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CHANGING LANGUAGE, REMAINING PYGMY

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Linguistic diversity of African Pygmy populations

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ABSTRACT

In this article I am illustrating the linguistic diversity of African Pygmy populations in order to better address their anthropological diversity and history. I am also introducing a new method, based on the analysis of specialized vocabulary, to reconstruct the substratum of some languages they speak.

I show that Pygmy identity is not based on their languages, which have often been borrowed from neighboring non-Pygmy farmer communities with whom each Pygmy group is linked. Understanding the nature of this partnership, quite variable in history, is essential to address Pygmy languages, identity and history.

Finally, I show that only a multidisciplinary approach is likely to push forward the understanding of African Pygmy societies as genetic, archaeological, anthropological and ethnological evidence suggest.

1. INTRODUCTION

Created by European travellers during the XIX^e century (Schweinfurth 1873), the blanket term Pygmy has been used to designate any kind of rainforest people with a short stature and a nomadic lifestyle. This term embraces an artificial combination of scattered ethnic groups culturally and physically different (Bahuchet 1991, Froment 1993, Seitz 1993) (Tab. 1, Fig. 1) living in Central Africa between latitude 5° N and 5° S.

The heterogeneity of the Pygmy populations could result either from the dispersal and split of a unique ancestral population or from the independent evolution of separate populations who physically adapted to the constraints of the same environment (Hiernaux 1966).

Fifty years ago, according to Hiernaux, it was reasonable to raise doubts about the origins of the different Central African populations, because little knowledge was available on this subject. Later on, L.L. Cavalli-Sforza and collaborators, who initiated the study of Central African Pygmies from a population genetics perspective (Cavalli-Sforza 1986), attempted to answer the question of their origins but were unsuccessful due to the lack of sufficient population samples, genetic markers, and computational tools. More recently, research in human population genetics showed both the common origin of some Pygmy groups and an ancient divergence between such ancestral Pygmy populations and the population ancestral to the other African populations (Patin *et al.*, 2009, Verdu *et al.* 2009, Batini *et al.* 2011).

Interestingly, recent population genetic research (Patin *et al.* 2009, Verdu *et al.* 2009, Batini *et al.* 2009) suggested a very ancient divergence between Pygmies and other populations (60-90 Ky BP). The considerable time involved by these findings gives some strength to a scenario of several language shifts/borrowing occurred since the times of prehistoric Pygmy hunter-gatherers and challenges the hypothesis of a common language inheritance. Before discussing questions like the social context for the borrowing of these languages it will be necessary to comprehensively analyze the relations between Pygmy and

neighboring non-Pygmy societies that are intimately connected. Unfortunately, despite the wide scientific interest that Pygmy groups have always attracted, documentation and publications concerning them are uneven, thus making any synthesis premature. This is why I will only focus on the ethnolinguistic status of Pygmy languages while discussing their sociolinguistical context.

2. CULTURAL HETEROGENEITY

About twenty ethnolinguistic groups are known as “Pygmies” and several names are in use to differentiate them (Table 1). For clarity all Pygmy groups will be written in italics and when I explicitly refer to their languages (called in the same way) the names will also be underlined. Some have long been used unquestioningly in the ethnographic literature, such as *Babinga*, of obvious colonial origin, and such intricate nomenclature lacks clarity. Some names are true ethnonyms (e. g. *Baka*); others are names given by surrounding farmer populations (e. g. *Bambutu*). Without mentioning Bantu names, used with or without the plural prefix (e. g. *Kola* or *BaKola*), it will be seen that some names correspond to local dialectal groups (e. g. *Mbenzele*, dialect of *Aka*). Finally, there is a gap in the nomenclature as three groups, (*Asua*, *Sua* and *Efe*) are usually included under the single name *Mbuti* or *BaMbuti*.

A rough survey of the ethnographical literature (345 specialized references including papers and books) shows a vast disparity in documentation. 86 % of the publications concern only five groups (*Mbuti*, *Efe*, *Aka*, *Mbenzele* and *Baka*) while the remaining 14% account for eight groups (Fig. 2) and 7 Pygmy groups have never been studied (Mikaya, Cwa of Democratic Republic of Congo –DRC-, Tembo, Rhwa, Twa of DRC, Congo and Uganda). The majority of available publications have focused on the “forest-oriented” groups, thus explaining why such lifestyle soon became a stereotype for all Pygmies (Hewlett 1996): Semi-nomadic hunter-gatherers living in temporary camps with domed huts and exchanging regularly with the neighboring farmers.

The lifestyle of Pygmies is highly variable (nomadic vs. seasonal mobility) as well as the style of habitat (huts used for short periods or settled villages with square houses), and the techniques and tools. Such heterogeneity remains apparent today even after the modern changes implied by the adoption of agriculture starting in the 1930s by some Pygmy communities.

Only a few publications document “peripheral” Pygmy groups characterized by low populations size, reduced mobility, settled in villages, and practicing both hunting-gathering activities and agriculture. While the groups called *Kola*, *Bongo*, *Koya* and *Twa* live in the rainforest, other groups live in the savannahs at the periphery of the forest basin, like the *Bedzan*, various groups named *Cwa* (pronounced “Tshwa”) and a scattered group known under the name *Twa*. Finally, I would like to mention some very poorly known groups in South Central Africa. They have an ambiguous status since, while not being considered “Pygmies” by authors, their names sound similar to Pygmy groups living in the Congo Basin. They are the *Vatwa* in South-West Angola (Estermann 1962, 1976), different *Batwa* swamp fishermen in Zambia (Rosen 1925, Macrae 1934, Barham 2006, Haller & Merten 2008) and the *Bambote* of the shores of Lake Tanganyika (Terashima 1980).

However, a constant feature among all Pygmies, semi nomadic or sedentary, is that they all maintain relations with neighboring non-Pygmy farmers. This feature will be largely discussed and addressed from different perspectives throughout the paper.

3. DIVERSITY OF LANGUAGES

There is no “Pygmy linguistic family”. All Pygmy languages are related to other languages that are spoken by non-Pygmy populations and belong to the two linguistic *phyla* of Central Africa: Niger-Kordofanian and Nilo-Saharan (Table 2). Linguistically, Pygmy populations are as heterogeneous as their neighbors and the absence of any major linguistic specificity implies extensive contacts with non-Pygmy populations despite the socio-economic (and phenotypic) differences. Infact, this scenario is very different from the one of the San of Southern Africa, another widely studied group of hunting and gathering populations from Africa, whose click languages are all related and form the specific Southern-African Khoisan family (Winter 1981, Güldemann & Vossen 2000).

Strikingly, linguistic studies of Pygmies are much less readily available than are ethnographic studies. The majority of the languages are still not described or scantily documented, exceptions being the *Efe* (Vorbichler 1965; Vorbichler & Brandl 1979), the *Kola* (Renaud 1976), the *Aka* (Cloarec-Heiss & Thomas 1978; Thomas 1991; Thomas *et al.* 1981) and the *Baka* (Brisson 1984, 1999, 2010; Brisson & Boursier 1979; Kilian-Hatz 1989, Paulin 2010). While some groups have never been studied, others are poorly known as only short lists of vocabulary, without phonetic annotations, are available from old travel accounts.

To come back to what has been said before about the relation Pygmies/non-Pygmies, the *Aka*, *Baka*, and *Asua* speak a language that cannot be understood by the speakers of languages belonging to the same family. Otherwise, all other Pygmy groups speak variants of the languages spoken by surrounding farmers.

Together with the *Sua*, the *Efe*, the *Aka* and the *Baka* occupy large areas and are the most mobile meaning that strong social ties are necessary to maintain linguistic unity and cultural identity, thus forming polyethnic systems with their neighbors (see part 6). Nevertheless, scattering is often synonymous of language diversification and three dialects have been

documented (*Mbenzele*, the western dialect of *Aka*; *Bangombe*, the eastern dialect of *Baka* and *Kango*, the southern dialect of *Sua*) in three quite dispersed groups.

4. INTERETHNIC CONTACTS

4.1 Socio-economic issues

I have already mentioned that every Pygmy group maintains relations (mainly economical) with their non-pygmy neighbors, who are farmers. This does not mean that the two communities have a differential access to resources, as they both inhabit the same ecosystem and share a comparable technical knowledge; nevertheless a complementarity exists as some activities are, in practice, exclusive to a community. Both societies rely upon each other (food; work) and through economic exchanges the two partners can better exploit two juxtaposed ecosystems, rainforest on the one hand, fields and secondary forest on the other hand.

It seems obvious that the social dimensions of these interactions are complex (Bahuchet & Guillaume 1982; DelobEAU 1989; Grinker 1994; Joiris 2003; Kazadi 1981; Ngima Mawoung 2001; Turnbull 1965b; Waehle 1986) and their changing throughout the colonial past of Central Africa has been documented (DelobEAU 1989, Guillaume 2001, Hardin 2000).

