

What kind of knowledge is ‘indigenous knowledge’? Critical insights from a case study in Burkina Faso

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1 Introduction

The debate over the use of ‘indigenous knowledge’ (and later, of related expressions such as ‘local’ or ‘traditional knowledge’, often used as synonyms) and its epistemological status in relation to mainstream scientific and technical knowledge first appeared in the academic literature of the 1980s, both in the social and in the natural sciences. The issue rapidly became widespread in the political debate, especially in the fields of development aid and environmental conservation.

Inheriting the reflection on other systems of knowledge and the challenges they pose to Western science, started in the previous decades by cognitive anthropology and ethnoecology, the concept of ‘indigenous knowledge’ was first used by a group of anthropologists trying to build a basis for the recognition of cultural difference and of other forms of knowledge in the practices of development aid (Brokensha, Warren, Werner, 1980). The expression then became popular among scholars interested in environmental issues and in the link between culturally-driven behavior and ecological balance (Gadgil, Berkes, Folke, 1993; Berkes, 1999): for many authors, the concept was a tool to discuss eurocentrism in the natural sciences and to acknowledge the positive role of non-Western technical knowledge.

In the following decades, the interest in local knowledge expanded among development agencies and international institutions. From the mid 1990s, it became common for most of these to create their own ‘indigenous knowledge’ programs, and for NGOs working in the global South to include a component based on traditional knowledge – especially about medical, agricultural and environmental issues. Paradoxically, in contrast with its success among natural scientists, practitioners and decision-makers, the concept *per se* has rarely been at the center of epistemological reflections in the recent academic production of the social sciences and the humanities, at least until some recent contributions.

Furthermore, while ethnoecologists and anthropologists provide detailed descriptions about indigenous groups’ rich heritage of environmental knowledge, specific ethnographies of the circulation of local knowledge and of its incorporation in non-traditional settings – such as the practices of technical or medical assistance in the global South – are relatively scarce.

This article makes an attempt at problematizing the idea of ‘indigenous knowledge’, first through a review of some critical positions in the social sciences and particularly in anthropology (in the first section), and then through a presentation of an ethnographic case study on ‘traditional’ environmental practices and sacred sites in the area of the Comoé-Léraba reserve in Western Burkina Faso (in the following sections).

2 'Indigenous knowledge', a contested category

Within the broader stream of criticism that has been made of categories such as 'indigenous', 'local' or 'traditional knowledge' and their inclusion in discourses and practices of development aid and environmental conservation, three major points can be identified and discussed for the moment. A first one concerns conceptual choices and the terms employed by indigenous knowledge (IK) theorists. Indigeneity is a widely discussed and politically charged issue (see for ex. Dove, 2006) and its definition can vary considerably from one context to another. In relation to Sub-Saharan Africa, where many of IK-inspired development interventions take place, the concept can be difficult to define clearly, as Pelican observes in introducing her study on the legal status of Mbororo pastoralists in Cameroon:

Whereas in North, Central, and South America indigenous activism has a long history and the status of first peoples is generally uncontested, the situation in Africa is different. Here defining which groups may count as indigenous is much more problematic and controversial, as there are long and ongoing histories of migration, assimilation, and conquest. Furthermore, as Igor Kopytoff (1987) has convincingly demonstrated, African societies tend to reproduce themselves at their internal frontiers, thus continuously creating and re-creating a dichotomy between original inhabitants and late-comers along which political prerogatives are negotiated. This recurrent process does not allow for a permanent and clear-cut distinction of first nations versus dominant societies, as implied by the universal notion of "indigenous peoples." (Pelican, 2009: 56)

In Africa, indigeneity risks to overlap with the category of autochthony, which serves as the basis for many contested political claims and economic cleavages (as highlighted by, among others: Bayart, Geschiere, Nyamnjoh, 2001; Ceuppens, Geschiere, 2005; Cutolo, 2008); or, in contrast, it can come at odds with local perceptions of who the locals and who the strangers are and produce paradoxical results. Awareness of indigenous peoples' rights often generates from the action of international organizations or transnational social movements: the adoption of indigeneity as a significant resource in local political arenas may be the consequence of extraversion and even produce new forms of exclusion for those who cannot claim the status of indigenous people, as Igoe's study of Maasai identity politics in 1990s Tanzania has shown (Igoe, 2006).

