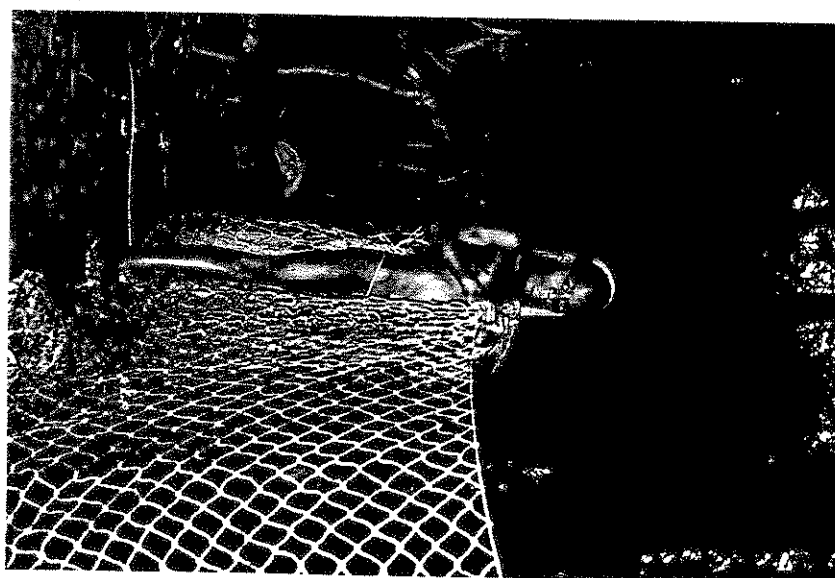


Figure 9.2 Aka and Mbuti use nets that are about 1 m tall and anywhere from 10 to 150 m long. This Aka boy is checking the net for tears before the net hunt begins

primary hunting techniques reflect important distinctions in the sexual division of labor between the foraging groups: men, women, and children participate in the Mbuti and Aka net hunts (Figures 9.2, 9.3), whereas generally only men participate in the Efe bow and Baka spear hunts. Efe and Baka women seldom hunt and spend much of their time working in the fields for village women. The differences in the sexual division of labor appear to be associated with other features of subsistence and settlement. For instance, net-hunting Mbuti and Aka acquire a greater percentage of their calories from meat and wild foods and go somewhat farther into the forest for longer periods of time. Aka men seldom hunt while they are in the village and Aka and Mbuti women

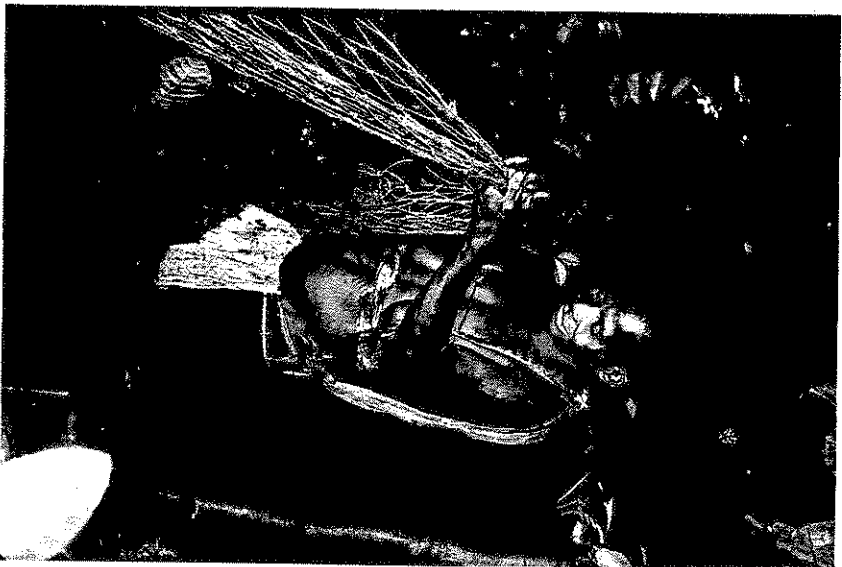


Figure 9.3 Net hunts involve both men and women. This Aka woman is collecting the net after a cast of the nets

seldom collect fish or shellfish. Efe and Baka, on the other hand, who have separate male and female subsistence activities, tend to stay closer to the village for longer periods of time and acquire fewer calories from meat and wild foods. Efe men hunt from their village camps and Efe and Baka women frequently collect fish and shellfish, an important supplemental source of protein for those who acquire less meat through hunting.

The interests of men and women in these two patterns (i.e., male-female cooperating vs. male-female separate) are quite distinct. Bailey and Peacock (1988) indicate that the "village world" versus "forest world" dichotomy that Turnbull (1965b) uses to distinguish Bila farmers and Mbuti foragers is useful in describing the different interests

of Efe men and women: Efe men prefer to go hunting in the "forest world" whereas Efe women prefer the subsistence regularity and certainty of the "village world." The different preferences of Efe men and women are one reason why Efe spend less time in the forest than Mbuti and Aka, usually establish camps within a four-hour walk of the village, and have less meat in their diet. Camps a short distance from the village allow Efe women to return to the village to acquire village foods. Efe men also go hunting in the forest while residing in a village camp because the family stays in the village camp for most of the year. The Baka gender task dichotomy today may not be as pronounced as the Efe dichotomy (Joiris, personal communication), yet Vallois and Marquer (1976) and Dodd (1979) indicate that men's and women's activities in the recent past were separate (e.g., men spear-hunting and collecting honey; women fishing and collecting fruits and tubers), as they are today, and in contrast to the Aka and Mbuti patterns where male and female subsistence interests are relatively more similar.

Other features of net hunting also contrast with archers and spear hunters. The average net hunt lasts 6–8 hours and covers 8–15 kilometers (Tanno 1976; Hewlett, personal observation); the average bow hunt lasts three hours and covers 7–8 kilometers (Bailey 1991). Net hunters tend to hunt 5 or 6 days per week (Hart 1978; Hewlett 1991); archers tend to hunt 2 or 3 days per week (Bailey 1991) while they are in forest camps. Comparable data for Baka spear hunters who hunt for medium-size game do not exist. Spear hunting for elephant is practiced by all the groups and usually involves very long hours and great distances. The differences between net hunting and bow hunting suggest that net hunters are the more intensive foragers, as might be expected, because they acquire more of their village foods (e.g., manioc, corn, etc.) through trading game meat rather than by labor exchange. Efe archers acquire their carbohydrates in exchange for the labor of Efe women. The nature of Baka spear hunting is presumably similar to Efe bow hunting because the sexual division of labor is separate rather than cooperative and forest camps are close to villages.