Pygmies and their non-Pygmy neighbors belong to a same social system; ranging from patron-client relationships (respectively the farmers and the Pygmies) to quasi-equality, to the point of sharing the same clan affiliations. For example, among *Aka* and *Baka* groups, iron tools made by neighboring farmers are essential for the bride price. Concerning the farmers, the large amount of meat provided by Pygmy hunters constitutes the stock necessary for the ceremonial meetings at the end of mourning. In several places, the young people are admitted to the ceremonies of initiation of the other society giving rise, in this way, to lifelong ties of friendship (*Efe*, *Sua*, *Baka*, etc.). The strong social ties (Joiris 2003; Rupp 2003; Sawada 1998; Terashima 1987, 1998) make intermarriages possible with non-Pygmy males sometimes marrying Pygmy women. The reverse is usually impossible with very few exceptions (for instance some *Bongo* groups in Gabon).

The contacts that each group of African Pygmy foragers have with associated farmers of different ethnic background, not only condition the major part of their present socio-economic changes, but in the end add to the cultural differences between the various Pygmies groups.

This kind of partnership has been lasting for centuries and ample material demonstrates that everywhere the Pygmies are largely represented in the mythology of the farmers. Oral traditions mirror the important place of the “Pygmies”, who are given a quasi-supernatural symbolic status, at the border of the human world (Abega 1997; Bahuchet 1993b; Delobeau 1989; Sulzmann 1986; Waehle 1986), thus giving rise to a form of respect and fear that, often, goes together with admiration and despise (Bahuchet & Guillaume 1982; Kazadi 1981). This special status is confirmed by the fact that Pygmies are the only ones allowed to touch the sacred King at the moment of birth, enthroning or mourning in farming societies like the Tikar (Cameroon) and the Ekonda (Democratic Republic of Congo), whose socio-political system is a monarchy. Pygmies are considered members of the same sacred category as the King, as opposed to the ordinary people (Bahuchet 1993c:61-64; Sulzmann 1986).

The founding myth of many central African societies concerns an initial migration from quite far regions to the place they presently occupy. Some oral traditions tell that the Pygmies were encountered during the initial migration and that they behaved as guides and introduced the farmers to the forest world by transmitting rites, initiations, and techniques, including some that are not typical of hunter-gatherers like the forging of iron (for the Ngbaka, Arom & Thomas 1974; for the Beti, Laburthe-Tolra 1981).

To summarize, we face two types of social relations with the non-Pygmy farmers: either the Pygmies are simply associated to them as a different but linked society, or they are considered as a part of the society of the farmers but like a sort of caste (this is case of the *Twa* and probably of the *Koya*).

The traditions I mentioned indicate that the majority of the farmers of the Western Congo Basin have had continued contacts with the Pygmy groups during the last few centuries at least. However, some farmers did not encounter them, or met them only when traveling in specific areas (see Deschamps 1962), from that we can infer that the Pygmies had a lower population size and were quite dispersed. Particularly in Cameroon and Gabon, oral traditions provide many details about initial contact with different Pygmy groups throughout time.

4.2 Linguistic contacts between Pygmies and farmers

While using a single mother tongue inside their communities, Pygmies interact with surrounding farmers by using other languages and, together with most of the non-Pygmy farmers, are plurilingual.

Quite logically, the number of languages to which every ethnolinguistic group of Pygmies is exposed is proportional to the area occupied by the group and to the size of its population. It varies from a single external language for the *Bedzan*, to nineteen for the *Aka*. The linguistic heterogeneity of the languages with which Pygmies are exposed increases with the number of farmers communities with whom they are in contact. For instance, the linguistic landscape of the *Koya* in Gabon, in contact with four external languages, is much more homogeneous than for the *Kola* of Cameroon that are exposed to nine external languages.

4.3 Socio-linguistics and contact of languages

Actually, the languages spoken by the distinct Pygmy ethnolinguistic groups are not necessarily related to the languages spoken by the farmers with whom they currently live in proximity and vice versa. For instance, the *Aka*, who speak a Bantu language (C10) are dispersed over a large territory that is shared with nineteen groups of farmers on which only

six speak Bantu C10 varieties, in Southern Central African Republic (CAR) and Northern Congo.

If we consider only the most documented Pygmy groups (*Kola, Aka, Baka, Bedzan, Koya, Sua, Asua, Efe, Twa-Konda*), corresponding to nine different tongues, we find that their linguistic environment totals seventy-three different languages of which only nine are closely related, thirty-four belong to the same linguistic group; and the remaining thirty belong to totally different linguistic groups. In other words for these populations, thirty groups of farmers in contact with Pygmies speak languages not sharing any linguistic similarity which may imply that the partnership between them is recent.

5. HISTORICAL STEPS: DISPERSION AND MOVEMENTS

5.1 From sociolinguistics to geolinguistics

The analysis of the spatial proximity among the most closely related languages lead to some historical considerations, and enables the reconstruction of the succession of contacts between Pygmies and farmers. Several cases are possible:

1. Farmers speaking a language close to the one of the Pygmies, being both groups geographically close and probably associated since a long time.

E.g. the Lese with the *Efe* (Sudanic; Eastern Democratic Republic of Congo), the Bongom with the *Koya* (Bantu B20, Eastern Gabon), or the Ngando with the *Aka* (Bantu C10, South CAR).

2. Farmers speaking a language related to the one of the Pygmies, being both groups geographically distant suggesting a possible ancient split between the two and subsequent migrations.

Like the Maka (Bantu A80) from Southeastern Cameroon, whose language is related to that of the *Kola* of coastal Cameroon (400 km distant); and the Ngbaka (Ubangian) from Southern Central African Republic, whose language is related to that of the *Baka* in southeastern Cameroon (500 km distant).

3. Farmers having no linguistic relation with Pygmies being geographically close (thirty groups), suggesting that the existing partnership (if any) is recent.

E.g., in South Cameroon and North Gabon, the Beti and Fang (Bantu A70), associated either with the *Kola* (A80) or with the *Baka* (Ubangian), or the Bangandu (Ubangian, Gbaya group), associated with the *Baka* (Ubangian, Gbanzili group) in Southeastern Cameroon.

4. Farmers being in contact with more than one Pygmy group (at least 10 cases documented), suggesting an historical scenario.

This is the case along the Sangha River between Cameroon and CAR, where some Mpiemo, Bomoali or Yangere are associated with the *Baka* on the right bank, and others are associated with the *Aka-Mbenzele* on the left bank (Lewis 2002). This is also the case in Ituri, in East DRC, where some Ndaka and Liko live with *Asua* Pygmies, while some others live with *Sua*. Similarly, the majority of Lese are associated with *Efe* while some are linked with *Sua* Pygmies.

These scenarios show that the link between a group of foragers and a group of farmers, in the past usually leading to a language shift for the foragers, could have come to an end and a new association with other farmers established. For instance, the Maka, linguistically related to the *Kola*, are presently associated with the *Baka*. In turn, the *Baka*, whose language is related to Ngbaka currently spoken in Central African Republic, have relations, among others, with the Kwele (Cameroon) or the Fang (Gabon), both Bantu speakers.

It is very risky to provide a timeframe for these social modifications, but a few centuries may be a possible conservative estimate, an hypothesis that we will investigate in the following sections.

The patterns of dispersion of languages spoken by Pygmies and non-Pygmies can lead to some hypothesis of migration. To this end, I will examine here two cases of discontinuous geographical distribution of two languages, the *Kola* (Bantu A80) and the *Baka* (Ubangian Gbanzili group).

5.1.1 The Kola

The A80 languages are geographically discontinuous, some being located in Southeastern Cameroon (like Maka, Njem, Mpiemo, Bajue...) and others being located in Southwestern Cameroon. *Kola* Pygmies speak a Bantu A80 dialect of the Mvumbo language, also spoken by Ngumba and Mabea farmers living close to the southern coast of Cameroon (Renaud 1976) (see Fig. 3). The present range of the *Kola* Pygmies (3,000-4,000 individuals) encompasses the Ngumba and Mabea, and exposes them to eight more languages for a total of ten (Joiris 1994)(Table 5). According to Loung (1987), the *Kola* pygmies speak two dialects, the northern being called *Gyeli* and the southern called *Kola*. I would like to remind here the challenges of nomenclature that I highlighted at the beginning of this article, in fact *bo.gyel* is the name by which Ngumba farmers refer to the *Kola Gyeli*.

Oral traditions of both *Kola* and Ngumba suggest that they recently moved, together, from East to West, in a process that ended in the 1880's (Loung 1959). Now, the remaining related languages belonging to such A80 group are currently located in southeastern Cameroon (Maka-Njem group, see Maho 2009) and, according to the traditions of the Maka-Njem people, they came from the northeast on the Nyong River and were “the first” to penetrate the rainforest where some *bo.gyel* Pygmies were encountered (Geschiere 1981). The same oral history suggests that, after the arrival of the Proto-Fang (A70) group, the Maka-Njem split in two: the Ngumba moving towards the coast together with the *bo.gyel* Pygmies and the Maka going to the southeast alone (Loung 1959; Geschiere 1981). Therefore, the hypothesis that a Pygmy group speaking a language whose closest relative is currently located far away may indicate the occurrence of past migrations is supported by the historical migration of the *Kola* Pygmies over more than 400 km from the Doume River from Eastern Cameroon to the Atlantic coast in Southwestern Cameroon.