To avoid some of these contradictions, scholars and practitioners have sometimes adopted alternative and supposedly less controversial definitions: IK often became 'local' or 'traditional knowledge'. But the concepts of tradition and locality have been equally discussed and problematized. Anthropologists, in particular, have insisted on the historicity and constructedness of tradition (at least since the seminal work of Hobsbawm, Ranger, 1983), and interpreted the local as a direct production of large-scale relations and global forces (Gupta, Ferguson, 1992; Appadurai, 1996). Thus, the act of labeling practices, techniques or taxonomies as 'traditional' or 'local' can become, in certain cases, a way of othering elements or systems of knowledge that do not fit in the corpus of Western science. This attitude eventually fails to acknowledge the similarities that a recognized scientific theory might share with a vernacular system of beliefs, and the transversal characters of 'indigenous' and 'scientific' knowledge (Agrawal, 1995).

Lexical disputes aside, few scholars would deny that all populations develop forms of knowledge on the natural resources of the environment they inhabit, and that this often happens outside the field of mainstream scientific knowledge. Creating labels or protocols specifically aimed at the use and recognition of this knowledge could thus help to include it in the 'official' pack of theories and techniques usually mobilized for interventions in the fields of development, conservation and natural resources management. Still, the problem arises when a decision must be taken about

what should be included: are IK protocols and programs about localized techniques and practical knowledge – for example *zai*, a specific agricultural technique used in Northern Burkina Faso to rehabilitate dry land (Reij, 1991)? Or rather, should they offer space for broader symbolic representations and knowledge systems to be regularly taken into account – as in the projects aimed at involving traditional healers and at promoting or formalizing non-biomedical health care? The answer to this question will probably depend on the goal attributed to these protocols and programs, and the conditions under which the discourse on the inclusion of IK emerges in a certain context or institution.

This suggests a second level of criticism, which pertains to broader considerations about participatory development. The idea of 'participation' and the call for new inclusive and participatory models of intervention in developing countries, which have entered the mainstream discourse of international agencies since the 1990s, have received a broad range of criticism, from anti-development authors such as Rahnema (2007); to poststructuralist scholars such as Cooke and Kothari (2001) who focus on the de-politicization engendered by participatory techniques and the disciplinary turn that characterizes them; to development anthropologists such as Chauveau (1994), who deconstructs the idea of peasants' participation by replacing it in the *longue durée* of colonial history and natural resources exploitation. Olivier de Sardan observes that the 'neo-populist' stance of the development scholars who theorize participation (among which he includes Chambers, 1983; and Hobart, 1993) can fail to grasp development practices and discourses as complex objects of socio-anthropological analysis:

Ideological populism paints reality in the colours of its dreams, and has a romantic vision of popular knowledge. As for methodological populism, it considers that 'grassroots' groups and social actors have knowledge and strategies that should be explored, without commenting on their value or validity. The first is a bias which disables scientific procedure, while the second, on the contrary, is a positive factor which opens new fields of investigation. The problem, of course, is that both are often thrown together in the works of a given author, or in a given book. Nevertheless I remain convinced that, despite the difficulties involved, distinction between the two is necessary, as can be illustrated by a number of recent works constructed around local knowledge or the agency of 'grassroots' actors, along the same lines as Hobart's. On reading them, we observe that one can simultaneously succumb to ideological populism, through a systematic idealization of the competences of the people, in terms either of autonomy or of resistance, while obtaining innovative results thanks to methodological populism, which sets itself the task of describing the agency and the pragmatic and cognitive resources that all actors have, regardless of the degree of domination or deprivation in which they live. (Olivier de Sardan, 2005: 9)