Are the Efe and Baka more dependent upon villagers than Aka and Mbuti?

Efe and Baka camp closer to villages (Figure 9.4), spend more time in the village, and eat more village food than Mbuti and Aka, but does this mean that they are more "dependent" on villagers? This question has been raised by several Iuri ethnographers. Turnbull (1965b) and Putnam (1948) indicate that Efe archers are more dependent on villagers



Figure 9.4 Baka spend much of the year in semi-permanent village camps. This is a small Baka village camp in southern Cameroon

because bow hunting is less efficient than net hunting, therefore they stay close to the village to acquire regular and sufficient amounts of food. This propinquity and "dependence" has led to similarities between the social-political organization of the villagers and the Efe; a lineage system, greater hierarchy, less egalitarianism, and more formalized exchange relations. Harako (1976), on the other hand, suggests that net hunters are more dependent on farmers than are archers because women participate in the net hunt. Harako assumes that before women started net hunting they gathered vegetable foods, which contributed the majority of the calories to the diet. When women participate in the net hunt they have to give up the collection of wild foods, which means the group becomes more reliant on farmers for their carbohydrates. The supposed result is that net hunters have less flexibility because they must trade with farmers to acquire carbohydrates while archers are not as strictly tied to villages because women still collect wild foods. Harako also indicates that net hunters' closer economic ties with farmers leads to increased social and religious ties (i.e., acculturation and dependence).

Harako's field data were reanalyzed by Abruzzi (1979) and Milton (1985) to examine differences in Efe and Mbuti hunting techniques and dependence on villagers. These researchers came up with completely

opposite results! Abruzzi believes Efe rely more heavily on villagers while Milton believes the reverse. Their hypotheses will be discussed in greater detail in the next section.

The Mbuti-Efe dependence debate assumes that the foraging group that lives closer to villagers and eats more village foods is more acculturated and less traditional. In fact, all of the forest foragers depend rather heavily on the domestic crops of the villagers. However, the number, diversity, and nature of religious, ritual, and social activities that foragers and farmers have in common are more often related to the length of time foragers and farmers have been living in association with one another than with the foragers' dependence on village food. In this regard, the relations of the bow-hunting Efe and the net-hunting Mbuti with farmers appears more similar than those between Aka and Baka foragers and their neighboring farmers. The Efe and Mbuti speak languages that are very similar, if not identical, to the language of their long-time Lese and Bila neighbors. They also share many ritual activities with their village neighbors (e.g., male initiation ceremonies, marriage). The Aka and Baka, who have most lived near village farmers for about 100 years, tend to speak their own languages and retain more separate traditions.

However, outward appearances of similarity can be misleading and some confusion may have been compounded by a lack of data; long-term studies did not exist when Turnbull and Harako made their arguments. For instance, Harako assumed Efe acquired a good percentage of their diet from collected wild foods, which we now know is not true (Bailey and Peacock 1988). Actually, there is currently no evidence to suggest that Efe or Baka social life (e.g., egalitarianism, autonomy, leadership, dispute resolution, child rearing), forest life, or ethnic identity is closer to that of farmers than that of Mbuti or Aka. Efe and Baka have simply developed different strategies for dealing with their farming neighbors.

Why are there different subsistence technologies among African tropical forest foragers?

This question reflects another lively debate that has emerged from research in the Ituri – why are there archers and net hunters in the same forest? The basic assumption has been that net hunting is more efficient and productive than bow hunting; consequently, researchers, such as Turnbull (1965b) and Harako (1976), explained Efe's persistent use of the bow as related to concerns other than immediate hunting returns. Turnbull indicated that Efe developed closer relations with farmers in

order to compensate for the lowered efficiency. He (1968) also suggested that forest game was plentiful and thus it did not matter which hunting technique was utilized. Harako suggested nets were introduced by Bantu-speakers and only those foragers who associated with Bantu-speakers adopted the use of nets. The Efe continued their relations with Lese and other Sudanic speakers who used bows rather than nets.

Turnbull's and Harako's hypotheses and data have generated several analyses and more detailed research by ecological anthropologists. Abruzzi's (1979) reanalysis suggested that an increase in population density created by farming groups moving into the Ituri reduced the forest areas available for hunting, which in turn led to intensification of hunting effort and consequent adoption of net hunting by Mbuti; Efe did not adopt nets because they received more foods from villagers and relied less on forest resources. Milton (1985) also reanalyzed Harako's data but suggests instead that distinctive hunting techniques existed because the forests of the Mbuti and Efe were different. Net hunting was adopted in less diverse, relatively unproductive and resource-poor forest areas where *Gilbertiodontomys devereuxi* species dominated. In forested areas with greater species diversity (*Cynomys*-*Brachystegis* forest) game was more plentiful and therefore it was not necessary to adopt nets; bow hunting would be sufficient.

As stated above, these hypotheses assume that net hunting is more efficient than bow hunting. Ichikawa (1982), Terashima (1983), and Bailey and Aunger (1989) have examined this assumption by comparing how many kilograms of game meat are acquired per person/hour with net and bow hunting. After summarizing several systematic and quantitative studies from the Ituri they have indicated that there are no differences in hunting efficiency. More game is captured on net hunts, but there are generally twice as many people involved as on the bow hunts because women and children participate in the former. Thus, there are no statistical differences in the amount of game captured per person/hour.

Because some of their findings differed from earlier hypotheses, Bailey and Aunger (1989) recently field tested Abruzzi's and Milton's ideas. They found no difference in the composition or diversity of forest areas, and generally no difference in population densities in net- and bow-hunting areas. This contradiction may be partly due to the fact that Abruzzi and Milton never conducted fieldwork in the areas, but developed their hypothesis on the basis of knowledge of other areas.

Bailey and Aunger offer an alternative hypothesis based upon their findings that Mbuti net-hunting women bring in more calories by participating on the net hunt than by working in the villagers' fields,

whereas Efe women bring in more calories by working for villagers. The authors demonstrate that Lese and Mamvu fields are larger than Bila and Budu fields, so Efe women who work for Lese and Mamvu get more in return (i.e., more calories) for their labor than do Mbuti women.

