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# Conflicts between indigenous and scientific concepts of landscape management for wildlife conservation: human-chimpanzee politics of coexistence at Bossou, Guinea<sup>1</sup>

*Conflits entre conceptions locales et scientifiques de la gestion du paysage pour la conservation de la faune : politiques de la coexistence entre humains et chimpanzés à Bossou, Guinée*

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## 1. Introduction

### 1.1 (Post-)Colonial environmental conservation policies in Africa

- <sup>1</sup> The history of modern environmental conservation in Africa has its origin in the colonial era. Large-scale nature reserves were then established throughout the African colonies, with the principal aim of protecting game animals (which were at risk of depletion) for sports hunting, and protecting landscapes for aesthetic motives and recreation (MacKenzie, 1988; McNeely *et al.*, 1994). These nature and hunting reserves were established by colonial governments, which forcibly expropriated land from local inhabitants. This policy expressed a value system and economic motives peculiar to the West, which sought to maintain areas of “untouched nature” (e.g. Nash, 1967).

- 2 After African countries became independent around the 1960s, this management system was, in many cases, inherited as is by post-independence governments. Even though many of these newly independent countries had lofty ideals about the self-reliance of Africa, there appeared to be no new nature conservation policies to indigenize or transcend philosophies originating in the West. This context was favorable for a massive international broadcasting of numerous campaigns for the creation of national parks. Hence, “untouched” reserves which excluded local inhabitants were preserved and even expanded (Neumann, 1998; Rodary and Castellanet, 2003). For the newly independent countries, one of the incentives to maintain the reserves was the income brought in by sports hunters and tourists from Europe, the U.S. and other northern countries (Yasuda, 2011). These externally-driven policies of environmental conservation are well illustrated by the 1961 “Arusha Manifesto” by Julius Nyerere, then the prime minister of Tanganyika, at an international conference organized by the IUCN which took place in Arusha (Neumann, 1988, p. 140-141). He also stated as follows in the interview by Daily Telegraph: “Personally, I’m not very interested in animals. I don’t want to spend my holidays looking at alligators. However, I totally support their continued existence. Just like diamonds and sisal, wild animals can provide a huge income to Tanganyika. Many Americans and Europeans have a strange urge to look at wild animals, and we should provide assurances so that they can fulfill their wishes” (Grzimek, 1962).

## 1.2 Resistance movements and the rise of community conservation

- 3 How did citizens in affected areas respond to the conservation policies which were continually forced upon them in a top-down fashion by colonial governments and then post-independence governments? These people whose land rights and land-use systems were ignored, and who in many cases received no compensation in land or money, are generally critical of the establishment and operation of reserves. There is of course a diversity of situations depending on the country, region, socio-political situation and strictness of conservation enforcement measures, but a variety of responses are evident, ranging from large-scale resistance movements such as armed conflicts or political lobbying, to routine practices such as poaching, illegal logging and bushfires, and to superficial apathy and non-cooperation (Iwai, 2009; Matsuda, 2002; Neumann, 1998; Nishizaki, 2004; Kull, 2004).
- 4 Thereafter, the need to build a cooperative relationship with local inhabitants in order to achieve substantive results in reserves became widely recognized. In designing a reserve, planners have reconsidered the traditional approach of demarcating the reserve with a single borderline and have proposed and carried out supposedly more integrative approaches. This is typified by UNESCO’s “Man and the Biosphere Program”, where a strictly protected “core area” is surrounded by a “buffer zone” where sustainable livelihood activities are partially recognized (Batisse, 1982). Under this scheme, which came to be called “community conservation” (Barrow and Murphee, 2001), the inhabitants are supposedly encouraged to participate in conservation activities as collaborators. A variety of approaches are used, including employing them as reserve employees for their “traditional ecological knowledge”, and/or having them participate as local representatives in organizations which make decisions regarding reserve management issues (Western and Wright, 1994).

- 5 In many of these “participative” projects, however, the inhabitants participate peripherally in a pre-existing reserve scheme under which administrations and NGOs simply make attempts to enlist local citizens—historically regarded as a “menace”—by presenting them with the carrot of economic profit. Additionally, this mechanism of “participation” still leaves much open space for issues of land dispossession (for a case study in northwest Guinea, see Leblan, 2007). Further critics of this model have underscored how the creation of buffer zones around reserves actually allows States to reinforce their own intervention capacities beyond zones that were established in colonial times. This model, which in fact remains very centralized as much in the way it unfolds in space as in its persisting top-down decision-making processes, also fulfills rarely recognized geopolitical functions by allowing States to catch the attention of western-based development agencies and to control their territorial boundaries more effectively (Giraut *et al.*, 2004).