Commenting Sillitoe's reflection on indigenous knowledge – where the author advocates its use, while recognizing some problems in reaching a clear definition (Sillitoe, 1998) – Ellen raises concerns over the instrumental uses of indigenous knowledge, which again refer to criticism of participatory approaches:

What greatly offends, quite rightly, so many anthropologists is the way indigenous knowledge is used by some as the new "quick fix". We find it as conveniently repackaged bits of knowledge (Sillitoe's "independent technical facts") which, it is claimed, can be garnered under conditions of rapid rural appraisal in the context of so-called participatory and farming-systems approaches and thereafter slotted into what remains an essentially top-down paradigm. (...) The result is that many so-called indigenous-knowledge reports radically disembody particular bits of proclaimed useful

knowledge from the rest of culture in a way which does a profound disservice to its potential importance. (Ellen, commentary to Sillitoe, 1998: 238)

Some authors (Agrawal, 1995) agree with Ellen on this point, recognizing the risk of disembedding single elements from a complex of beliefs or a cultural context. In fact, the debate on the uses of indigenous knowledge often remains linked to applied or practical goals and rarely confronts the broader epistemological issues that the attempt of integrating different systems of knowledge raises. Several contributions to a recent issue of the journal "Futures" have engaged in such a task: their propositions, such as the foundation of a "global polycentric epistemology" (Maffie, 2009), the theorization of "linked spheres of knowledge" (Sillitoe, Marzano, 2009), or the use of fuzzy logic in order to allow for more flexibility in the interaction between different knowledge systems (Berkes, Berkes, 2009), are a starting point, but they have not obviously obtained general consensus for the moment.

A third level of criticism is thus evoked, pertaining to the link between the reflection on IK and the longer term focus on knowledge in the history of social and cultural anthropology. The first theorizations of IK, such as the seminal collection of essays edited by Brokensha, Warren and Werner (1980), were somehow influenced by ethnoscience and cognitive anthropology, and by the broader reflection that these theoretical schools developed over cultural differences in perceiving, classifying and knowing the world. Yet, with the appropriation of IK both by development actors and by scholars from the natural sciences (see among others Gadgil, Berkes, Folke, 1993), the focus has progressively shifted toward the effectiveness of adopting local techniques and practices – usually in the fields of agriculture, health care or natural resources management – in a framework previously dominated by Western technoscience. This disconnection from anthropological theory has been the source of uneasiness and criticism even for the most sympathetic scholars, as demonstrated in Sillitoe's article already mentioned above:

The difference between indigenous-knowledge research and anthropology is one of emphasis. It is less an intellectual pursuit than an applied one, its objective being to introduce a locally informed perspective into development – to promote an appreciation of indigenous power structures and know-how. In some regards, it is the introduction into development – some would argue long overdue – of a more explicit anthropological perspective. Anthropology needs to pay attention to this task or other disciplines will supplant it; already agricultural economists and human geographers, even foresters and plant pathologists, are stealing our disciplinary clothes. This is unfortunate for anthropology and development alike. (Sillitoe, 1998: 223-4)

'Traditional environmental knowledge', for example, calls into question human-environment relations, an issue which has been source of discussion in anthropological theory and has seen the confrontation between sometimes radically opposite approaches, such as those who characterize the debate on the 'ecologically noble savage' (see for example Hames, 2007). One noteworthy example is the controversy opposing Lévi-Strauss's structural anthropology and Harris's cultural materialism that followed the publication of *Structuralisme et écologie*, based on a lecture given by Lévi-Strauss at Barnard College in 1972 (Harris, 1976; Lévi-Strauss, 1983). Two visions confronted in that occasion: one – Lévi-Strauss's – seeing nature as a repertoire of meaningful elements, "something like a huge reservoir of observable properties in which the mind is free to select objects that it will then convert into signs" (Descola, 2009: 106); , and one – Harris's – more materialist and focused on the ecological limits posed by the natural environment to cultural practices, and interpreting human-natural relations in terms of extraction and livelihood. Some decades later, basing on his own fieldwork on the Bassar of Togo and their environmental practices, Dugast offers a quite lévi-straussian interpretation of the presence of sacred groves – deemed as