The value of Efe women's labor in villagers' fields is greater than that of Mbuti in large part because the Lese and Mamvu fields worked in by Efe are larger. Lese and Mamvu can give more because they have more. But why are Lese and Mamvu fields larger? Bailey and Aunger argue that Lese and Mamvu live in more remote areas and therefore have fewer opportunities for a cash income. They therefore have to grow more of their food than do Budu and Bila, who live along frequently traveled roads. However, in one of their tables (ibid.: 228), they show that Mamvu have coffee plantations twice the size of all groups investigated, which suggests Mamvu do have cash incomes.

An alternative hypothesis is that Lese and Mamvu fields are larger because they have regular, almost daily, help from Efe women and can therefore cultivate larger areas. This coincides with the fact that net hunters capture more game than bow hunters because there are more people on the hunt. Wrangham and Ross (1987) have demonstrated that a prime factor in determining the size of a Lese family's field is the number of relatives it has to depend upon. Efe women are relatives to Lese. Bila and Budu fields are smaller because they do not have Mbuti women to help them out on a regular basis.

If the return of calories is similar, then the development of net hunting versus bow hunting has less to do with subsistence efficiency than with cultural history. That is, Efe women work in villages because it is part of an evolved cultural pattern established with villagers. There are several ways to adapt to a particular environment; again, net hunters have established relations with farmers in one way while bow or spear hunters have established relations with farmers in another way.

The local economy may well play a role in the development of those relations. Bailey and Aunger found that meat in net-hunting areas had a greater currency value and greater exchange value than in bow-hunting areas. This assumes that the increased demand for meat comes from larger towns and good roads in the area, both of which encourage meat marketing. Bailey and Aunger hypothesize that if the value of meat increased in bow-hunting areas, women would participate in bow hunting or possibly adopt net hunting.

The most recent paper in this debate (Wilkie and Curran 1991) reconfirms Ichikawa's and Terashima's findings that net hunting is not more efficient than bow hunting and also complements Bailey and Aunger's hypothesis of bushmeat market economy affecting hunting

methods. The authors indicate that net hunting focuses almost exclusively on small to medium-sized ungulates (e.g., duikers, antelopes, chevrotaïns) and further indicate that bow hunting is better utilized for a greater diversity of animal species. Although the authors believe net hunters target medium-sized ungulates for bushmeat trade they do not provide evidence to support their contention that ungulates are preferred or have a greater monetary value per unit effort at the market than do monkeys or other game that are hunted with bows.

Wilkie and Curran do not provide historical evidence to support their bow- to net-hunting hypothesis. It is necessary to ascertain when bushmeat markets were established and then try to determine from ethnohistorical data if net hunting happened in the area previous to the development of these markets. Wilkie and Curran, and Bailey and Aunget, indicate that the frequently traveled Kisangani-eastern Zaïre road that passes through the Ituri has contributed greatly to the development of a lucrative meat market. Truck drivers and other travelers purchase bushmeat relatively cheaply in the Ituri and transport it to market in population centers in eastern Zaïre or Kisangani. Indeed, most of the groups along this road are net hunters. The implication of the meat-market hypothesis is that the construction of this road increased market capabilities and contributed to the shift to net hunting.

There is no question that bushmeat markets have dramatically influenced the social, economic, and religious life of forest foragers (Banhart 1985; Hart 1978; Ichikawa 1991), but to suggest that bushmeat markets were a prime mover in the shift from bow hunting to net hunting is questionable.

The Kisangani-eastern Zaïre road was the first road to be constructed in the Ituri and was opened in the early 1930s (Harako 1976; Ichikawa 1991). The meat-market hypothesis suggests Mbuti should have been bow hunting before this road contributed to the development of meat markets. Ethnohistoric data suggest that this was not the case; thirty or more years before construction of the road, several early travelers to the Epulu area describe Mbuti net hunts as they are known today (i.e., with male and female participation). Schebesta does not mention the meat trade and Turnbull, who did his work in the late 1950s, does not mention meat-market trade among the Mbuti in Epulu, which is a regular and important rest stop for most travelers. Hart (1978) and Ichikawa (1991) indicate Ituri meat-markets developed in the late 1950s and early 1960s as Nande peoples moved into the Ituri from eastern Zaïre. While there has probably always been some meat-marketing on this road, it appears that the frequency and intensity of meat trading increased dramatically just after independence.

Comparative data from the Baka and Aka also question the validity of Wilkie's and Curran's hypothesis. The Aka in the Central African Republic are generally involved in meat-markets because roads are relatively good and there are several large towns to market the meat. The Aka in the interior regions of northeastern Congo, on the other hand, are not actively involved in meat-markets because roads and large villages are rare. Aka in both areas use nets most of the year.

Data from the Baka of southeastern Cameroon are more instructive because they do not use nets and have more subsistence and settlement patterns in common with the Efe. Regular public transport is available on most SE Cameroon roads. By comparison, this service seldom exists in the Mbuti, Aka, and Efe areas. SE Cameroon is more "developed" than the other areas because it is closer to the populated areas of West Africa and it is near the Douala seaport. People have moved into the forest from populated coastal areas of West Africa and it is relatively easy and inexpensive to export forest hardwoods, such as mahogany, and cash crops, such as coffee and cacao. Consequently, there are more people with more money to purchase highly valued game meat. There are extensive meat-marketing systems and the monetary and exchange value of game meat is at least twice as high in Cameroon than it is in the Central African Republic or Congo. The Baka have responded to all of the changes in several ways, but they have not taken up net hunting even though farmers in the area (e.g., Fang) have nets. Baka continue to spear hunt for medium-sized game, but now also rely heavily on trap lines. Baka women do not participate in hunting nor do they adopt the use of nets in spite of the above-mentioned high monetary and exchange value of game meat.