### 1.3 A lack of local initiatives and principles?

- 6 The philosophy of citizen participation assumes that the inhabitants of a given area, to whom ultimate authority has been delegated, are the primary actors of conservation and that they should be provided with minimal support from the outside. However, some of the institutional actors of conservation with a skeptical view of community conservation in Africa make the case that, in the end, all they want is economic gain, and that local residents who do not share the modern philosophy of nature conservation cannot become independent actors. Hence, these critics promote a comeback to the “fortress” approach to conservation, valuing “nature” for its own sake (Hackel, 1999; Oates, 1999). To the contrary, another skeptical view also grounded in institutional approaches to conservation is that international agencies are not internally organized for and actually do not have the will to truly delegate their powers to local citizens (Chapin, 2004).
- 7 In order to promote more independent participative models, there have been vigorous environmental “education” efforts to transfer Western concepts like “biodiversity” and “ecosystem” to local inhabitants who “do not understand” why “nature”, a notion yet usually foreign to African societies (Leblan and Bricka, 2013), needs to be protected (Hattori, 2005). These unilateral policies evidently overlook the fact that relationships to the environment as they unfold in African societies may offer new and more legitimate opportunities to think about and implement conservation practices.
- 8 This article focuses on a local campaign regarding chimpanzee and forest conservation in and around the village of Bossou in the Republic of Guinea, a place known through naturalistic research for its inhabitants’ coexistence with chimpanzees. The purpose of the paper is to critically reconsider approaches which exclude local inhabitants from State conservation policies and which usually deny them the right to be independent actors in conservation policies (the opposing risk then being to fall into the “ecologically noble savage” trap: see Hames, 2007). For this, we examine the stated and possible motives of a swidden preparation campaign in the context of a confrontation with scientists and State employees working at the site. This enables us to establish what appears to be a local “conservation” model, based on Bossou villagers’ agricultural practices as well as on their long relational history with chimpanzees maintained through various political regimes. Thus, while adding to the literature on the political-economic contexts of conservation in West Africa which usually takes a landscape approach to

conservation (e.g. Fairhead and Leach, 1996; Basset and Zuéli, 2000; Temudo, 2009), we also consider the important “north-south” cultural differences in understanding what a “chimpanzee” is (see richards, 1993 and 2000 on the ontology of chimpanzees among the Mende of Sierra Leone). This indigenous model is then assessed for its efficiency and acceptability by the various actors living and working at the site regarding three issues related to human-chimpanzee coexistence: reproductive isolation of Bossou chimpanzees from other populations, disease circulation between villagers and chimpanzees, injuries inflicted to villagers by chimpanzees.

## 2 A paradise of coexistence? People and chimpanzees in the village of Bossou, Republic of Guinea

- 9 Bossou is a village with a population of about 2,000 people, located in a forested region adjacent to Liberia and Côte d'Ivoire in the Southeast part of the Republic of Guinea, near which lives a well studied chimpanzee community. The “Manon” or “Mano” inhabitants of Bossou are a people who speak a language of the Mande family. The majority of Manon people live within Liberia, less than 100,000 of them living across the border in Guinea. In Guinea, the majority of the population comprises three large ethnic groups—the Muslim Fula, Malinke, and Susu— which make up 90% of the population. The remainder groups are minorities in the Southeastern forest, a majority of them Christians who maintain their traditional animist religion like a majority of Muslims do (Downie, 2003). The inhabitants of Bossou rely primarily on swidden agriculture, their main crops being upland rice, cassava, maize, and banana (Schwab, 1947; Sugiyama, 1978).
- 10 As for Bossou chimpanzees, their first academic description dates back to 1942. It is then not before the 1960s that a research team lead by Adriaan Kortlandt of the University of Amsterdam visited the area multiple times, conducting original research on chimpanzee anti-predator behavior using an electrically-controlled leopard dummy (Kortlandt, 1972; Albrecht and Dunnett, 1971). In 1976, Yukimaru Sugiyama of Kyoto University initiated long-term continuous research which had continued for a period of 25 years at the time of the conflict reported in this article (Matsuzawa *et al.*, 2011). The first author of this article has conducted research in this village since 1992 as a member of the research team, as well as on the history of scientific research at the site (Yamakoshi 2011a), and retrieved data through interviews and informal discussions with all parties involved in the conflict. A secondary source of documentation used to cross-check these data consists of e-mail reports from G. Ohashi and S. Fujita, who were in the village at the time to study chimpanzees and who had to temporarily cease their research activities during the resistance campaign.
- 11 Chimpanzees are widely hunted for meat in Southeast Guinea. However, hunting and eating chimpanzees is strictly forbidden in the village of Bossou. Among the villagers, there are various opinions about how this ban came to be established. A common view in the village is that among the 5 main clans that currently comprise the village of Bossou, the founding Keleba (lineage names were changed) had a ban on eating chimpanzee meat which was adopted by the other clans as they migrated into the village later on. Another version is that the chimpanzees are former inhabitants of Bossou who have changed their form and who must not be harmed for this reason (Yamakoshi, 2006b). In any event, both versions provide a reason for protecting the local chimpanzee community which is