the result of “classificatory thought” (Dugast, 2010) and analyzed as parts of broader complex systems of thought – while at the same time criticizing the reductionist interpretations offered by some development theorists:

(...) ce sont de simples systèmes d’interdits, ou encore des institutions spécifiques qui ont retenu l’attention des penseurs du développement en quête de patrimoines. Le continent africain, champion des opérations de développement, est ici à l’honneur. Quelques rares fois, ce sont les systèmes d’interdits eux-mêmes, particulièrement formalisés à travers des institutions dites totémiques, qui ont retenu l’attention de certains chercheurs chevronnés. Plus souvent, car l’idée se profile plus spontanément, et aussi car l’analyse en semble plus facile, le fait plus indubitable, ce sont les bois sacrés qui ont fait couler le plus d’encre financée par des fonds destinés à l’étude des patrimoines naturels dans les pays tropicaux. (Dugast, 2002: 34)¹

Starting from similar premises, I will present in the following paragraphs my case study on sacred forest sites in lower Komonola (Western Burkina Faso), which have been interpreted by some as *ante litteram* forms of conservation. After a brief presentation of the history of conservation in Burkina Faso, the article will go into more detail on the actors involved in the protection of the Comoé-Léraba reserve and on the characteristics of sacred sites in its surroundings, and later draw some general conclusions on the parallel between sacralization and conservation.

3 Burkina Faso: from colonial to participatory conservation

In Burkina Faso, as in all francophone West Africa, the current presence of protected areas originates from the classification of *forêts classées* (classified forests) by the French colonial government during the first half of the 20th century. Interests of colonial science in the study of tropical fauna and flora and hygienist preoccupations over the spread of illnesses such as onchocerciasis around rivers or other risk areas met with colonial power’s growing need to exploit timber and forest resources (on the subject see also Calandra, 1999; Ribot, 2001; Benoît, 2004). This led to the creation of several natural reserves with differentiated statuses, a policy which intensified particularly between the 1930s and the 1950s.

The reserve of Comoé-Léraba, in Western Burkina Faso (at the border with Ivory Coast), has a similar colonial origin and exemplifies further developments which are quite typical of the most recent history of conservation in Burkina Faso. The “Forêt Classée et Réserve Partielle de Faune de la Comoé-Léraba” – by its complete official name – results from the merging of two distinct classified forests: the forest of Diéfoula in the western side and the forest of Logoniégué in the eastern side, created respectively in 1937 and 1955. The preservation of ecosystems and resources and the enactment of prohibitions implied by their respective statuses, though never completely achieved, became even more problematic in the late colonial period and through all the first decades of independence.

Early post-colonial policies developed a continuity with the orientations set by the former colonial power, e.g. confirming the military character of natural conservation, and training the

¹“Simple prohibition systems, or rather some specific institutions, have received attention from development thinkers searching for heritage (patrimoines). The African continent, a champion in development operations, has in this case the place of honor. A few times, prohibition systems themselves, formalized through so-called totemic institutions, have been the object of attention for qualified researchers. More often – because the idea comes spontaneously, the interpretation looks easier, the facts seem undeniable – sacred groves have triggered extensive coverage, with funds aimed at the study of natural heritage in tropical countries” (translation by the author).