We can summarize migration events in the following way:

1. Some non-pygmy farmers speaking an A80 language met the Pygmies who adopted the same language;
2. Pygmies migrated together with some of their associated farmers, and their common language diverged from the original variety spoken by the farmers as a consequence of isolation (migration). Kola Pygmies provide the example of a joint migration with non-Pygmy farmers after their language shift.
3. After the migration and subsequent isolation of a community limited to the Ngumba, the Kola expanded geographically and probably also demographically, and some of them established relationships with other farmers (Joiris 1994). Meanwhile, the other A80-speaking non-Pygmy groups, who remained in the Eastern part of Cameroon, met the *Baka* Pygmies (Ubangian-speakers), with whom they are associated today. The A80-speaking non-Pygmy groups give us an example of farmers changing their Pygmy associates (from Kola Pygmies to Baka Pygmies).

5.1.2 Baka and Gbanzili-group languages and peoples

The second example of migration is provided by the people speaking Ubangian languages of the Gbanzili-group, to which belongs the *Baka* language spoken by the *Baka* Pygmies. While the Gbanzili-group is scattered from Southern Sudan to Southeastern Cameroon (Fig. 4), the *Baka* is spoken in a continuous area across Southeastern Cameroon, Congo and Gabon and is a linguistic isolate surrounded by eighteen languages, fifteen of which are Bantu and three Ubangian (Gbaya and Banda groups; see Table 5). Other languages related to *Baka* are exclusively spoken by farmers located far away. The closest is the Bomasa, spoken in a single village located on the left bank of the Sangha River, in Congo. Other similar languages are the Ngbaka-Mabo and Monzombo (spoken ~ 500 km away in the Southern part of the Central

African Republic) and, finally, the Gbanzili that is spoken at a distance of ~ 800 km, along the Ubangi River in the Southeastern part of the Central African Republic. Before suggesting a scenario explaining such dispersed geographical location for the languages close to *Baka* it must be stressed again that the *Baka* Pygmies have no contact with any of the farmers speaking the related Ubangian languages mentioned above.

If the *Baka* Pygmies adopted their Ubangian language from farmer populations, then the linguistic features of the whole linguistic group imply that the encounter between the two groups occurred some time in the past, before the geographical separation observed today. A geographical analysis of the areas where the languages are spoken indicates a Southern Sudan origin of the protolanguage at the origin of the Ubangian languages spoken by both the *Baka* and the *Ngbaka* today (Arom and Thomas 1974; Bouquiaux and Thomas 1980). The populations speaking this original proto-Ubangian language may have spread later along the Ubangi River in a westward migration. Interestingly the *Baka* would have migrated further than other groups as they are nowadays located in the farthest West.

In figure 4 I show that the languages of the Gbanzili-group, including the *Baka* itself, arise by a process of isolation resulting from different migrations. If this process historically implies a partnership between Ubangian speaking farmers and *Baka* Pygmies, the first ones (*Ngbaka*, *Monzombo* and *Bomasa*) are presently associated with the *Aka* Pygmies speaking a Bantu language.

To summarize such historical scenario, in the past the *Baka* used to live all together, associated with non-Pygmy populations speaking a Gbanzili-group Ubangian language that they finally borrowed. Thereafter they migrated, together with Ubangian speaking farmers, in various directions and moved far away, alone, establishing new partnerships with farmers speaking languages other than Ubangian varieties.

It is interesting to note that after the borrowing of the language, *Baka* were less prone to be influenced linguistically. In fact the Bantu and Ubangian languages spoken by farmers with whom they are currently partners, has almost no influence on their own tongue. For instance, there are no similarities in the vocabulary concerning rainforest, plants, animals, techniques, or even habitat. Therefore, under such scenario, the Baka language spoken today would result from previous partnerships, with little influence from the languages spoken by the new partners. Interestingly, Koch (1968) noted that the Bajue farmers (A84, Southeastern Cameroon), distinguish two different groups of Pygmies: The *o.jel*, who originally met *their ancestors* and subsequently somewhat “disappeared”, and the *bi.bayagh* (otherwise called *Baka*) with whom they currently live (Koch 1968:68).

More generally speaking, the mechanism of differentiation could have been the following:

1. A period of intimacy between Pygmies and non-Pygmy farmers, leading the first group to adopt the language of the latter.
2. A period of linguistic differentiation with the emergence of dialects subsequent to migrations and split between the two groups.
3. Increased linguistic differentiation and loss of mutual understanding with growing isolation.

6. POLYETHNIC SYSTEMS AND INTERNAL CULTURAL COHESION OF PYGMIES

As it has been explained in various ways throughout this paper, Central Africa is a mosaic of ethnic and linguistic communities, including the Pygmies. Far from being isolated from each other, these populations are associated in various ways. It was proposed to consider and analyze the regional relations between sets of populations as *polyethnic systems* (Robillard 2010). In such systems, the individuals belonging to a given Pygmy group are in contact with each others despite being scattered and surrounded (encapsulated, according the formula of Woodburn, 1988) by non-Pygmy groups. Such Pygmy communities, in constant contact with much larger populations of farmers, and exceptionally with other Pygmy groups, can remain culturally homogenous or, conversely, loose internal cohesion. To illustrate this process I will present three examples.

6.1 Strong internal cohesion: The Aka

The region between the Congo and Sangha River is the territory of the *Aka* Pygmies (speaking a Bantu C10 language) that are linguistically divided in two dialects, *Aka* and *Mbenzele*, the latter ones being located near the Sangha river (Bahuchet 1986). Other non-Aka Pygmy groups share the same territory: the *Mikaya* near Ouessou in Congo (also speaking a Bantu C10 language), the “*Bofi*” Pygmies” (speaking an Ubangian language) and the “*Bolemba* Pygmies” (speaking a Bantu C10 language). The *Mikaya* is different from *Aka* and the *Bolemba* is quite close to *Mbati* (Bantu C10). Most probably, *Bofi* Pygmies are a group of *Aka* that, at some point, adopted the *Bofi*, that is a language belonging to a different phylum (cf. Fouts *et al.* 2005).

The majority of the farmers inhabiting this region (Ngando, Bondongo, Mbati, Enyele, Mbomotaba, Pande and Ngundi) speak languages of the Bantu C10 family (Fig. 5). The *Aka* are much more mobile than the farmers and can be encountered almost everywhere in the

region; numerically the *Aka* (about 60,000 individuals) outnumber by a factor of ten the farmers. These two factors may well clarify their cultural cohesion and explain why their language subsists besides the numerous farmers' tongues that belong, beside the mentioned Bantu C10, either to the Ubanguian (Banda-Yangere, Bofi, Ngundi, Ngbaka, Monzombo along the Sangha River) or to the Bantu language family (A80/A90, Kako, Pomo, Mpiemo, Bomoali along the Oubangi River) (Table 5). Furthermore, the cultural cohesion of the *Aka* is reinforced by frequent cross-regional marriages (see Cavalli-Sforza 1986 : 340, and Bahuchet 1993 : 100).

6.2 Average cultural cohesion: *The Mbuti*

The well-known vast Ituri forest in Eastern DRC is the home of the Mbuti, a blanket name covering distinct Pygmy groups called *Asua*, *Efe*, *Sua* and *Kango*, and a subgroup speaking a dialect of *Sua* (cf. Schebesta 1952, Turnbull 1965a, Ichikawa 1978, Bailey 1991). It is worth mentioning that, although the *Efe*, the *Sua* and somewhat the *Kango* have been studied in the past, the *Asua* are still poorly documented. Cultural similarities have been reported among these groups (like the music -- Demolin & Bahuchet 1990a) together with apparent differences such as the distinction between *Efe* archers and *Sua* net hunters (Turnbull 1965b). Another difference, that both mirrors and influences the sociocultural organization of the groups, is the different sizes of their base camps (Terashima 1985). Even though we ignore which language they use for communication among themselves, the linguistic pattern contradicts the observed cultural similarity, in fact the *Mbuti* speak three different languages belonging to two distinct families (Tab. 1).

If we focus on the non-Pygmy farmers associated with the various *Mbuti* groups, the linguistic heterogeneity is even larger as they speak one Ubanguian, seven Bantu and thirteen Sudanic languages. The heterogeneity also applies to ethnographic features of these farmer

populations, since the major cultural traits reported to be shared among them are circumcision ceremonies (commonplace in central African populations; Allovio 1999) and the practice of bark-cloth paintings (see Bahuchet & Farris Thompson 1991). Overall, the various *Mbuti* Pygmy groups (*Sua*, *Efe*, *Kango* and perhaps *Asua*) seem to share more cultural features than the various neighboring farmer populations.

The regional distribution of the languages spoken by the *Mbuti* overlaps the distribution of corresponding linguistic families, with spillovers at the periphery (there are examples of *Mbuti* groups associated with farmers that speak the language of another linguistic family -- Fig. 6). For instance, *Asua* (linguistically belonging to the Mangbetu group) can either be associated to farmers belonging to the same linguistic group or to Bantu speaking farmers (Liko and Ndaka). The *Sua* (Bantu D30) are both associated to farmers speaking similar D30 languages or Sudanic speakers. Moreover and to further complicate the ethnolinguistic picture, the *Efe*, despite their close association with the Lese (Sudanic speakers) (Grinker 1994; Terashima 1987) maintain partnerships with Bantu speaking famers.