embedded in the history and establishment of the village. The extent to which this pattern is unique to Bossou in the forest region overlapping parts of Guinea, Côte d'Ivoire and Liberia is not yet clear. However, the forgotten writings of Etta Donner, a young woman who traveled across the Nimba range (and later on became an ethnologist), provide a short narrative about the origin of chimpanzees retrieved in a Dan village located on the eastern side of the Nimba range. The general structure of this narrative is identical to the one that has been heard at Bossou for decades (Holas, 1952 ; Kortlandt 1986) : an ancestor was killed at war and was reincarnated into a chimpanzee. Since then, it is forbidden to eat the flesh of these creatures and to kill them on the territory of the chief who was himself killed (Donner, 1939). Another narrative reported by a natural scientist working in the area about a decade later also states that “[...] in Kono country, the Traoré (zomian) who have the chimpanzee as their totem used to worship a mountain where chimpanzees lived” (Schnell, 1949, our translation).

- 12 The main area of chimpanzee habitat at Bossou is centered on the forest of the village spirit called “Gban”, comprised of small forests distributed in patches along other hills and creeks. At the center of these forests, which appear at a superficial glance to be “untouched,” there are places where the village spirit lives and others where ceremonies such as circumcision are performed. At these places, village customs prohibit tree cutting and field clearing. Unless there is a special reason, the villagers never enter this forest. Some trees like oil palms (*Elaeis guineensis*) which are left uncut in fallow forests make good foraging grounds for chimpanzees (Yamakoshi 2011b). The first academic paper about the palm trees of the area even suggested that they were likely to be primarily disseminated by chimpanzees (Schnell, 1946). Places like these, where vegetation is not used by people, become a primary habitat for chimpanzees. In other words, the living environment of Bossou chimpanzees is deeply embedded in the agricultural and village landscape.
- 13 The enmeshment of human and chimpanzee habitat is not a recent feature of this locality. In 1941, under the Vichy Government, a group of young naturalists was sent to Dakar in order to take part in a biological survey of the territories of French West Africa. Among them was Maxime Lamotte who spent a few months in the Nimba range. His research project aimed at transferring the methods of phytosociology to the study of the fauna (looking for “animal associations”) and at adopting the perspective of biogeography for studying the distribution and ecological relationships of all the tiny animals that could be found in grasses and on the ground itself (Lachenal, 2005). This is certainly the reason why chimpanzees are only briefly mentioned in his academic report. However, he already thought it worth noting that those of Bossou received a form of local protection (Lamotte, 1942). A cultural anthropologist who conducted surveys in the surrounding area also stated that, due to local beliefs, “[...] there is no need whatsoever to protect the chimpanzees here with government measures” (Holas, 1952: 39-40, our translation).
- 14 The Nimba range was designated as Strict Nature Reserve in 1944, depriving the inhabitants of several villages, including Séringbara which is only a few kilometers from Bossou, of parts of their agricultural lands (Berdoulay *et al.*, 1999). As for the Bossou forest, it was not designated as a reserve by the Guinean state or international institutions until it was added in 1991 to the “Core Area” of the UNESCO Biosphere Reserve (designated in 1981), which itself overlaps with the 1944 Mt. Nimba Strict Nature Reserve (Wilson, 1992). Except for signs posted at two locations in the village, there were

no obvious changes in conditions before and after the 1991 designation (Sugiyama and Matsuzawa, 1993). However, although this UNESCO label doesn't imply any real legal force, it probably contributed in the long term to modify the context for the legitimacy of various arguments concerning the management of Bossou chimpanzees and their habitat, as we will see below. Problems relating to the forest and chimpanzees had always been resolved through discussions by the village's decision-making bodies: they had been protected for endogenous reasons grounded in the worldview, history and landscape configuration peculiar to the place.