forestry agents at the Ecole Nationale des Eaux et Forêts in Dindéresso, who inherited the legacy of the school for forest guards founded in 1953. In general, though, environmental legislation was overlooked until the 90s (the colonial laws of 1935 were not formally replaced until the adoption of the new Code Forestier in 1997), and the borders of protected areas became more and more permeable. The southwestern area of Burkina Faso, benefitting from a comparatively more favorable climate than the rest of the country, was to become an important agricultural zone, with commercial crops such as sugar cane, cotton and yam, and the preservation of wilderness was no longer a priority. It was common practice for villagers to enter the limits of the reserves and turn the land into cultivable fields, or to include protected areas in the paths followed by transhumant cattle; the forests of Diéfoula and Logoniégué were no exception. From the mid-90s, though, authorities showed the intention to elaborate new environmental policies and to reestablish control over protected areas still formally existing on the national territory.

Meanwhile, at the international level, different actors were contributing to a trend towards a more complex and socially aware approach to conservation, and towards the adoption of participatory techniques in the management of natural reserves. In this area, an international project called GEPRENAF (Gestion Participative des Ressources Naturelles et de la Faune), funded by the GEF (Global Environment Facility) and by the Belgian government, was started in 1995, aimed at the recuperation of two forests on the two sides of the Burkinabe/Ivorian border and to turn them into a transfrontier park. While the project failed on the Ivorian side, partly because of the political crisis involving Ivory Coast from the late 1990s, it achieved a certain degree of success in Burkina Faso: the two adjacent classified forests of Diéfoula and Logoniégué were merged into a single reserve, with the territorial limits being partly redefined in favor of farmers from the peripheral villages. At the same time, a number of villages composing the “official” periphery of the reserve were singled out and chosen as counterparts.

The AGEREF/CL (Association de Gestion des Ressources Naturelles et de la Faune/Comoé-Léraba), an association gathering representatives from these 17 villages and provided with an executive bureau composed by experts, was created in 1999 and obtained the concession of the reserve management in 2001 from the central State. The reserve thus became, thanks to GEPRENAF and other national projects that followed, a pivotal experience testing one aspect of the newly elaborated national policy of *gestion tripartite* (tripartite management) of protected areas – which are supposed to be managed by State authorities, privates, or collective actors and local communities.

The participatory approach adopted in the case of AGEREF/CL implied several strategies aimed at involving the local population. The work of the different bodies of the association – composed both by elected representatives and by recruited experts – assures the management of the fauna and flora in the reserve: it proposes forms of surveillance through the “village rangers” who support governmental forestry agents, and elaborates strategies for the economic viability of the reserve, including the development of packages for both hunting and sightseeing tourism. At the same time, AGEREF/CL has promoted income-generating activities in most of the peripheral villages, as a form of compensation for the tightening of controls over the use of land and resources inside the reserve.

4 “Sanctuaries of conservation”

While the goal of promoting local knowledge was not explicitly mentioned in the projects that led to the constitution of the Comoé-Léraba reserve, the theme has emerged in more recent documents. Here is a quotation from a report written by the executive office of AGEREF/CL, after a mission devoted to list sacred groves and other sites of cultural interest in the reserve:

[...] sur le plan culturel, on retiendra que les populations riveraines gardent des relations séculaires fortes avec la réserve. Si certains groupes ont pu maintenir ces relations en continuant de fréquenter leurs lieux de cultes situés dans la réserve, d’autres ont abandonné leurs lieux de culte. Les aménagements envisagés donneront une fois de plus confiance aux populations en portant l’augmentation de leur degré d’engagement en faveur de la protection de la réserve” (AGEREF, 2007)²

This quotation links explicitly the relation between people and their natural environment, defined as “centuries-old” and charged with symbolic and religious meaning, with the level of participation to the efforts of preserving the reserve – or, it could be argued, with the creation of consensus around local conservation policies. A more general view is stated in a report on governance and biodiversity in the Comoé-Léraba reserve, written by a Burkinabe team of CIFOR (Centre for International Forestry Research):