6.3 No common culture: The Bongo of Gabon

The Bongo, less than 10,000 individuals altogether, are a blend of small Pygmy communities scattered in hamlets distributed around twenty sometimes distant areas over South and Central Gabon. There are few or no contacts between such areas. The smallest groups of *Bongo* (also called *Babongo*) call themselves *Baghama* and *Barimba* (Andersson 1983). Whilst practicing agriculture, the *Bongo* are predominantly foragers. The *Bongo* speak at least seven different Bantu language varieties: dialects of Tsogho (B30), Lumbu, Sango and Punu (B40), Nzebi (B50), Kaningi (B60) and Teke (B70) (Table 5). Despite their small densities, by being scattered over wide geographical areas, they are associated to several farming groups (at least eighteen, according to the Table 5). The literature reports no

information about the social interactions between the dispersed micro-groups (e. g. contacts, visits, exchanges of spouses...) and we can reasonably conclude that the *Bongo* do not have much in common. Further research on aspects related to technical vocabularies, ritual systems, music tradition and the language they might use to communicate between them, may better confirm, or not, this picture. Anyway, if they once had a common language, today there is no evidence for it.

We can hypothesize that communication and the preservation of social cohesion turned out to be impossible among small communities, fragmented and scattered, surrounded by many groups of farmers (Annaud & Leclerc 2002; Knight 2003, Le Bomin & Mbot 2011).

7. DISCUSSION

7.1 Can we find a Pygmy linguistic substratum?

The quest of an original language common to all the Pygmies will remain unsolved. The linguistic integration of Pygmies and farmers is currently too extensive to allow any large-scale reconstruction of any remnants of it.

The comparison of Pygmy languages with other central African languages does not give convincing results either with classical methods of historical linguistics or with the comparative method. The reason is that Pygmy tongues, borrowed from some populations of farmers in a more or less recent past, are too close to other varieties spoken by some groups of farmers.

As an example, I found that the similarities of basic vocabulary for *Baka* with 3 close Ubangian languages (Swadesh list of 195 words, in the comparative lexicology edited by Monino 1988) are above 70 % (Tab. 3, Bahuchet 1992 :60).

The same analysis yielded a similarity rate of 71% (167 words of basic vocabulary from the Swadesh, Bahuchet 1992: 81) when *Aka* was compared to Ngando, its closest relative (Bantu C10). However, such similarity sharply decreased to 29% when an extensive vocabulary of 651 words was further considered (Bahuchet 1992: 81). For a similar study see Klieman (2003).

The specific nature of the relationship existing between Pygmies and non-Pygmies (in which each society has a precise *character* maintained despite episodes of language borrowing), suggests the adoption of a specific methodology to investigate the substratum. Such original approach relies on the analysis of specialized vocabulary linked to specific activities of a group; such vocabulary could possibly have been borrowed by one or the other group when contact happened (usually when products were exchanged). The methodology I have developed combines ethnographic and ethnolinguistic comparisons (Bahuchet 1989).

This method relies on exhaustive gathering specialized vocabulary (concerning aspects of the culture of one group like techniques, objects, plants, animals, music, rituals, symbols...), and comparing these data to a large linguistic dataset comprising as many African languages as possible, regardless of which population speaks them (Pygmy or non-Pygmy, farmers or foragers, ethnic background...). In this way, it should be possible to distinguish those words that are specific to Pygmy communities from those that were borrowed. In order to conduct such large-scale comparisons in the future, it will be necessary to collect linguistic and lexical data, not only from Pygmy populations (specially the ones less studied than the *Kola*, *Baka*, *Aka* and *Mbuti* here presented) but also from the populations of farmers inhabiting the same region. The underlying principle of this type of comparison is that the presence of a similar cultural element (a tool, a practice...) in two different societies has no historical significance in itself (it could be a simple convergence) unless this element bears the *same name*; this very similarity indicates either inheritance or loan and diffusion. In any case, it implies some previous *contact* (in space or in time) between the two groups.

7.2 Looking for the substratum in *Aka* and *Baka*

In agreement with the minimal interaction between the two corresponding groups, *Aka* (Bantu C10) and *Baka* (Ubangian) are not mutually intelligible today. Nevertheless, shared vocabulary accounts for more than 20% and covers a broad spectrum of specific meanings, 88 % of these shared terms belonging to specialized vocabulary. According to these observations, I hypothesized that *Aka* and *Baka* populations stemmed from the same ancestral population (whose name may be reconstructed as **Baakaa*). Under such hypothesis, their common vocabulary would be a remnant of the common original language abandoned when they respectively borrowed Bantu and Ubangian languages (Bahuchet 1992). It is worth

mentioning that the **Baakaa* vocabulary (and culture) may be ancestral to the *Aka* and the *Baka* only, and not to all the Pygmy groups as Blench (1999:43) misunderstood.

While the *Aka* and the *Baka* were borrowed from languages spoken by farmers, with whom these Pygmy populations share much of the basic vocabulary, it is noteworthy that the amount of shared *specialized* vocabulary is large: 75 % of the words shared among *Aka* and *Baka* concern forest vocabulary, flora, fauna, animal behaviors, tools and techniques (Table 4). This illustrates the persistence of a shared economic *substratum* of tools, techniques, forest knowledge and acquisition processes. In other words, this 75% of shared vocabulary concerns cultural complexes (*sensu* Sapir 1916) i.e. integrated sets of cultural practices organized around specific rainforest activities and ecosystem. Only 12% of shared words are related to society (music, ritual and religion - see Bahuchet 1993a for details). This finding illustrates that the *Aka-Baka* shared culture and ancestral society was distinct from the one of the farmers. At this stage, the question whether this *Aka-Baka* Pygmy ancestral group was already associated with farmers is hardly tractable.

The split and divergence between the *Aka* and the *Baka* may have resulted from their new partnerships with Bantu and Ubangian speaking populations respectively, populations from whom they may have borrowed most of their present language including grammar. Interestingly, the specialized vocabulary shared among the *Aka* and the *Baka* suggests that the specific cultural features associated with it may have characterized the ancestral culture of the **Baakaa*. The method I developed is particularly appropriate for those Pygmy groups whose cultural identity is well defined regardless the possible linguistic heterogeneity among them. In this context, I believe that this method would be worth applying to the study of the Ituri groups known as *Mbuti* from the Ituri forest (DRC), or to the various *Bongo* groups from Gabon, once that appropriate linguistic data has been collected.

Finally, although the *Aka* and the *Baka* are bi- or plurilingual, there is no evidence that they are borrowing new languages from their neighbors today. By using their own tongues as a “secret language” they seem to avoid being assimilated by the socially dominant neighboring farmers.

7.3 Early contacts inferred from vocabulary between Pygmies and farmers, the **Baakaa*.

The careful analysis of the vocabulary shared by Pygmy and non-Pygmy languages delivers valuable information about the conditions of the cultural contact between the two communities as mentioned for the **Baakaa* and the farmers they met (Bahuchet 1993b). Their common vocabulary shows that the farmers were newcomers in the rainforest, assimilating new knowledge and technical skills about this ecosystem from the Pygmies and, therefore, adopting the words that define them.

Moreover, sociological lexica supports the idea that **Baakaa* women married among farmers. In fact when comparing the *Aka* and the *Baka* with two closely related languages, respectively Ngando (Bantu C10) and Ngbaka (Ubangian), I identified five terms concerning alliance, whose meaning suggest that marriages and exchanges of wives between Pygmies and non-Pygmies were commonplace (brother-in-law: *bêndê*; jealousy for love: *-kômbè*; son-in-law and courtship: *-kôpè*; pay for bridewealth: *sè-*; kinship through women: *mobila*). This finding is in agreement with the genetic admixture observed among Central African populations (Destro-Bisol *et al.* 2004, Verdu *et al.* 2009, Batini *et al.* 2011).

In this context, one can hypothesize that the original contacts between **Baakaa* and farmers were unbalanced [0]and that the Pygmies, being forest specialists, may have had a dominant position over the farming newcomers. As a consequence, the Pygmies, connected to the supernatural world, were given a special status and gifts were made to them in order to build positive alliances (see section 4). For instance, *Aka*, *Baka* and the related farmers share a

vocabulary concerning friendship, visits and gifts (*yele*), symbolic vital principals like “string of life” and protecting spirits (*kulu*). Elsewhere, in the Central DR Congo, among the Ekonda blacksmith, it is a *Twa* who puts the first fire in the furnace (Bahuchet 1993b:64).

8. CHRONOLOGY

8.1 Archaeology

Central African prehistory is very poorly known both because of the scarcity of the excavated sites and of recent criticisms concerning several « classical ideas » (cf. Stahl 2005). The past extension of the rain forest is largely discussed too, with a minimal extension between 20,000 and 15,000 years BP, and a maximal extension between 9,500 and 3,000 years BP and a later short but intense contraction between 3,900 and 2,000 years BP, the maximum extension of the savanna being placed about 2,000 years ago. However, the extent of deforested regions and the position and extent of forest refugia are still controversial (Cornelissen 2002; Maley 1987, 2003; Schwartz *et al.* 2003). In other words, it is difficult to assess if a given prehistoric site was surrounded or not by the rain forest.