Finally, as noted above, linguistic data suggest language affiliation may be a useful factor for understanding the distribution of net hunting in the Ituri (see Ichikawa and Terashima, chapter 11, this volume, on how language influences plant use in the Ituri). A strong, but far from perfect, relationship exists between speaking a Bantu language and net hunting. The Aka and Mbuti speak Bantu languages and both net hunt; in fact, there are several differences between Mbuti and Aka in the organization of net hunts, but only one is listed in Table 9.2: Mbuti women chase the game into the net and the men usually stay near the net and kill the game after it is trapped, while among the Aka it is just the reverse. This is listed simply to illustrate the diversity and flexibility in the types of net hunting. Efe and Baka do not speak Bantu languages and do not net hunt even though other foragers or farmers in their area use nets. The Bongo foragers of Gabon and the Gyieli foragers of Cameroon are both Bantu-speaking foragers and both utilize nets. The Bantu-

speaking Bila and Budu neighbors of the Mbuti use nets, but the Sudanic-speaking Lese and Mamvu neighbors of the Efe do not use nets. The Mangbetu, who are also Sudanic speakers in northeastern Zaire, use nets and say they learned to do so from the Azande. Of the thirteen Human Relations Area Files societies located in Central Africa, five are described as actively using large nets for cooperative (men only) hunting. Four of the five societies are Bantu speakers (Fang, Ganda, Mongo, and Bemba). The Azande are the only Central African non-Bantu-speaking group in the HRAF that uses nets.

The point is that language and the socialization process associated with the acquisition of language and culture dramatically influence cultural preferences – in this case the preference to use one hunting technique rather than another. Boas pointed out long ago that emotions are intricately bound to habits or customs. For instance, individuals generally have strong emotions about what foods are edible. When I ask undergraduates if they could eat caterpillars or termites, I generally get a rather strong emotional negative response. Individuals often cannot tell you why they do or do not like things one way rather than another, but they often have strong feelings about which is better. Cultural transmission mechanisms among forest foragers are also rather conservative (Hewlett and Cavalli-Sforza 1986), which means the adoption of new hunting technologies would be difficult, especially given the recent research which shows no difference in efficiency between nets and bows. If cultural traits are not under selective pressures, then they persist. Boyd and Richerson (1985) also point out that individuals usually adopt new traits from other individuals for one of two reasons: the individual with the new trait is similar (i.e., speaks the same language, looks the same) to the individual without the trait, or the individual with the new trait is more successful. Efe children learn to bow hunt from their family members who speak the same language and Efe adults do not adopt nets because the foragers they see using them are not more successful at acquiring calories.

Ecologists have expended tremendous amounts of time and energy in attempting to understand and demonstrate how different hunting techniques are adaptive to different environments (see Vieri and Hitchcock, chapter 5, this volume). Their research is useful and significant – for instance, it has shown that net and bow hunting are equally efficient – but more consideration and systematic research is needed on the roles that cultural history, cultural transmission, and symbolic systems play in patterning people's preferences in hunting techniques (see Kent, Silberbauer, Joinis, Ichikawa and Terashima, and Barnard and Widdlok, all in this volume, on the importance of symbolic systems).

Table 9.3. *Marriage, kinship, and descent*

	Efe ^a	Mbuti ^b	Baka ^c	Aka ^d
Kinship	Hawaiian	Hawaiian	Hawaiian	Hawaiian
Descent	patrilineal	patrilineal	patrilineal	patrilineal
Marriage payment	sister exchange small gifts	sister exchange small gifts	bride service small gifts	bride service small gifts
Post-marital residence	patrilocal	patrilocal	patrilocal	patrilocal
	flexible	flexible	flexible	flexible
Polygyny rate	3.0	14.0	19.5	17.5
% Pygmy females that marry village males	common (13%)	rare	rare	rare

References:

- ^a Bailey 1985; Peacock and Glinker, personal communication.
^b Turnbull 1965b; Harako 1976; Ichikawa 1978.
^c Vallois and Marguer 1976; Bahnuchet 1992.
^d Hewlett 1989, 1991.

The different subsistence technologies among African tropical forest foragers today may have little to do with contemporary ecological and economic conditions. Nets were adopted by foragers who associated with Bantu speakers, possibly, as Bailey and Aunger (1989) suggest, because Bantu farmers often gave and continue to give their nets to foragers to use in exchange for part of the catch. The foragers often end up keeping the nets because farmers do not net hunt much any more. Other foragers may like the nets simply as an optional hunting method, but do not want to invest the time and energy to make the large nets.

Kinship, marriage, and descent

Table 9.3 summarizes the similarities and differences between the Mbuti, Efe, Aka, and Baka in kinship, marriage, and descent patterns. These four groups are remarkably similar; all have Hawaiian kin terms, patrilineal descent, and patrilocal post-marital residence. These characteristics resemble the patterns of most farmers with whom foragers associate, so it is unclear whether the patterns existed before relations were established with farmers or whether foragers adopted these patterns from farmers and modified them in their own ways. However, beyond the surface patterns the differences between foragers and farmers are striking. Foragers' versions of Hawaiian kinship terminology are more classificatory or generalized than are farmers'; adult foragers' ideology about patrilineages is not strong and utilization of

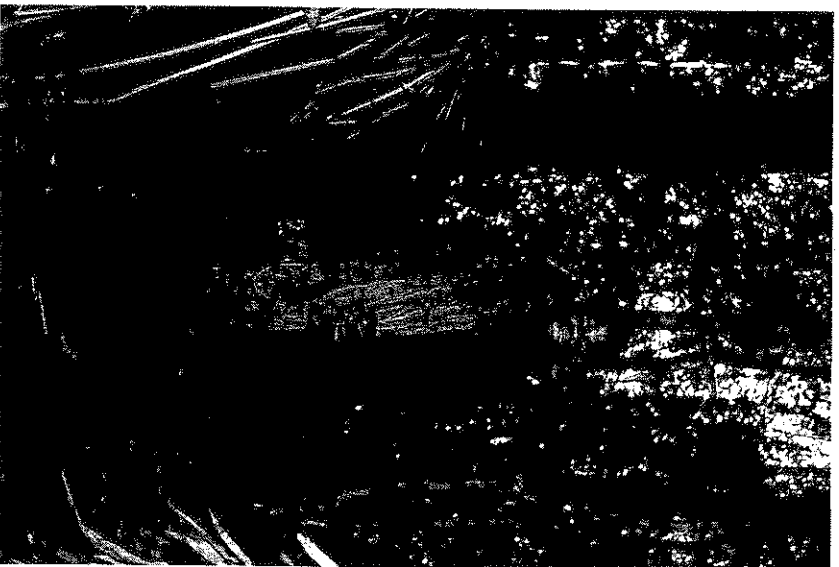


Figure 9.5 Aka and Baka men live in the camp of their wife for several years before moving back to the camp of their patriline. This Aka man will carry the net of his in-laws as part of his bride service

patrilineages is more flexible (e.g., mother's relatives are important and are often recognized with a specific term) and less precise than that of farmers (e.g., adult farmers often identify 5–6 generations of patrilineal links while foragers generally identify only 2–3 generations of patrilineal links); post-marital residence is more flexible among foragers than farmers as foragers frequently visit in-laws and distant relatives for long periods. The comparative data also indicate that several of the earlier characterizations (Turnbull 1965b) of forest forager descent as bilateral and post-marital pattern as bilocal are incorrect. The African forest forager bands are not organized for warfare nor do they have a strong patrilineal ideology as Service suggests. Nonetheless, though patterns

are flexible, they do tend to practice patrilineal residence where related men hunt together.