“la sacralisation et la totémisation sont des dispositions coutumières de protection et de reproduction des ressources naturelles, donc des stratégies traditionnelles de maintien de l’équilibre écosystémique d’une zone. Ainsi, les bosquets, les mares, et les collines sacrées sont préservés de toute agression multiforme et deviennent de ce fait des réserves naturelles, des sanctuaires de conservation de la biodiversité [...]. Les espèces totems ont également le temps de s’épanouir et de contribuer à maintenir l’équilibre écologique du milieu” (CIFOR, 2006)³

This excerpt expresses a vision in line with more institutional versions of the discourse on indigenous environmental knowledge (see Wangari, 1998; World Bank, 2004; ICCROM, 2005). Accordingly, beliefs identifying sacred sites in the forest and forbidding certain uses of animal or vegetable species are interpreted as ‘customary’ or ‘traditional’ apparatuses oriented toward the preservation of natural resources and the maintenance of ecological equilibrium. In this vision, local practices do not work as constitutive or transformative factors for the natural environment, but rather act as contributions aimed at securing stable material relations between people and their milieu. In the first quotation, the AGEREF mission report recognized at least that the long-term relations with the forest might be subject to change, since in some cases worship sites have been abandoned. Furthermore, the second quotation suggests an analogy between the sacred in its traditional meaning – religious beliefs – and a new sense of sacred, related to environmentalism and conservation policies: the text refers to “sanctuaries”, a term that can often be found in the classification of protected areas.

5 Sacred sites in lower Komonola (Western Burkina Faso)

Most of the peripheral villages on the eastern side of the reserve are situated in lower Komonola (*le bas Komono*), or the lower ‘Komono country’, in the southern half of the Mangodara department. The Komono, also known as Khi-pe, are a small group living at the border with Ivory Coast:

²On the cultural level, it must be observed that neighboring populations keep long-term and strong relations with the reserve. While some groups have maintained these relations and kept attending their worship sites situated in the reserve, others have abandoned their worship sites. The scheduled restorations will once more give confidence to the populations and increase their commitment in favor of the reserve protection” (translation by the author).

³“Sacralization and totemization are customary dispositions of protection and reproduction of natural resources; as such, they are traditional strategies for maintaining the ecosystem balance in a given area. This way, sacred groves, lakes and hills are preserved from any aggressive act, and they become natural reserves, sanctuaries for biodiversity conservation [...] What is more, ‘totem’ species have the time to develop and contribute to maintaining the ecological balance of the milieu” (translation by the author).

they speak Khi-se, a gur (or Voltaic) language, which is considered in danger of disappearing, partly because of the growing influence of Julakan and of Mande culture in the whole area. While nowadays a minority in demographic terms, the Komono have maintained the status of “autochthonous” group as far as the ritual control of land is concerned: they have resided in the region for – supposedly – the longest time and are thus entitled to act as hosts (*jatigi*) receiving the guests (*duna*) or new-comers and attributing them portions of land in exchange for ritual and sometimes material (though seldom monetary) compensation⁴.

Furthermore, while sharing significant similarities with bordering groups such as the Dogossé and the Gan, the Komono have a peculiar political organization that distinguishes them: although Komono earth priests and village chiefs operate at the village scale, a *massa* (‘king’ or ‘sovereign’ in Julakan) holds a symbolic rule over the whole lower Komono country. Consequently, part of the status of the villages depends on the presence of the different branches of the royal family and of the role played in the processes of succession and enthronement of the *massa*. One place playing a significant role in these processes is located in the village of Massadéyirikoro, where I conducted most of the fieldwork on which this article is based. Its Jula name can be translated as “beside the tree of the king’s son” and recalls an episode in the oral history of ancient migrations from Togo to the current lower Komono country. Massadéyirikoro is supposed to be the first stage in the last wave of Komono settlement, probably around the early 19th century, and an old tree still standing among the houses represents the siege where the first descendant of Dongo, founder of the ruling lineage, decided to stop⁵. From then on, it was considered an important place in Komono history and the traditional authorities charged with the nomination of the *massa* gather at a shrine beside the village to proceed with the requested rituals.