Human occupation in the Congo Basin is attested since at least 30,000 years by Middle Stone Age and Late Stone Age lithic industries throughout the western Congo Basin, in Cameroon, Equatorial Guinea, Gabon and DR Congo (Mercader 2002; Mercader & Marti 2003; Tutin & Oslisly 1995). Several sites (e.g. Shum Laka in Northwestern Cameroon; Lopé in central Gabon) and rock shelters (Ituri in the Democratic Republic of Congo) provide evidence of continuous human occupation for the last 20,000 years (Lavachery 2001; Assoko Ndong 2002; Mercader 2003).

As far as pyrotechnologies are concerned, the oldest ceramics are 8,000 years old (Shum Laka, Northwest Cameroon, Lavachery 2001) and ceramics showing several different styles were found in numerous dispersed localities (Cameroon, Gabon or along several tributaries of the Congo River that were dated from 3000 to 2700 years), thus suggesting that corresponding populations were isolated one from another (Assoko Ndong 2002; de Maret 1985; Eggert 1987, 1992).

The earliest iron artifacts were found in several sites of Gabon and are ~2700 years BP old (Digombe *et al.*, 1988; Clist 1989; Oslisly & Peyrot 1992). This time frame is very close to dates from Nigerian Nok sites (2900 years BP) and early sites of the interlacustrine region between Rwanda and Tanzania (2700-2600 years BP, see Phillipson 2005). Conversely, iron and ceramics are both attested later in the eastern Congo Basin (ceramics, 9th century CE, iron 1st century CE, Mercader *et al.* 2000).

The first traces of agriculture in the Congo Basin are difficult to find, and it has been suggested it would be better to avoid the term “Neolithic” and to use the neutral terminology “Stone to Metal Age” (SMA) (*cf.* de Maret 2003). In the Western Congo Basin, ceramics are associated with larger stone tools, sometimes polished, together with the increasing presence of nuts of *Canarium* and of *Elaeis* palm-tree starting from 6000 years BP. Large pits have been excavated in more recent sites (4,500 to 3,000 years BP) in South Cameroon, then in Gabon and CAR.

Anthropological remains are very rare in Central Africa and only three sites delivered some bones. The oldest concerns eighteen individuals excavated in the Shum Laka shelter (NorthWest Cameroon) in three tombs from 6,000 years BP and six more dated around 15th century. CE (Orban *et al.* 1996; Lavachery 2001). Along the Ubangi River, a single skull was found dated *circa* 1st c. BC (Eggert 1987). The most recent is a skeleton from the Matangai Turu rock shelter in Ituri (DRC), dated 1,235 AD (Mercader *et al.* 2001). None of these remains can be clearly attributed to some morphotype, either Pygmy or not.

8.2 Genetics

Recent genetic studies that I largely fostered to parallel ethnolinguistic research, gave several estimates about the divergence of Central African populations. A first result concerns the divergence between Pygmies and non-Pygmies that occurred around 60,000 years BP (95% credibility interval: 23,025–123,275 years BP in Verdu *et al.* 2009 and 25,800-130,500

in Patin *et al.* 2009). A second subsequent split between the ancestors of present Eastern and Western Pygmies has been estimated to have happened around 22,000 years BP (95 % CI 14,200-66,300 YBP) (Patin *et al.* 2009). A third result concerns Western Pygmies who, while undergoing several gene flow phenomena from non-Pygmy populations, started to diverge into the present day groups about 3,000 years BP (95% CI : 725–34,275 YBP). Overall, various gene flows from non-Pygmies into Pygmy populations can explain the genetic differences between Pygmy groups throughout Central Africa today (e.g. Verdu *et al.* 2009, Patin *et al.* 2009, Tishkoff *et al.* 2009).

The first split between Pygmies and non-Pygmies, could correspond to the Middle Stone Age in Africa, while the divergence between Eastern and Western Pygmies could be placed in the Late Stone Age. The divergence among Western Pygmies seem to date back to the times of the transition from stone to metal techniques and to the times of the expansion of non-Pygmy populations in Central Africa (2,000 to 5,000 years BP) (Phillipson 2005). Hence, the results of Verdu *et al.* (2009) support the profound modification of the relationship between Pygmies and non-Pygmies caused by the considerable expansion of the latter group, as Cavalli-Sforza (1986) and Destro-Bisol *et al.* (2004) previously suggested. Probably, this expansion set new constraints to Pygmy mobility and modified intermarriage rules thus increasing their isolation and the genetic differentiation among Pygmy populations (Verdu *et al.* 2009).

It is likely that linguistic analysis of shared vocabularies would enable the reconstruction of more recent events, for instance Aka and Baka have similar terms related to ivory trade and to the crop introduced from America (Bahuchet 1993:117-119) that provide valuable chronological elements. However the evaluation of time span remains difficult, leading to contradictory estimations. For example, Klieman (2003) by using a glottochronological approach reconstructed the past 3000 years for all western Bantu Pygmies (excluded the Baka

Ubangian language), while by lexical analysis I reached only the 15th century CE for the separation between Aka and Baka after contact with either Bantu or Ubangian speakers (1993:130).

9. CONCLUSIONS

9.1 Maintaining cultural identity?

As we said, it appears that all the Pygmy populations of Central Western Africa underwent a language shift at some point of their history, that is in the last 3000 years according to the dates provided by geneticists (Verdu *et al.* 2009). In contrast to the general processes of language shift (an adaptive response to socioeconomic change with crossbreeding, marginalization and variation in the prestige of a language— see Mufwene 2004) the language has not been the main marker of Pygmy ethnic and cultural identity. How did they maintain a cultural identity in the pluriethnic context that characterize them? According to Barth (1969:15-16):

« Ethnic groups only persist as significant units if they imply marked difference in behavior [...]. Yet, when persons of different cultures interact, one would expect these differences to be reduced, since interaction both requires and generates a congruence of codes and values—in other words, a similarity or community of culture. Thus, the persistence of ethnic groups in contact implies not only criteria and signals for identification, but also a structuring of interaction, which allows the persistence of cultural differences. » (Barth 1969:15-16).

When seen from this angle, the linguistic status of Pygmy populations is even more striking. Related languages result from some kind of intimacy, past or present. On the contrary, in the case of the Pygmies, language is not an ethnic boundary. Which Pygmy groups recognize themselves as sharing the same cultural (ethnic) identity? Several groups are united by the same language, though subdivided into several dialects as defined subgroups with a name (*Aka* and *Mbenzele*, *Baka* and *Bangombe*); other dialectal subgroups exist but are not named (*Bedzan*, North and South). Other groups are considered different by their neighbors, but it is uncertain whether they themselves believe in any self-identity. This is the case for the

“*Mbuti*” (whose self-assessed identities actually are subgroups as the *Asua*, *Efe*, *Sua*, *Kango*...) and for the scattered *Bongo*, whose self-identity is still questionable. This issue is quite relevant today, in the context of “indigenous peoples” rights defense, mostly in the frame of non governmental organizations policies meant to recognize “forest foragers” indigenous groups and to identify their legitimate representatives.

Actually, Pygmy groups do not satisfy such classifications, as they usually do not share any particular socio-economic lifestyle. What best defines them is the constant relationships they maintain with the other people (farmers). To cite Barth again (1969:13):

« Actors use ethnic identities to categorize themselves and others for purposes of interaction ».

Today, the distinctive identity between Pygmies and non-Pygmies remains quite stable (according to the perception of outsiders or of Pygmy and non-Pygmy populations themselves), and the boundaries between these groups are maintained (Robillard & Bahuchet 2011). The organizational relevance of ethnic identities persists despite the similarities of languages and exchange relationships – generally two factors of fusion.

An ethnic boundary concerns the existence of a set of pertinent criteria of recognition, evaluation and judgment justifying the belonging of an individual to a group. In the same way differences are taken into account to distinguish other groups according to judgment criteria of values and acts. The boundary between Pygmies and non-Pygmies is based upon differences of values, by a set of social proscriptions and by a certain division of roles and resources. Each group delivers specific goods and services to the other and the possible equal relationship turns out to be unequal because the farmers control some means of production of the Pygmy societies (like iron tools).

What is interesting with the Pygmies is that their ethnic identity is not linked to any economic activity of their society or the societies they are in contact with and ethnic

boundaries persist despite recent socioeconomic changes like the increasing adoption of agriculture or a vast modification of settlements that in many cases have been forcibly moved by governments along roadsides. Furthermore, as the differences between “ecological niches” previously occupied by Pygmies and non-Pygmies are vanishing, the nature of exchanged goods is changing (less products, more labor). Nevertheless, the boundaries between such groups persist and the dichotomization between members and non-members of a group is permanently maintained.

If we consider the mythological importance that Pygmies have in all the farmers’ societies, being presently in relation or not with Pygmies, and the supernatural values they represent, the ethnic division I mentioned should be interpreted as connected to the representation and perception, by the farmers, of the forest environment itself. Specific characters attributed to the rainforest by the farmers (danger, the non-human world...) may explain the persistence of an ethnic boundary that, despite modern changes, confers a ‘specificity’ to the Pygmies. Distance and identity are maintained, and interrelations are characterized by opportunism and, more importantly, by flexibility.