Form of marriage payment is interesting because there are distinct western versus eastern Congo–Zaire basin patterns: in the east, Efe and Mbuti prefer sister exchange, while in the west, Aka and Baka prefer bride service (Figure 9.5). The similarities between each of the two neighboring groups suggest the following possibilities: (1) similar marriage rules between the two proximate groups (Baka and Aka or Efe and Mbuti) exist to facilitate easy intermarriage today or in the past; or, (2) in the past, before bride wealth became common, farmers and foragers in the east practiced sister exchange and farmers and foragers in the west practiced bride service. The first hypothesis suggests forest forager marriage patterns remained relatively distinct from farmers' marriage patterns. This seems reasonable in today's context because most forest farmers' marriage practices are distinct from those of foragers – i.e., farmers practice bride wealth while foragers practice bride service or sister exchange. Intermarriage between Aka and Baka or Efe and Mbuti occurs today, but it is relatively infrequent (see Ichikawa and Terashima, chapter 11, this volume).

The second hypothesis suggests foragers and farmers shared marriage patterns in the past, possibly to facilitate easier intermarriage between foragers and farmers. There is some support for this hypothesis. In the east, Lese, Mamvu, Mangbetu, and Bila say that they practiced sister exchange before colonial times and some Lese continue to use this type of marriage today (Bailey, personal communication). In the west, the Kwele, Kondebembe, and Bangandou with whom the Baka associate say that bride service was a common practice in the past and that some families practice it today (Joiris, personal communication). While foragers and farmers may have shared marriage patterns in the past, there is no evidence to suggest that foragers adopted farmers' patterns rather than the reverse. The proposition that forest foragers and farmers had much closer relations in the past is consistent with Bahuchet's (1992) recent ethnolinguistic analysis of forest foragers.

There are also differences in polygyny rates and the frequency with which foragers intermarry with farmers. The Efe polygyny rate is substantially lower than that of the Mbuti, Aka, and Baka. This is apparently due in large part to the relatively high frequency with which Efe females marry Lese farmers (Bailey 1988) (see also Blackburn, Vierich and Hitchcock, and Blurton Jones *et al.*, this volume, for greater discussion of hypergyny and marriage between foragers and farmers/pastoralists). Such intermarriage always involves Efe women and Lese men, therefore there are simply fewer Efe women for Efe men to marry.

Table 9.4. *Infant care and demography*

	Efe ^a	Mbuti ^b	Baka ^c	Aka ^d
<i>Infant care</i>				
Women other than mother nurse infant	common	rare	rare	rare
Multiple caregiving in early infancy	very common	common	common	common
Father's role in infancy	distant	very close	close	very close
Secondary caregiver	other female	father	older sibling	father
<i>Demography</i>				
adult male/adult female ratio	110	88	89	80
percentage of adults	76.0	47.1	46.3	52.0
percentage of children (< 15 years of age)	24.0	52.9	53.7	48.0
TFR (Total Fertility Rate)	2.6	5.5	ND	6.2
infant mortality	12.0	33.0	ND	20.0

References:^a Bailey 1985, 1988; Morelli 1987; Tronick *et al.* 1987; Winn *et al.* 1990.^b Turnbull 1965b, 1986; Ichikawa 1978.^c Vallois and Marquer 1976; Leonhardt, personal communication.^d Hewlett 1989, 1991.

Why is there more intermarriage among the Efe and Lese than between other forager and farmer groups? There are at least two possible explanations. First, Efe and Lese both have remarkably low fertility (see Table 9.4). Village men are generally not very interested in marrying forager women, but under low fertility conditions where a woman may have only one child, a village man may be willing to marry a forager woman, especially as a second wife, in order to increase his chances of having children. Also, bride price for forager women is substantially lower than that for village women. Second, Lese are the poorest farmers in the Ituri region and it is difficult for Lese men to attract women from their own or other ethnic groups; finally, Lese women often marry wealthier men from other ethnic groups, so there is a shortage of Lese women. Since Lese are marginal farmers in the area, they frequently go into the forest to trap game. Consequently the Efe and Lese share not only language and ritual, but utilization of the forest as well.

The frequency of forager-farmer intermarriage also seems to increase where foragers adopt farming and where farmers experience low fertility. In 1979 Dodd states that "in Lomie . . . 4.5% of married Baka women are married to Bantu, in Abong Mbang area the figure is 8.6% and in the Bessamena region the figure is even higher." Bessamena is about 300 km from Yaoundé, the capital of Cameroon, while Abong Mbang is 350 km and Lomie 380 km from Yaoundé. The Baka in these more densely populated areas relatively close to the capital are more likely to have started farming; most Baka live to the south and east of Lomie where intermarriage is less common. Vallois and Marquer (1976) indicate that Baka-Bantu marriage in the late 1940s was very rare. Dodd indicates that Bantu men in these areas near Yaoundé marry Baka women for their high fertility; many Bantu women are infertile because of venereal disease. Again, it is always Bantu men marrying Baka women rather than the reverse. It would be interesting to know if it is the poorer Bantu men in these towns who are marrying the Baka women.

In summary, the Efe and Baka data suggest forager-farmer marriages are most likely to occur when the following conditions exist: (a) female farmers have relatively low fertility, and (b) either farmers are very similar to foragers or foragers are very similar to farmers.

Infant care and demography

This section explores two distinguishing features of infant caregiving among African tropical forest foragers: father's involvement with infants, and multiple caregiving. These two features of infant care have recently been described by two independent research projects on two

different groups of African forest foragers. As part of the Ituri Project, Edward Tronick, Gilda Morelli, and Steve Winn have worked with the Efe archers of the Ituri Forest in northeast Zaire and have identified multiple caregiving of infants as a distinguishing feature. I have worked with the Aka net hunters of the Central African Republic and have indicated that Aka fathers do more infant caregiving than fathers in any known culture. Each research project has offered explanations for the infant caregiving practices in their particular foraging population. This section examines the following question: Do all African forest foragers have these features of infant care or are they unique to these populations? Forager demography is considered in this section because I believe these factors are important for answering this question (see Blurton Jones *et al.*, chapter 7, this volume, for an excellent discussion of relations between childcare and demography).