Most of the sacred groves and shrines in all the surrounding forests depend on the ritual supervision of earth priests (*dugukolotigiw* in Julakan, *folonderye* in Khi-se) or sacrifice chiefs (*murutigiw* or *landatigiw* in Julakan, *kperederye* in Khi-se) residing in the village of Massadéyirikoro. A map drawn during a group interview with local representatives of AGEREF and traditional authorities showed the approximate location of some of these sacred groves. Many follow the course of the Comoé river and are subsequently included inside the limits of the reserve; another group is concentrated in the same small area right outside the village, an area identified with the supposed location of the “ancient village”. My ethnographic work focused initially on collecting data about these sacred sites in order to draw a comparison between them and observe recurring features of the sacred.

Dunjugu, for example, designates a section of the river Comoé, which flows in the reserve: the Comoé is the main river of the whole region and traces a natural frontier between Burkina Faso and Côte d’Ivoire. Two points where the river widens and then narrows set the external limits of the area called Dunjugu; a few visible stones emerge from the water in its central part – an element often associated to sacred altars (see Kuba, Lentz, 2002). The name of Dunjugu refers to an “evil place” in Julakan, and the site is indeed associated to a violent episode in the oral history: the basin supposedly hosted the Bwe, the autochthonous inhabitants of Ouiguita, who fled the newcomers during the first wave of Komono settlement in the area and refused to come to terms with them. Several prohibitions concern the killing of animals: more specifically, it is forbidden to hunt and fish, and one must keep the rifle under his back when crossing the site. Even outside the site, hunters cannot shoot in the direction of Dunjugu. The exceptional character of the site is also witnessed by the presence of a holy hippopotamus – or, according to different informants, a caiman – who cannot be hunted and who can announce misfortunes to the villagers.

⁴This system of traditional land control and attribution is widely accounted for by several authors in other contexts of Burkina Faso and more generally of West Africa. See, among others, Hagberg 2001; Lentz 2006.

⁵See also Lanzano, 2013 (where some results of the same case study I expose here are anticipated). For more details on the Komono settlement, see Paley Parenko, Hébert 1962; Diallo 2004; Père 2005.

Beekanga ("great mountain" in Khi-se) is the name of a rocky hill situated a few kilometers east of Massadéyirikoro. The hill includes two peaks, a higher one and a lower one, which represent a mother and her daughter standing high and observing the fights around the city of Bobo-Dioulasso – located 200 kilometers north, the second largest city in the country. The oral history does not link this site to the episodes of the Komono settlement in the area, but instead to the conflicts and political instability that characterized the region and the kingdom of Gwiriko during precolonial times. Further research would be needed in order to collect more accounts and reach a clearer interpretation of the origin of this sacred site. The prohibitions of Beekanga, such as the one forbidding sexual intercourse in the area, are similar to those traditionally associated to all forest spaces outside the villages. In addition to that, the hill presents a cleft where it is possible to perform sacrifices in order to ask for favors or to prevent calamities.

Karbena is a small woody space just outside the village of Massadéyirikoro, in an area described in local history as the previous site where villagers' dwellings were established. Some cashews and tamarinds are present, and their fruits can be consumed near the trees but cannot be transported to the village to be consumed later. In general, trees in Karbena cannot be cut or torn down, and no one can enter the place if armed with cutting weapons. In case of transgression, expiation can consist in the sacrifice of a cow, a goat or a fowl.