- 15 After the establishment of the Bossou Environmental Research Institute (IREB: Institut de Recherche Environnementale de Bossou), a national Guinean research organization, in 2001, the villagers entered into resistance in 2002 against newly enforced conservation policies by clearing some parts of the forest vegetation located inside overlapping human-chimpanzee ranging areas. The next section deals with this resistance campaign taking place inside this "paradise of coexistence" and its social and ecological background. This context will enable us to consider an alternate local experience-based model for coexistence with chimpanzees.

## 3 History and background of the field clearing campaign

### 3.1 Elements of historical background

- 16 Under the socialist administration of President Sékou Touré, established after independence in 1958, animistic rites were regarded as the expression of pre-civilized savage behavior holding back the "development" of the country and were hence forbidden under the slogan of "demystification" (Rivière, 1969). Among the Manon and other minorities in the forest region of Guinea, there is—even today—a deep mistrust of the government caused by the neocolonial experience of being dominated as minorities and regarded as "savages" by the other majority ethnic groups under the banner of Islam and socialism.
- 17 It was strictly forbidden for villagers to enter the forest of Gban in Bossou, and of course entry by anyone else was also forbidden. However, after the colonial period, records state that the researchers who frequently visited Bossou climbed to the top of Gban. It appears that the villagers, who originally had a negative attitude towards such behavior, became unresponsive as the years passed (Kortlandt, 1986). At the time when Sugiyama began his investigations, there was no negative reaction to entering the forest (Sugiyama, 1978; personal communication). Sugiyama (1978) also stresses the non-religious character of life in general in the village of Bossou. It thus seems likely that this is a consequence of the aforementioned government policy of "demystification", although we cannot presently rule out the possibility that the people of Bossou found other, hidden ways to maintain and express their beliefs about the sanctity of the forest. The researchers came with a travel order delivered by the government and in many cases entered the study area together with local researchers who were government employees. It probably was impossible for the villagers to oppose these activities by invoking village traditions which were regarded as backwards by the State.

- 18 With the death of President Touré in 1984, the socialist government collapsed and power was seized by Lansana Conté who pursued a path of economic liberalization. As the policy of “demystification” ended, religious ceremonies were publicly revived in Bossou. The ban on villagers themselves going into the forest of Gban was maintained, but research in primatology continued without any special objections. It is likely that, by this time, unspoken acquiescence to outsiders going to Gban—something which had been pushed onto the villagers during the Touré administration—had become established to a significant degree.
- 19 Since the beginning of their studies, primatologists have clearly recognized that the Bossou chimpanzee community as well as the forest area of their habitat is small compared to other regions. The researchers who had a sense of crisis about maintaining the chimpanzee population requested in the early 1990s, i.e. at the time that Gban came to be included in the UNESCO “core area” of the Nimba Biosphere Reserve, that the villagers stop cultivating the skirts of Gban which had already been returned to fallow for a while. The request was made in the form of lump-sum payments to farmers who would then have the right to use land in other areas, as well as through personal provision by the researchers of funding assistance for construction of bridges and schools.
- 20 These requests were made *via* villagers who were employed by the researchers as guides. The first villager hired as a guide was a Mr. A belonging to the Mamy lineage. After that, Mr. A personally selected the new guides that were hired. The Mamy are a lineage which was ordered by the Keleba lineage, as a condition for establishing themselves at Bossou, to take care of the rites related to the forest of Gban. In other words, there was a legitimate reason in the political dynamics of the village for Mr. A to being appointed as a guide for the chimpanzees inhabiting the forest of Gban. Mr. A accepted the researchers’ requests for forest preservation and handled them *via* the village headman and the council of elders. In the end, the promised bridges were not finished and their construction did not progress according to the original budget that was agreed upon. Nevertheless, cultivation of Gban was postponed. As a consequence, by 2002, the forest reached the foot of the hill (Fig. 1).