Multiple caregiving

Tronick, Morelli, and Winn have identified multiple caregiving as a distinguishing feature of Efe infancy (1987). The bases for this characterization of Efe include: (1) the Efe mother was often not the first to nurse her infant, and during early infancy women other than the mother nursed the infant; (2) Efe 4-month-old infants spent only 40 percent of their time with their mother; (3) Efe infants were transferred frequently – 8.3 times per hour on average for 4-month-olds; and (4) many individuals contributed to the Efe infant's care – an average of 14.2 different people cared for an infant during eight hours of observation.

Qualitative data for the three other forager groups are given in Table 9.4, but comparable quantitative data exist only for the Aka. The following Aka-Efe comparisons on multiple caregiving apply only to 4-month-olds. The Efe study included 3- and 7-week-olds as well, but comparable data for Aka do not exist.

First, consistent with the Efe data, Aka mothers receive a substantial amount of assistance with infant care while they are *in camp*: mothers provide 34–45 percent of the infants' care while individuals other than mother provide the major portion of care. Unfortunately, all observations were conducted in camp so it is not known if Efe multiple caregiving exists outside that context. Aka data on infant caregiving outside camp (i.e., on the net hunt) indicate that multiple care does not occur very frequently; almost 90 percent of the infants' care is provided by mother. Thus, extensive multiple caregiving occurs in particular contexts. Turnbull has also described extensive multiple care in camp

among the Mbuti (1978:172), and recent ethnographers among the Baka have indicated a similar pattern.

Second, also consistent with the Efe study, Aka infants are frequently transferred *in the camp*. Four-month-old Aka infants are transferred 7.3 times per hour, while Efe 4-month-olds are transferred 8.3 times. But again, the context or setting substantially influences the transfer rate. While on the net hunt, which lasts six to seven hours per day while in the forest, Aka infants are transferred only twice per hour on average.

Third, somewhat like Efe, Aka are cared for by a number of different individuals during observational periods. On average, 7.0 different individuals held the Aka infant during 12-hour observation periods. This is substantially lower than the 14.2 different individuals for the Efe.

Fourth, unlike the Efe, Aka mothers are always the first to nurse their infants. Seventeen of 18 mothers who were interviewed within six months of giving birth indicated that they were the first to nurse their infant and that no other woman had ever nursed their infant. A number of them said it took a day for their milk to come in so they gave their infant water until they were able to nurse. Aka mothers did not give their infant colostrum – all the mothers reported expressing their colostrum into the fire. The women indicated they would not let another woman nurse their infant because she might pass along *ekila* through her milk. The illness is characterized by convulsions and is attributed to eating taboo foods. The one mother who did report letting another woman nurse her newborn indicated that she did so because it took one week for her milk to come in. The interview data are consistent with the observation data: at no time did a woman other than the mother nurse an infant. In contrast, Efe mothers were never the first to touch or hold their infants. Usually an older female-in-law cleaned the infant and took it to the hut until the mother arrived (Aka women give birth outside of camp). Ethnographic descriptions of Baka and Mbuti are consistent with the Aka pattern in that only mothers are reported nursing their infants.

Why do the Efe appear to have an especially pervasive multiple caregiving pattern, as is demonstrated by the frequent occurrence of women other than mother nursing infants and the number of different caregivers per infant? Tronick *et al.* indicate that Efe multiple caregiving functions to meet the infant's biological demands for fluids and energy supplies as well as the cultural demands to develop cooperation, sharing, and group identification. Some of the problems with their hypothesis have been discussed elsewhere (Hewlett 1989). Only a few points will be mentioned here: (1) Aka birthweights are similar to Efe

birthweights so the biological demands are similar, but multiple caregiving is different; (2) cooperation is especially important for Aka because women, men, and children regularly participate together on the net hunt, but the pervasiveness of Aka multiple care is less than that of the Efe; and (3) mothers in other foraging groups (e.g., !Kung) do not receive as much assistance with infant care as do Efe mothers, yet they are equally cooperative, or more so.

An alternative hypothesis may be that Efe multiple caregiving is more of a response to unique demographic patterns: 47 percent of postmenopausal women have had either no live births or only one (Peacock 1985) and children constitute only one-fourth to one-third of the population (Bailey and Peacock 1988). Peacock (1985) indicates that women without dependent children spend about 6 percent of their time in child care (compared to 16 percent of time for mothers with dependent children). This means that nearly half of the Efe adult females in camp are available and active in child care. In contrast, all of the other forest foragers have relatively high fertility, which means that most females in camp usually have a nursing infant and would have a difficult time helping out another woman regardless of the cultural values of sharing and cooperation. Table 9.4 summarizes some infant care and demographic features of the Efe.

While Efe multiple care is distinctive in some ways, multiple caregiving does appear to be a common feature of tropical forest forager socialization. Another demographic factor may contribute to this tendency: the density or compactness of settlement. Forager settlements are very compact and usually have three to nine households living within a 10–15-meter radius; by comparison only one or two farmer households would occupy the same area. As a result, forager camps are essentially open public places, and the infant and mother are exposed to all camp members, while village farmers' homes are relatively private. Thus, alternative caregivers are more available to and familiar with the forager infants than are the alternative caregivers in farmers' houses.