While available ethnological and linguistic research reveals a highly complex situation that is the result of a rich and diversified past, historical studies of Pygmy hunter-gatherers are still in their infancy as the reader may have noticed from the number of questions, still unanswered, that I have raised.

The western myth of a unique Pygmy population, at least ancestrally, has been corroborated by genetic research that explains observed genetic diversity between them as the result of subsequent, variable gene-flow from non Pygmy populations (Destro-Bisol *et al.* 2004, Verdu *et al.* 2009). Linguistically and ethnologically, we can always hypothesize the existence of an ancestral and rather homogeneous Pygmy population, later fragmented by incoming farmers belonging to various linguistic families and ethnical groups but, as

linguistic material somewhat suggests, the nature of the contact with the farmers and the type of partnerships Pygmies used to establish in the past were probably different from today. Today we observe no cultural mixing and no language shift (*Baka, Aka, Kola ...*), whereas in the past language shifts happened quite often as I have shown. To explain such ‘mutation’ in social interaction and the precise definition of the conditions of the contacts is of paramount importance and a modified population size ratio between the two communities may be a key to understand it.

9.2 Multidisciplinary research

To test the hypothesis of an ancestral homogenous proto-population it is necessary to aggregate results from different disciplinary fields, combining linguistics with ethnology, musicology, genetics and, hopefully, archaeology. I am here providing some perspectives:

– *Linguistics*: The majority of Pygmy tongues are not described. Pygmy languages and dialects should be investigated and collected at the same time as the languages spoken by their neighbors. In this frame, a very accurate and detailed collection of specialized vocabularies (technical and ethnobiological) should be undertaken as they are likely to contain traces of the past contact of population enabling the definition of their contact and, without talking of the *substratum* question already highlighted, enlighten the chronology of contacts and migrations. As it often happens in Africa, tongues have the status of languages but the variability between them falls closer to dialect varieties, which makes possible the adoption of dialectometrical approaches that, likely, will better mirror regional variation of both Pygmy populations and neighboring farmers.

– *Ethnography*: We lack correct descriptions for many groups, even among the most studied ones. For instance, we have no ethnographic monographs for the *Asua*, who are part of the “*Mbuti*”; we have very little information about the *Aka* living in the southern part of their

territory in the Congo swamps. We lack good data for “peripheral” groups as far as their way of life, techniques and tools, rituals, etc/ are concerned.

– *Musicology*: The study of the musical practices and traditions, this “other language”, is of great importance. The “classical” Pygmy music, already famous worldwide, is based upon complex vocal polyphonies with yodels (Arom 1987), but it is not shared by all Pygmy groups and goes together with a certain stereotype. Detailed studies and recordings are necessary to analyze the various types of songs (repertoires), to note the social events they support, to dissect their construction (rhythm, metrics, melodies, vocal parts...) and to document the musical instruments that are used (see Arom & Fūrniſs 1992, Fūrniſs & Bahuchet 1995). Music is also an important support of the religious ceremonies, which still are underdocumented for many groups.

– *Sociology*: Interactions within and between different Pygmy communities are scantily documented. It has been seen, that indeed dialectal variability is linked to the axes of circulation and to matrimonial habit as spouse exchanges. When Pygmy groups with differing languages happen to be neighbors, a phenomenon happening sometimes given their high mobility, it would be useful to investigate the kind of contacts existing between them (e. g., for the *Bongo*, or the “*Mbuti*”). In the same way, accurate observations of the relations existing between the Pygmy groups and their various farming neighbors are largely lacking together with data about the circumstances of mixed marriages and the position occupied by the offspring in their societies. I already mentioned the problem of the almost total unavailability of demographic data that are likely to provide a more robust frame to interpret the facets of Pygmy cultural identity as, in human societies, the population size largely underlies the perception of it either from the inside or from the outside.

Life conditions are changing very fast in Central Africa, both economically and socially. Unfortunately, such change does not seem to bode well to the future of the rainforest

foragers. I sincerely wish that this contribution will attract more interest, possibly sincere, on the societies of the Pygmies.

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TABLES ARE IN FOLLOWING PAGES:

Table 1 – Terminology of Pygmy groups and main references

Name	Country	Other names	Language family	Main ethnographic references
(Ba)Kola	Cameroon	(Ba)Gyeli	Bantu A80	Joiris 1994; Koppert, et al. 1997; Loung 1959, 1996; Ngima Mawoung 1996
Bedzan	Cameroon	Medzan, Tikar Pygmies, Pygmées des Tikar	Bantoid-non bantu/tikar	Leclerc 1999; Mebenga Tamba 1998
Baka	Cameroon, Congo, Gabon	Bangombe, Bibayak, Babinga	Ubangian/Gbanzili group	Fürniss 2011; Joiris 1998; Leclerc 2001; Paulin 2010; Sato 1992; Tsuru 1998; Vallois and Marquer 1976
(Ba)Rimba	Gabon	Babongo	Bantu B40 ?	Andersson 1983
(Ba)Bongo	Gabon	Akoa, Barimba	Various Bantu B30,60,70	Knight 2003; Le Bomin & Mbot 2011
(Ba)Koya	Gabon, Congo	(Ba)Kola	Bantu B20	Tilquin 1997, Soengas 2009, 2010
Mikaya	Congo	Bambenga	Bantu C10	
(Ba)Aka	CAR, Congo	Bayaka, Biaka, Babinga, Bambenga, BaMbenzele, Babenzele	Bantu C10	Arom 1987; Bahuchet 1985; Demesse 1980; Hewlett 1991; Kitanishi 1995 ; Lewis 2002
Bofi Pygmies	CAR	Babinga	Ubangian/gbaya	Fouts <i>et al.</i> 2005
(Ba)Twa	DRC	Konda Twa	Bantu C60	Elshout 1963; Pagezy 1986, 1988; Schultz 1986; Sulzmann 1986
(Ba)Cwa	DRC	Bushong Twa, Kuba Cwa	Bantu C80	Kazadi 1981
(Ba)Cwa ; (Ba)Tembo	DRC	Luba Cwa, Batwa, Bambote	Bantu L30	
(Ba)Sua	DRC	(Ba)Mbuti, (Ba)Kango	Bantu D30	Harako 1981; Hart and Hart 1986; Ichikawa 1978; Tanno 1976; Turnbull 1965a
Asua	DRC	Bambuti, Akka, Aka, Tikki-tikki	Sudanic/mangbetu-asua	Schebesta 1952
Efe	DRC	Bambuti	Sudanic/mangbutu-efe	Bailey 1991; Bailey and Peacock 1988; Demolin 1993; Terashima 1983,1985
(Ba)Twa ; (Ba)Rhwa	DRC	Batwa, Kivu Twa, Western Twa	Bantu JD50	

(Ba)Twa	Uganda	Batwa	Bantu J11	
(Ba)Twa	Rwanda, Burundi	Batwa, Eastern Twa	Bantu JD60	Lewis and Knight 1996

CAR: Central African Republic; DRC: Democratic Republic of Congo; Congo: Congo (Brazzaville)

Table 2 - Linguistic diversity of African Pygmies

Phylum	Stock	Family	Number
Niger-Kordofanian	Niger-Congo	Adamawa-Ubangian	2
		Bantoid non-bantu	1
		Northwest Bantu	8
		Central Bantu	5
Nilo-Saharan	Central Sudanic	Mangbetu-Asua	1
		Mangbutu-Efe	1

Table 3 - Common basic vocabulary among Ubangian languages

%	Baka	Ngbaka	monzombo	gbanzili
Baka	/	71	76	66
Ngbaka		/	82	82
Monzombo			/	75
gbanzili				/

Table 4 – Example of specialized vocabulary specific to the Aba and Baka Pygmies as compared with the farmers

	Pygmy Bantu C10	Farmer Bantu C10	Pygmy Ubangian	Farmer Ubangian
item	Aka	Ngando	Baka	Ngbaka
Ax	<i>zumbi</i>	<i>zombi</i>	<i>kopa</i>	<i>kopa</i>
Handle	<i>suma</i>	<i>pande</i>	<i>suma</i>	<i>kpe</i>
Spear	<i>dikôngô</i>	<i>dikôngô</i>	<i>mbenga</i>	<i>do</i>
Ligature	<i>ngango</i>	<i>mopata</i>	<i>ngango</i>	-
Meat	<i>nyama</i>	<i>nyama</i>	<i>sô</i>	<i>sô</i>
Blood	<i>manda</i>	-	<i>manda</i>	<i>nze</i>
Honey bee	<i>nzoi</i>	<i>nzôï</i>	<i>tongia</i>	<i>nzoi</i>
Wax	<i>ewasa</i>	-	<i>ewasa</i>	-
<i>Perodicticus</i>	<i>yinde</i>	<i>katu</i>	<i>yunde</i>	<i>'bele</i>
<i>Cricetomys</i>	<i>gbe</i>	<i>somba</i>	<i>gbe</i>	<i>mboka</i>
<i>Potamochoerus</i>	<i>nguia</i>	<i>ngoya</i>	<i>pamè</i>	<i>pamè</i>