Figure 1



Mt Gban, Bossou  
*Mont Gban, Bossou*

### 3.2 The 2002 field clearing campaign

- 21 Amid rising international concern for the chimpanzees of Bossou, the Guinean Ministry of Higher Education issued an order establishing the IREB near the village, the aim being to promote environmental conservation and scientific research there as well as in the neighboring Nimba range and the surrounding area. The stationing of State employees began in 1999. In October 2001, the Institute was formally launched with 5 departments: primatology, genetic resources, meteorology, sociology and documents/information. As noted above, there was previously no governmental organization in Bossou in charge of environmental conservation and tourism. Thus the plan for the IREB was, in addition to receiving foreign researchers and conducting research with the Institute's own researchers, to place the various interests related to chimpanzees (such as guide employment, consolidation of infrastructure through individual aid, and allocation of tourism income) under the Institute's control.
- 22 In the middle of February 2002—the time when the dry season had reached its final phase, and tree cutting for agriculture begins—16 households primarily comprising people who detained cultivation rights at the base of Gban began clearing the forest. These households were distributed evenly among the main clans of the village, and the cleared forest was also distributed evenly in order to geographically cover the village area. The villagers' statement in response to the guides and IREB employees who censured the slashing of trees was that cultivation on their own lands was an ancestral right and that it was unavoidable because of their trouble making a living.
- 23 As the field clearing activities began, the IREB indicated its disapproval and issued an order to halt. As the conflict between the village and IREB deepened, foreign researchers

were forced to cease their research activities. In the middle of March, the Director of IREB issued an order for research to go ahead, but in response, a white “curse powder” indicating a prohibition to enter was anonymously spread around all the entrances to the forest. The Director issued instructions to ignore the powder and enter anyway, but the villager guides refused to step over it and go onto the mountain.

- 24 The conflict looked like it would drag on, but a member of national parliament from the village returned home and acted as a mediator. Among the 16 households who conducted the field clearing, 10 households accepted lump-sum payments and abandoned cultivation in the cleared area. The 6 others rejected the lump-sum payment and refused to amicably settle. In July, the Provincial Governor initiated mediation and the leaders of the tree-cutting group were jailed. The dispute was then brought to court. In September, the trial ended with the abandonment of the cultivated land and the release of the involved members.
- 25 This is how the situation tentatively ended. The IREB had actually only superficially brought the opposing side under control. Mutual distrust between the IREB and the villagers remained unresolved, and in February of the following year (2003), the first IREB Director was removed. A new Director took up the post, and through negotiations with the villagers, addressed the issue of tourism income allocation which was one of the points of contention. The villagers’ proposal for a division of village 50%, guides 35% and IREB 15% was accepted, and thus the issue was settled.
- 26 The intentions of both sides and the details of the various negotiations and deals which likely occurred behind these superficial changes are not clear. However, it is not realistic to think that the conversion of secondary forest back to fields, which had been postponed for 10 years in response to requests from foreign researchers, had suddenly flared up by chance immediately after the IREB’s creation simply due to “hardship in making a living.” It should rather be understood as a form of defiance displayed at this newly established governmental organization, perceived as threatening an independent system of coexistence with chimpanzees which had been maintained through various political regimes.

### 3.3 Continuation and transformation of field clearing

- 27 A consequence of the IREB director’s ouster in 2003 was to calm down the resistance campaign carried on by the entire village. However, Mr. B (one of the leaders of the resistance) and his family continued new agricultural activities in the secondary forest around Gban for 3 consecutive years (2003, 2004, and 2005). This time, the axis of confrontation changed to the group surrounding Mr. B versus the majority in the village who accepted the 2002 amicable settlement. With regard to the continuation of field clearing in 2003-2005, Mr. B continued to consistently claim legitimacy based on his ancestral right and his living conditions. As a result, his standpoint was criticized as selfish as much as by the IREB as by the majority in the village. Even so, Mr. B was jailed every year and continued to refuse to take a settlement payment.
- 28 How can Mr. B’s motives, apart from his own statements, be understood? Actually, Mr. B occasionally asserted that turning the secondary forest into cultivated fields is good for the chimpanzees themselves. If fields are cultivated surrounding the area near the well-developed tall forest on top of the Gban hill, where the chimpanzees spend much of their time, then the chimpanzees too can eat the cultivated corn and cassava. As they are the

villagers' ancestors, their "crop theft" is regarded as akin to an offering. This local way of relating to the chimpanzees has a long history: the manager of the first research station established in the Nimba area during the 1940s had already witnessed food offerings to chimpanzees (Kortlandt, 1986). This claim has for a long time been difficult to believe by the outsiders who are usually convinced that even a little more forest is beneficial to the chimpanzees. They have regarded it as a selfish excuse for justifying field clearing activities after the fact. However, it is presently known that nearly 10% of chimpanzee feeding time in Bossou is spent on cultivars (Hockings *et al.*, 2009), allowing to progressively setting up a new picture for conservation.