But why is multiple caregiving among forest foragers most likely to happen in the camp setting and why are there differences in who usually provides the assistance to mothers? While in camp, a woman's workload increases dramatically – women are responsible for food preparation, cleaning and repairing the hut, and the collection of firewood and water – while the workload of men and children usually decreases. Women need help with infant care while they do tasks; the camp's men and older children are sitting around or playing outside the huts and are generally available to help out. Table 9.4 indicates that, among the Mbuti and Aka, father is most likely to help out mother, while among the Efe and

Baka the older daughter or another female usually assists mother. Several factors are important for understanding who assists a mother. First, cultural precedents tend to be established during subsistence activity (see Blackburn, chapter 8, this volume, for a discussion of a similar concept – cultural assumption). Among the Efe and Baka, an adult or juvenile female often assists the mother with infant care while she works in villager fields (the primary subsistence activity of Efe and Baka women), and consequently a cultural precedent is established for infant care in other contexts or settings – i.e., the older female is likely to assist mother with infant care in camps, at dances, ceremonies, etc. Among the Aka and Mbuti, the father assists the mother with infant care on the net hunt because an older sibling cannot carry infants for long distances. Consequently, among the Aka and Mbuti, a cultural precedent is established for fathers' assistance, so they are more likely to help out with infant care in camp or other settings. I have also described elsewhere (Hewlett 1991) how extraordinarily close are husband-wife relations among the Aka, due in large part to the cooperative nature of the net hunt, and that closeness contributes to the increased role of father with infants. A biological factor should also be considered in understanding multiple care among forest foragers – the mother generally receives assistance from individuals who are genetically related to the infant – be it father, older sibling, grandmother, mother's sister, etc.

Intracultural variation in multiple care

In a separate paper, the Ituri researchers examined intracultural variability in Efe infant caretaking practices (Winn *et al.* 1989). They found that:

- 1 Fussier infants spent more time with mother.
- 2 Fussier infants had fewer caretakers.
- 3 Efe infants in larger groups were likely to spend less time with their mothers, were transferred more often, and encountered a greater number of different caretakers.

The researchers use (1) and (2) above to support Brazelton's (1972) contentions that a culture's practices and beliefs are partly shaped by the behavior of its infants, while (3) is given as an example of how variability within a culture can influence infant caregiving.

Aka data tend to support (1) and (2), but not (3). Fussy (more than five fusses per hour) infants spent about 15 percent more of their time with mother and averaged 1.6 fewer caregivers (4.0 versus 5.6) than those who are not fussy (63.4 percent versus 49.2 percent). These data seem reasonable since both Efe and Aka mothers are the primary caretakers

and mothers know their infants better than anyone else. Also, non-mothers may not want to hold fussy infants. But why do some infants fuss more than others? Aka infants often fuss to nurse, so those who are fussy may simply be hungrier or prefer to nurse more frequently. Also, they often fussed because they were under the care of another child or adolescent who played roughly with them. Fussier infants may simply be those who have less experienced alternative caretakers.

Group size among the Aka was not significantly related to multiple caregiving. Again, this may be a consequence of differences between Aka and Efe demographic patterns. It does not make a difference if Aka group size is 15 or 40, as most Aka women have an infant or small child to care for and are often unable to help out other women. Also, Aka fathers are usually helping out with their own infants or children. Among the Efe an increase in camp size means there are more women without infants to help out.

Fathers' role in infant care

In a recent study of Aka Pygmies of the Central African Republic, I found that Aka fathers provided an extraordinary (by cross-cultural standards) amount of direct care for young infants (Hewlett 1991). Specifically, Aka fathers: (1) were holding or were within an arm's reach of their infant 51 percent of a 24-hour period; (2) did 22 percent of the caregiving of 4-month-old infants in the camp setting; (3) were the second most active care givers (mother being the primary care giver); (4) provided most of their caregiving in the camp context and the least during the net hunt; and (5) were characterized by their intimate, affectionate, and helping-out style of caretaking, rather than by its playfulness.

Is intimate fathering a characteristic of all forest foragers or is it specific to Aka? The only comparable quantitative data come from Steve Winn's behavioral observations of Efe 4-month-olds in the camp setting. His data indicate that Efe fathers do significantly less caregiving than Aka fathers; Efe fathers hold their infants 2.6 percent of the time in the camp setting by comparison to 22 percent of the time for the Aka fathers (Winn, personal communication). Efe fathers are also not the secondary or even tertiary caregivers of their infants; several other females (older siblings, grandmother, mother's sister) provide more care (Peacock 1985). Winn subjectively describes Efe fathers as inactive, passively engaged in caregiving, and generally uncomfortable with infants; also, they seldom solicit infants. Efe fathers do not appear to be intimately familiar or affectionate with their infants or to be especially attached to them.

Winn's descriptions of Efe fathers are consistent with those provided by Bailey (1985) and Turnbull (1965b). Bailey found that men actively engaged in child care only 0.7 percent (about five minutes per day) of the daylight hours, but explained the low percentage as a consequence of only two of his 16 focal males having a child under the age of 4. Efe low fertility influenced this average childcare percentage. Bailey also indicated that "strong father-child attachments among Efe were uncommon. While fathers took on the responsibility of disciplining their children, they were no more likely to take care of their children than most other men in camp." This points to another distinction between Aka and Efe. Aka fathers seldom discipline the child – it is usually the mother who does the disciplining – while among the Efe the father contributes substantially.

Turnbull first identified net hunter-archer distinctions in father's role over twenty years ago. He states: "There is not only greater parity between the sexes among the net hunters, but the father enters more fully into family life than among the archers . . . The [net hunting] men are good fathers and, contrary to Schebesta's assertion for the archers, take pleasure in looking after their children" (1965b:232, 245).

While Efe fathers are not as involved in infant care as the Aka, Efe infants receive considerable care from several different males (Morelli 1987). Aka male care comes almost exclusively from fathers.

If one considers existing hypotheses for predicting the level of father involvement in human populations (Katz and Konner 1981), one would expect Efe fathers to be more involved with infant care than Aka fathers. Efe women contribute more calories to the diet than do Aka females (see Table 9.2), the polygyny rate is much lower among Efe, and the adult sex ratio indicates there are many more Efe adult males available to help out with child care than there are Aka males (see Table 9.4). The first two characteristics have been identified as critical variables in predicting high father proximity (Katz and Konner 1981). Existing models for understanding the degree of father involvement would predict that Efe fathers should provide more caregiving than Aka fathers. Just the reverse is true because Aka practice a subsistence activity where men, women, and children participate together on a regular basis. This subsistence pattern has implications for husband-wife relations and consequent parent-infant relations – women with infants have to walk far and need the help of another adult caretaker, and since fathers are often selected to help out, they become intimately familiar with and attached to their infants (Hewlett 1991).