Table 5 - Languages in contact with the main Pygmy groups, West to East

a) Languages in contact with the Kola			
Pygmy language	Family	Farmer language	family
Kola Two dialects: - gyeli (northern) - kola (southern)	Bantu A80	Mvumbo	A80
		Yasa Batanga	A30
		Basa Bakoko	A40
		Mvae Ewondo Beti	A70

b) Languages in contact with the Bongo		
Region	Bongo languages	Associated farmers and Language group
South-western	Ghama: dialect of Lumbu (B40) Rimba: dialect of Punu (B40)	Lumbu (B40) Punu (B40) Vili (B50)
Central region	Dialect of Tsogho (B30) Dialect of Nzebi (B50) Dialect of Sango (B40)	Kele (B20) Kota (B20) Tsogho (B30) Simba (B30) Sango (B40) Sira (B40) Aduma (B50) Nzebi (B50) Wanzi (B50)
South-eastern	Dialect of Kaningi (B60)	Kele (B20) Ndasas (B20) Kaningi (B60) Teke (B70) Wumbu (B70)
	Dialect of Teke (B70)	Obamba (B60) Teke (B70)

c) Languages in contact with the Baka			
Pygmy language	Family	Farmer language	family
Baka At least two dialects: - baka - bangombe (east)	Ubangian (gbanzili group)	Gbaya Bangandu	Ubangian (gbaya group)
		Yangere	Ubangian (banda group)
		Bulu Fang	Bantu A70
		Maka Njem Bajue Esel Bakwele Konabem Mpiemo Mpompo Bomoali	Bantu A80
		Bakum Pol	Bantu A90

	Kako	
	Kota (Mahongwe)	Bantu B20

d) Languages in contact with the Aka			
Pygmy language	Family	Farmer language	family
Aka At least 2 dialects: - aka (east) - mbenzele (west)	Bantu C10	Ngando Mbatl Enyele Bondongo Mbomotaba Bongili Pande	Bantu C10
		Bomoali Mpiemo	Bantu A80
		Pomo Kako	Bantu A90
		Ngbaka Bomasa Monzombo Ngundi	Ubangian (ngbaka group)
		Gbaya Bofi	Ubangian (gbaya group)
		Yangere Mbanza	Ubangian (banda group)

e) Languages in contact with the "Mbuti"			
Pygmy language	Family	Farmer language	family
Efe	Sudanic (mangbutu-efe group)	Lese (2 dialects: dese, karo) Mamvu Mvuba	Sudanic (mangbutu-efe)
		Bira Nyali	Bantu D30
		Nande	Bantu J40
		Asua	Sudanic (mangbetu group)
		Liko	Bantu D20
		Ndaka	Bantu D30
Sua Possibly two dialects: - sua (northern) - kango (southern)	Bantu D30	Liko	Bantu D20
		Baali	Bantu D20
		Bila	Bantu D30
		Budu	Bantu D30
		Ndaka	Bantu D30
		Bombo	Bantu D30
		Mayogo	Ubangian
Lese	Sudanic (mangbutu-efe)		
Luumbi	Sudanic (mangbetu)		

FIGURE CAPTIONS

Fig. 1 : General map of the Pygmy populations in Central Africa

This map shows the dispersion of the various Pygmy groups and the respective size of the areas they occupy. (Drawn by Paul Verdu on indications by S. Bahuchet)

Fig. 2 : Ethnographic publications about Pygmy groups

Survey of the ethnographic literature (n = 345) shows a huge disparity : 86 % concern only 5 groups (the more mobile), and 14 %, 8 other groups that are also often settled in hamlets .

Fig. 3 - Map of migration of Bantu A80 languages

This figure illustrates the present location of the A80 languages in Cameroon, with the way of migration of the couple Koa Pygmies/Mvumbo farmers, according to their oral history.

Fig. 4 - Map of migration of Gbanzili group languages (Ubangian)

This figure illustrates the present location of the Ngbaka languages (Ubangian), and the reconstructed way of their migrations. Baka Pygmies migrated together with the non-Pygmy Ubangian speakers, but went farther.

Fig. 5 – Map of the Bantu C10 languages

This map illustrates the present location of speakers of the Bantu C10 languages, Pygmies and non-Pygmies. The Aka Pygmies cover a much larger area, which includes the territories of several non-Pygmy farmers from the same language family.

Fig. 6 – The languages in the Ituri region (Democratic Republic of Congo)

The grey colors indicate the areas of Sudanic and Ubangian languages spoken by non-Pygmy farmers, while the white area shows the area of the Bantu languages spoken by non-Pygmy farmers. The areas circled by dotted lines indicate the location of the Pygmy groups, Sudanic speaking Asua and Efe, and the Bantu speaking Sua and Kango. It shows that the area of each Pygmy group does not coincide with the limits of the farmers' languages of the same family.