### 3.4 A "conservation" model based on local experience and knowledge

- 29 Now, viewpoints like those of Mr. B are not quite new. Similar ones have been asserted occasionally by village leaders when discussing chimpanzee conservation issues in Bossou before the 2002 field clearing campaign.
- 30 In March 1998, an 8 year-old boy and a 6 year-old girl circulating along a small path on the forest edge sustained severe injuries as they were bitten by an excited chimpanzee that they happened to encounter (Hockings *et al.*, 2010). The concerned parties in the village gathered and held a meeting to consider how to deal with the incident. Some underlined that events like this one happen once every few decades. But regarding the reason of the encounter with the chimpanzee near the path, a few influential people (including Mr. B) asserted skeptical opinions regarding the research activity itself, pointing out that the forest had increased in size due to pressure from researchers. It seemed to them that chimpanzees got more and more used to humans as researcher and tourist presence increased. Furthermore, some stated that these problems didn't happen when fields were cultivated halfway up Gban: the chimpanzees now come closer to the village because there is no food for them in the forest.
- 31 These opinions, which have been expressed in the past and the opinions of Mr. B in this case, have the consistency of a conservation model regarding the best approach for coexistence with chimpanzees which are probably shared to a considerable extent within the village. The "scientific" view which is shared by researchers and IREB employees states that, for the survival of a small isolated group like that at Bossou, the forest area of the habitat should be enlarged as far as possible and that interactions with adjoining chimpanzee groups should be promoted (Matsuzawa and Kourouma, 2008). In contrast, the view based on local experience and knowledge states that by turning areas near the main chimpanzee range into fields and by accepting a certain degree of "crop theft," they can improve the foraging conditions of the chimpanzee and at the same time provide a sort of "buffer zone" between the chimpanzees and the village. This assertion has the form of a scientific hypothesis relating to "reserve design", including zoning—stating the cause of the crisis and presenting a solution involving specific types of land-use and land rights.

Figure 2



Mt Gban and its forest "beret" in the 1960s  
*Le Mont Gban et son « béret » forestier dans les années 1960*

- 32 Furthermore, a “reserve design” model based on this kind of knowledge is well-founded in the empirical memory according to which there were no problems with this way of life until recently. The development of the secondary forest around Gban is a recent change, occurring only in the last 20 years, and prior to that a landscape with cultivated fields midway up Gban is well remembered by many elder villagers. One villager described the past landscape as follows: “It looked like the hill was wearing a beret” (translated from the French). This landscape also appears in the materials left by the Amsterdam University research team of the 1960s, which help to picture the spatial dimension of the conflict analyzed in this paper (Fig. 2). It can also be seen in the oldest photos of the Kyoto University Research Team from 1976 (Fig. 3).

Figure 3



Mt Gban and its forest "beret" in 1976  
*Le Mont Gban et son « béret » forestier en 1976*

- 33 With regard to changes in land use in Bossou and the forest cover situation, current researchers have begun to reconstruct the situation from sources like these old photographs and aerial photos taken in the colonial era (Yamakoshi, 2003), but there is no consensus between researchers. On this point, the depiction of the village on the IREB Research Building completed in 2001, displaying tall trees all the way down Gban, can be considered as a political statement about what the "normal" landscape should look like (Fig. 4).

Figure 4



Depiction of Mt Gban on the building of the IREB institute, Bossou  
 Représentation du Mont Gban sur le bâtiment de l'IREB, Bossou

- 34 The main cause of Mr. B's consistent resistance may be due to personal poverty, as he states in public. However, he probably also expresses a warning regarding transformations in the village's relationships with chimpanzees due to the influence of outsiders. If the opposition between the two models is regarded as an opposition in designing the ideal environment, then Mr. B, by stepping forward with consistency and obstinacy— not fearing prison and not taking settlement money— is returning to the “beret like” landscape of the past.