Table 9.5. *Efe intracultural variability in father holding (after Winn, personal communication)*

Variable	n	Mean % time father holding
Number of father's brothers		
none or one	5	1.3
two or more	2	6.7
Infant birth order		
Firstborn	4	5.4
Later born	3	4.0
Age of father		
Under 30	4	5.4
Over 30	4	4.0
Sex of infant		
Female	3	7.1
Male	4	3.3

Intracultural variability in father's role

In comparison of Aka fathers who held their infant frequently with fathers who seldom held their infant, a generalized pattern of traits emerged. High-investment Aka fathers tended to have the following traits: no brothers, few relatives in general, wife from a distant clan, married relatively late in life, monogamous, a small hunting net, more reliance on individual hunting techniques (i.e., small trap), a close relationship with Ngandu villagers, and a family with no particular status (neither he nor his father held a position as leader, great elephant hunter, or healer). Aka fathers who seldom held their infant tended to have the opposite characteristics (Hewlett 1988). When a number of variables for predicting intracultural variability are considered, the data suggested that the higher-status fathers, that is those with more "kinship resources" (brothers), invested the least time in the direct care of their infants; a high-status male is one who has many brothers, two wives, and a father who was a leader, elephant hunter, or healer.

Steven Winn was very generous in sharing some unpublished preliminary data on Efe fathers so that I might examine Efe intracultural variability. As Table 9.5 indicates, the number of brothers a father has is also very useful for predicting the level of Efe father investment. One Efe father was especially active – he held his infant 19 percent of the time. Steve Winn indicates that the reason this father was so involved was that he had no living relatives in camp and his wife was not known to

the group (i.e., he had few "kinship resources"). Winn's preliminary data indicate another distinction between Aka and Efe – the little time Efe fathers do spend with infants is preferentially biased toward daughters.

Summarizing, Aka fathers do significantly more infant caretaking than Efe fathers because of differences in subsistence activity. Also, like multiple caretaking, the setting dramatically influences the degree of father involvement – fathers are more likely to help out in the camp than in the forest.

Also, both Efe and Aka intracultural variation in father's role is related to resources – men will spend more time with their infant when they have fewer resources to offer. In another paper that examines father's role cross-culturally (Hewlett 1988), I find that this variable is useful in predicting intercultural variation as well. Men in societies in which men accumulate essential resources (e.g., land or cattle), or contribute the majority of calories to the diet, spend significantly less time in the direct care of infants and children than do men in societies where the reverse is true.

Conclusions

This chapter has described some of the diversity and commonalities among African forest foragers and has offered preliminary hypotheses to explain the diversity. The chapter focused on the following aspects of culture: language; subsistence and settlement; kinship and marriage; and infancy and demography. Three general patterns of similarities and differences emerge.

First, there is an eastern (Efe and Mbuti) versus western (Baka and Aka) pattern. Western groups associate with a greater diversity of ethnolinguistic groups of farmers, generally speak a language not familiar to their farming neighbors, and practice similar marriage patterns (i.e., bride service or sister exchange). The eastern groups associate with fewer horticulturalist ethnolinguistic groups, generally speak the same language as their neighbors, or one that is similar, and practice sister exchange rather than bride service. The eastern groups are also genetically distinct from the western groups, which suggests eastern and western groups have been independent groups for at least thousands of years (Cavalli-Sforza 1986).

Second, there is a subsistence-linguistic pattern. Eastern and western groups are over 500 miles apart and have been separate groups for a long time, but there are more similarities between some groups from the east and west than there are within the eastern and western groups as a

whole. Aka (western group) and Mbuti (eastern group) are both net hunters and speak Bantu languages, while the Efe (eastern group) are archers and the Baka (western group) are spear hunters; both speak non-Bantu languages. Aka and Mbuti net hunting is distinct from Efe and Baka bow or spear hunting in several ways: net hunting takes them further into the forest for longer periods of time and involves the participation of women and children; it lasts more hours each day and occurs more days of the week; it involves making as much noise as possible rather than being quiet and stalking animals. The differences in subsistence activities reflect differences in several other aspects of culture: Mbuti and Aka eat more game meat, spend less time in the village, establish camps further in the forest, rely less on women for getting starch for caloric intake, eat less fish and shellfish collected by women, have fathers more involved in infant and child care, and have closer husband-wife relations and greater sexual equality (i.e., less violence against women).

Finally, the Efe are unique in several ways. Efe (1) speak a language from a totally different language phylum, (2) have markedly lower fertility and mortality, (3) intermarry with farmers more frequently, (4) have substantially more adults in camp than children, (5) have more extensive multiple caregiving, and (6) have relatively low father involvement.

While there are commonalities between African tropical forest foragers, this chapter has emphasized the patterns of diversity. In doing so, it has perhaps contributed to a better understanding of those diversities and also made it clear that it is difficult if not impossible to refer to an African "Pygmy" culture.

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10 A comparative approach to hunting rituals among Baka Pygmies (southeastern Cameroon)

Daou V. Joiris

1 Introduction

Integrating research on ritual practices in Pygmy societies within the larger debate about hunter-gatherer diversity is no easy task. While environmental and economic studies make it possible to compare modes of adaptation of the many groups of forest foragers, information is limited in all other areas of study. Those publications that mention the ritual aspect of social life are generally monographs or contributions to dictionaries and encyclopedias, whose sources are most often legends and song-story collections. Currently, studies of cosmogony and ritual practices are limited to three ethnic groups: the Zairian Mbuti (Schubert 1952; Turnbull 1961, 1965a), the Aka from the Central African Republic (Bahuchet 1985; Morte 1980, 1982) and the Cameroonian Baka (Brisson and Boursier 1979; Brisson 1981-4, 1988; Higgins n.d. a, b, c; Dodd 1979, 1980; and Kilian Harz 1989). The problems are compounded by the fact that the studies that do exist are often designed around particular anthropological theories. Thus, within the evolutionist, functionalist, and cultural ecological perspectives, available ethnographic data reveal more about the proponents' preoccupations than about similarities and diversity among Pygmies.

A second kind of problem arises from intracultural variability, which complicates the research process. Research data from one group tend to be taken as a standard for all groups until proved invalid. Sometimes such diversity can go unnoticed for a long time. For instance, my interest in the following comparative study developed when it became obvious that an important cynegetic ceremony, the *yeli*, as described in literature on the Baka (notably by Higgins and Dodd), was not observed in the Baka camps where I conducted my investigations. My observations further indicated that aspects of the hunt ceremony were prepared differently, and that the diverse rituals I observed were longstanding. Because data for comparison are limited, it is difficult to make definitive comments about such diversity. However, my hypothesis is that there is