Figure 1

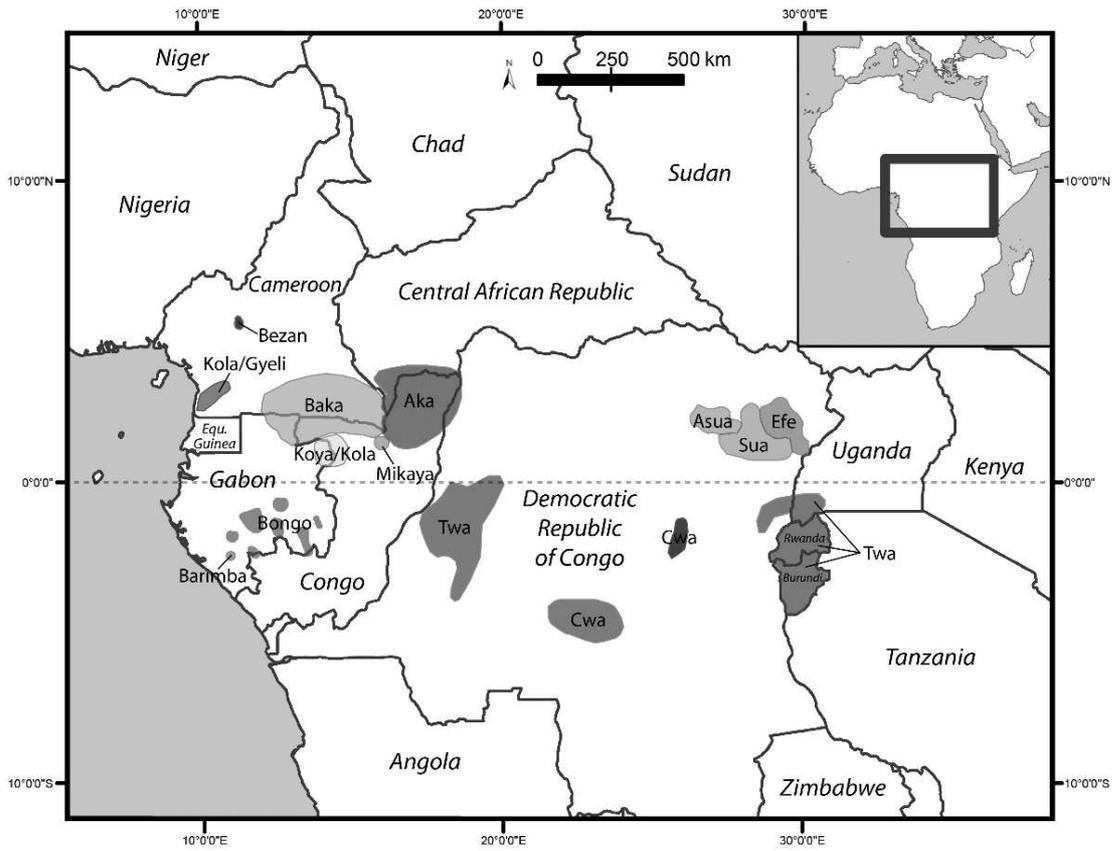


Figure 2

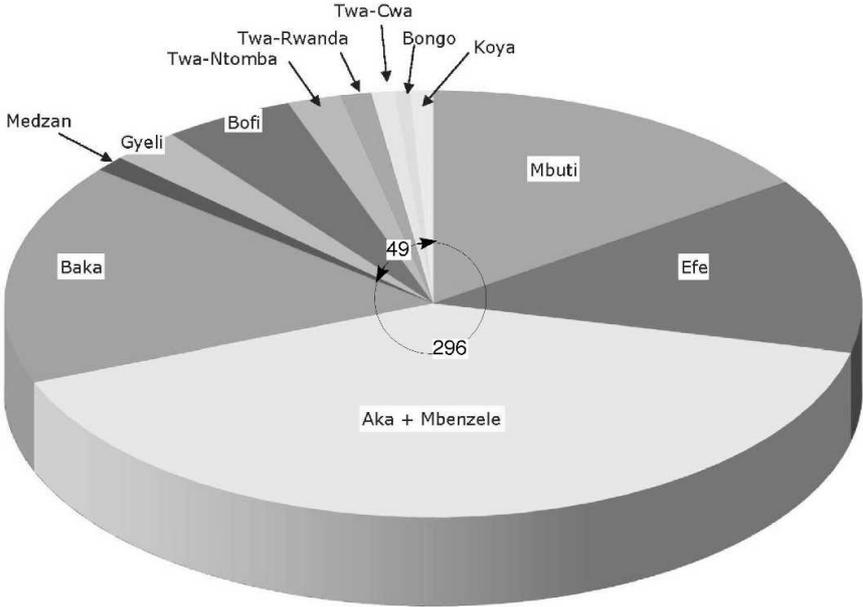


Figure 3

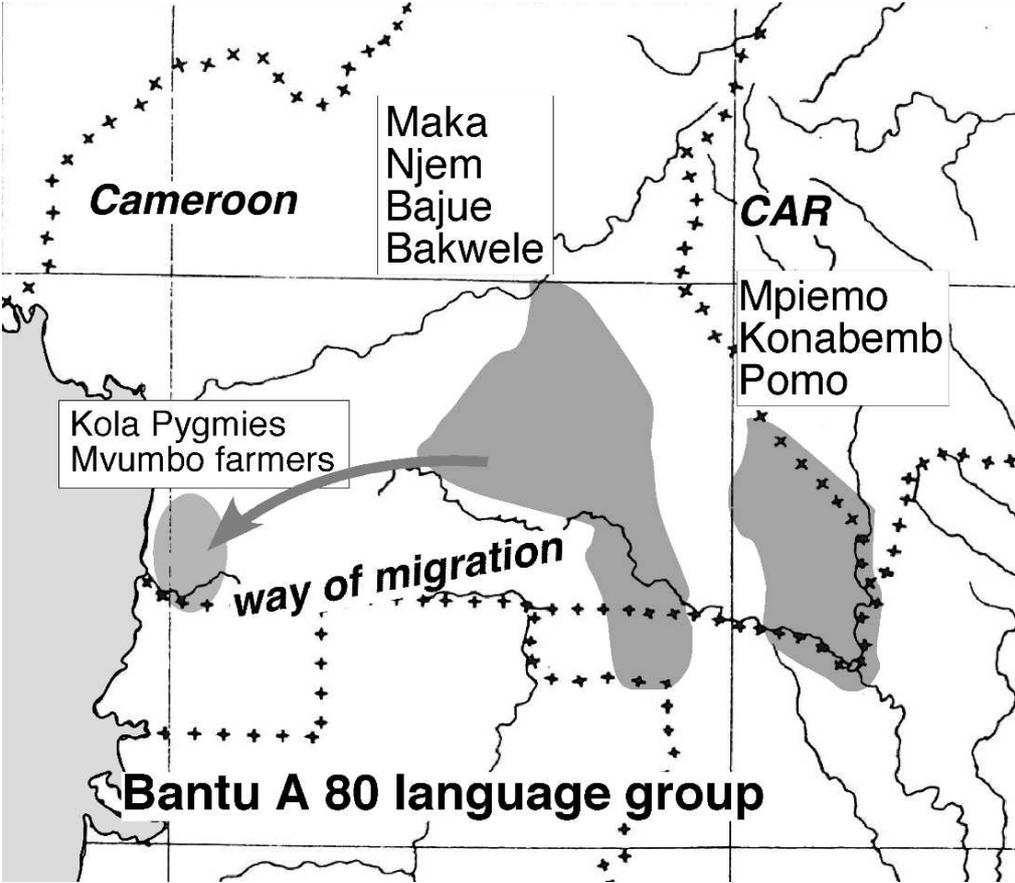


Figure 4

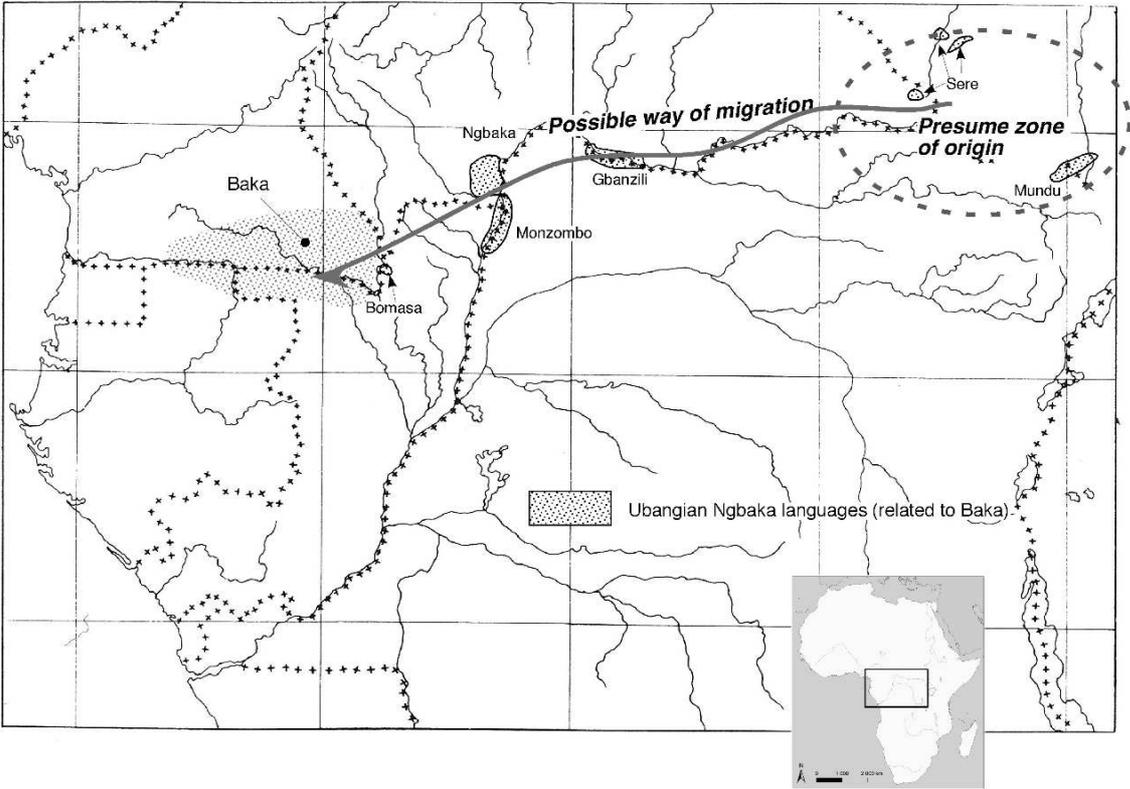


Figure 5

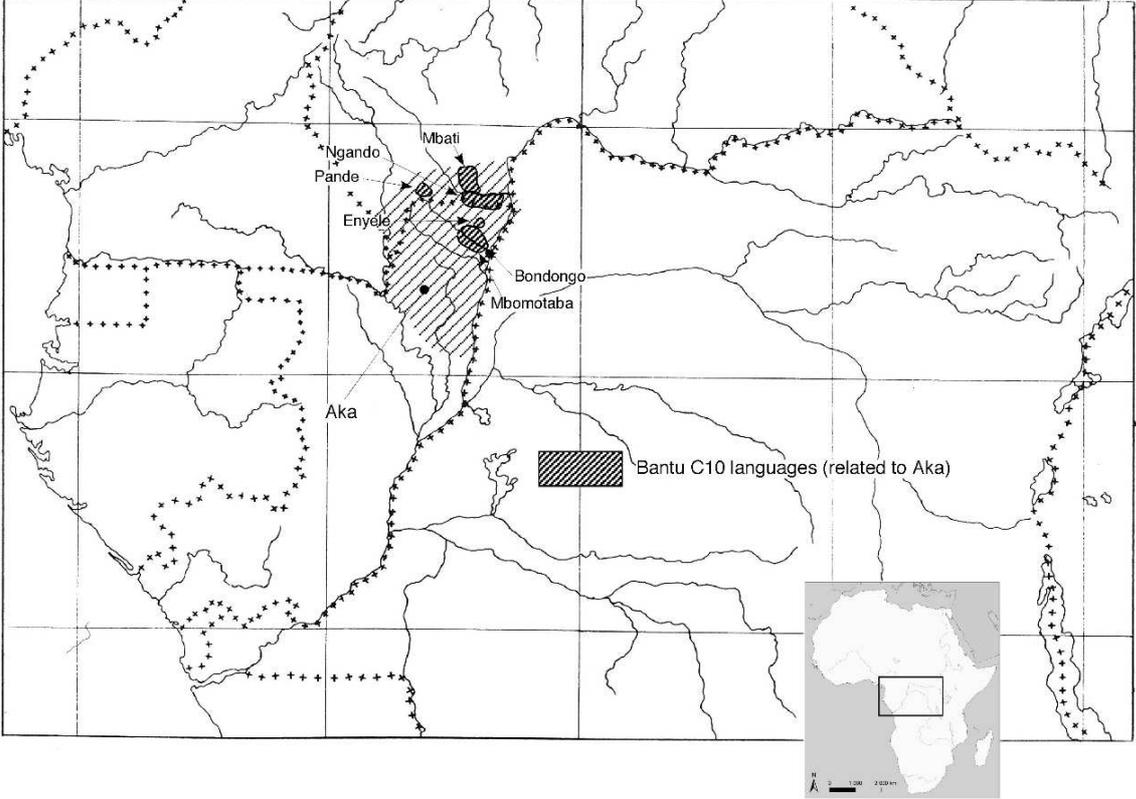


Figure 6