#### 4 Discussion: evaluation of the indigenous model for villager-chimpanzee coexistence

- 35 This opposition has an important meaning for the future of chimpanzee and forest conservation in Bossou. There are currently three serious conservation problems facing the chimpanzee population of Bossou. First is the aforementioned isolation of the habitat, and the associated insufficiency of genetic interaction with neighboring populations (Sugiyama, 1999; Matsuzawa and Kourouma, 2008, Shimada, 2011). Second is a dramatic decrease in population caused by mass death due to a contagious respiratory infection at the end of 2003 (Matsuzawa *et al.*, 2004; Humle, 2011). Third is the problem of injuries to people caused by chimpanzees, something which has occurred more frequently in recent years (Hockings *et al.*, 2010).
- 36 Regarding the last two problems in particular, the indigenous model seems the most efficient. Zoonotic diseases, primarily contagion from animals to humans, is currently a

serious international problem (Garber, 2008), but contagion from people to animals has also become a significant concern for reserve management, specifically in connection with tourism. In the case of Bossou in 2003, there are suspicions about contagion due to the presence of tourists, researchers and guides near the chimpanzees, and contagion via wastes near the village, particularly feces and urine. In the former case, we are faced with the fundamental problem of whether research and tourism regarding chimpanzee populations living near people, as in Bossou, are even appropriate in the first place. In the latter case, regarding human injuries caused by chimpanzees, the indigenous model clearly seems advantageous. A spatial model which secures a chimpanzee range at distance from the village using cultivated fields resembles the buffer zone model promoted by UNESCO, and is likely to reduce the probability of spreading contagious diseases between chimpanzees and humans, as well as the frequency of injuries caused by chimpanzees.

- 37 Of course, realizing the Bossou indigenous model is by no means simple. For example, the villagers presently depend on cash income, particularly on tourist income which they would like to increase. It is thus likely that the current landscape has a stronger aesthetic appeal to tourists than the “beret” landscape. The approach of Mr. B did not win support from the majority in this case, and it is conceivable that the villagers are striking a balance between political interests as a realistic response, while supporting the indigenous model as a “conservation” philosophy. Additionally, the indigenous model cannot handle all the region-specific problems. For example, for the first of the three problems— isolation of the habitat and securing genetic interaction with neighboring groups—there is, at present, no sense of crisis within the village, and the indigenous model is useless. However, if outsiders ignore the indigenous perspective, the inhabitants might be tempted by an anti-conservation response which maintains their independence but which at the same time rashly throws away a “resource” which is valuable to themselves (Matsuda, 2002).
- 38 In addition, it would be worth investigating to what extent this model may apply to other regions of human-chimpanzee coexistence in West Africa, where the great majority of chimpanzees are known to live in unprotected and cultivated spaces (e.g. Brugiere *et al.*, 2009 on the Guinea/Guinea-Bissau frontier ; Halloran *et al.*, 2013 in Sierra Leone). For instance, the meaning of “crop-raiding” as an offering may not have validity beyond Southeastern Guinea where chimpanzees often seem to be considered as ancestors, while in Western Guinea as in most Islamized regions these creatures are humans changed by God into repulsive beings and banned from village life after committing some kind of crime (Leblan and Bricka, 2013). However, other research has demonstrated that landscape transformation through human activities may imply habitat gain rather than loss for chimpanzees. For instance, processes of agricultural settlement formation a few kilometers away from “mother” villages in the Maninka region of Southwest Mali, which are occupied by the youngest farmers seeking to escape from the elders’ direct tutelage, give way to the creation of fruit patches which become available to chimpanzees once these sites are abandoned after two decades of use at most. In this region, the forced displacement of these agricultural settlements by policymakers drives some farmers to settle secretly in less accessible areas which were actually favoured by chimpanzees (Duvall, 2008).
- 39 No matter what sort of conservation problems arise in the future, acts of resistance against environmental policies will definitely continue to function as the antithesis to

measures by outsiders who do not understand the local historical and spatial stakes, thus potentially leading to a situation which is not beneficial to the outsiders either. The outsider approach regarding the future of chimpanzee conservation in Bossou should be, to borrow the words of Kakeya (2001), to have faith in the “potential of indigeneness,” i.e., in the villagers who maintained an intimate relationship with their chimpanzees through the storms of colonization, demystification policies and scientific conservation policies, and to continue the cross-fertilization of endogenous ideas with Western environmentalist views.

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## NOTES

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## ABSTRACTS

Environmental conservation policies in Africa have their origin in the forced establishment of nature reserves during the colonial era. Even after African countries became independent, top-

down operation of these reserves continued primarily due to international calls for nature conservation and to consumerist demand from western countries. For the people of Africa, this continued to be an externally-driven activity with little endogenous motivation and, quite often, real motives for opposition. Even in the context of today's participatory conservation approaches, there is vocal skepticism about the ability of Africans to act independently and about the existence of local "conservation" philosophies.

This paper offers a detailed description of field clearing demonstrations by the villagers of Bossou, Republic of Guinea, which flared up in 2002 following the establishment of a governmental research institute in the village. This place had been portrayed for several decades by natural scientists as a place of peaceful coexistence between people and chimpanzees. The stated goals of the swidden preparation campaign was to secure land for subsistence purposes, but it is thought that the main driving factor was maintaining the right to decide matters like the allocation of tourism income, which the government research institute was attempting to usurp. After the general 2002 uprising, a particular individual and his family continued their resistance consisting of swidden preparation and cultivation in the chimpanzee habitat. This was likely due to a conviction to recover the original vegetative landscape of the village, which had been transformed under the pressure of academic research, to its prior state. The agricultural environment is valued by a chimpanzee "conservation model" based on indigenous experience and knowledge, which is in conflict with models introduced by outsiders (scientists and public administrations).

The indigenous conservation model revealed by this case study may better help to prevent epidemics of zoonoses and injury and deaths due to chimpanzee attacks, compared with the outsiders' conservation approach based on general knowledge drawn from conservation ecology. Future conservation measures should be determined based on dialog between the two models. This article is modified after Yamakoshi (2006a).

La conservation de l'environnement en Afrique trouve ses origines dans les réserves naturelles imposées par les pouvoirs coloniaux. Même après les indépendances, la gestion "par le haut" de ces réserves a été maintenue notamment dans le cadre des politiques internationales de conservation et pour répondre aux attentes consuméristes des pays occidentaux. Dans les sociétés africaines, cette politique imposée a continué à générer très peu de motivation et, bien souvent, de véritables motifs d'opposition. Même dans le cadre des approches participatives actuelles, certains continuent à exprimer leur scepticisme quant à la capacité des africains à agir de façon indépendante et quant à l'existence de conceptions locales de la "conservation".

Cet article propose une description détaillée d'une campagne de défrichage par les habitants de Bossou (République de Guinée) au sein d'une aire protégée, en 2002, dont le catalyseur a été l'installation d'un institut de recherche public au sein du village même. Depuis plusieurs décennies, ce village était considéré par les scientifiques comme un lieu de coexistence pacifique entre les habitants et les chimpanzés. L'objectif déclaré de la campagne de défrichage était de sécuriser des terres pour la production de la subsistance, mais il semble que la principale motivation des acteurs ait été de garder leur pouvoir de décision, face à l'institut public, sur des questions telles que la répartition des revenus générés par le tourisme local. Après le soulèvement général de 2002, un individu et sa famille ont poursuivi le défrichage et les cultures au sein de l'habitat des chimpanzés. Ceci exprime vraisemblablement un désir de retrouver l'environnement végétal tel qu'il était avant le début des recherches scientifiques. L'environnement agricole est localement valorisé pour la coexistence avec les chimpanzés, ce qui entre en conflit avec les modèles de gestion exogènes (scientifiques, administrations publiques).

Le modèle de "conservation" local révélé par cette étude de cas peut aider à prévenir les préjudices et les décès dus aux zoonoses et aux agressions commises par les chimpanzés, par comparaison avec le modèle exogène fondé sur les préceptes de l'écologie de la conservation.

Dans le futur, les mesures de conservation devraient être déterminées d'après un dialogue entre les deux approches. Cet article est modifié d'après Yamakoshi (2006a).

## INDEX

**Subjects:** anthropologie

**Mots-clés:** Bossou (Guinée), chimpanzé (*Pan troglodytes*), conservation communautaire, paysage, résistance, savoirs locaux

**Keywords:** Bossou (Guinea), chimpanzee (*Pan troglodytes*), community conservation, landscape, local knowledge, resistance

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