Junpunbu (translated as "the place of the vultures") is another section of the Comoé, where the river widens and forms a basin, but it is located west of Dunjugu, near the village of Sakédougou. It is possible to sacrifice animals – such as chickens and goats – to ask for a good deed, and it is forbidden to shoot animals living in the area. The sacredness of the site originates from its history: Junpunbu was supposedly the area where criminals were sent – and later killed by the vultures – as a punishment by the chiefs of Jungara, an old Jula village who held ritual control over this area. Jungara has been abandoned and no longer exists: the descendants of its inhabitants would now live in the village of Bondokoro Dioula, further in the North, while the chiefs of Sakédougou know its position but are not entitled to perform rituals in it. Consequently, it is very difficult to know who is in charge of sacrifices and prohibitions in Junpunbu, since – as one informant put it – "the memory of the place has gone".

Further evidence of the political character of the sacred was collected during subsequent fieldwork done in Mangodara and the surrounding villages. Mangodara, the largest village in the department and the siege of the municipality including most of the lower Komono country, is nearer to the earth chiefdom of Tomikorosso, an area which has recently experienced a high degree of conflict regarding a contested succession and the controversial practices of land sale and loan operated by the earth priest currently in charge. One day, I visited an old woman; a relative of Ardjouma (informant and translator helping me with the researches), who claimed to be the only daughter of the former earth priest whose lineage had been excluded by the chiefdom. We talked about an episode that occurred some months earlier: a group of men had been to a pond located in the surroundings to catch fish, ignoring the fact that the pond was sacred and that they should have asked for the permission of her or someone from her family before fishing in that area. The woman told the story in these terms:

"when I knew what had been going on, I was in tears. . . I cried because they should have come to me or to my sons, ask for permission before going to that pond. Later some of them would apologize, claiming they didn't know the pond was sacred; someone even said they didn't catch any fish. I know it's not true, I'm sure they went fishing and then they went back to Lassina [considered a rival, now officially recognized as the earth priest of the whole area] to give him all they caught. They won't bring me not even the smallest fish".

Failing to recognize the sacredness of the pond, and failing to perform the expected rituals and

to respect the competence of certain elders, was not here a simple matter of ignorance or loss of "local knowledge". It had to do with political struggles over land tenure. The tension created by the controversial succession of the earth priest and the resentment over his choices, supposedly tending to the monetarization of land distribution (see Mathieu *et al.* 2002), were palpable and they constituted one of the major obstacles for my research in the area of Mangodara and Tomikorosso. Unlike my experience in Massadéyirikoro, which is under the influence of another earth chieftdom located more in the South, getting information on sacred groves and earth shrines where sacrifices are performed was much more difficult in the northern Komono country, and on some occasions I had to temporarily abandon the subject and try to focus on different aspects of the organization of space and local politics.

6 On some recurring characters of sacred sites

Some provisional conclusions can be drawn from this brief overview. The study of sacred groves and other ritual sites illustrated some recurring characters of the sacred, which can be summarized as follows:

Sacred sites are heterogeneous. It is difficult to give a coherent definition of 'the sacred' by observing the sites briefly described above: Dunjugu, Beekanga, Karbena, Junpunbu and the pond near Mangodara present different characteristics and implications. In some cases, a discontinuity in terms of natural landscape – the river widening, a hill – distinguishes the site, while in others it is the presumed presence of some special animals. The exceptional status of the site can be linked to the presence of the *juu* (the spirits), or to specific episodes of local history. All this sites are grouped in the ethnological category of *bois sacrés* (sacred groves) both by AGEREF agents who planned to list and restore them, and by local informants. In fact, to indicate these sites, local languages usually employ different expressions (see also Siebert, 2008) that may refer to other semantic fields, as in the case of the *peaux de la terre* (land skin) in several voltaic idioms (Liberski-Bagnoud, Fournier, Nignan, 2010). Anthropological interpretations on the functions of sacred groves vary considerably: Cartry (1993) distinguishes between those forest spaces where passage rites and initiation ceremonies take place by virtue of a presumed divine presence, and the smaller vegetation islands that display a 'more discrete' sacredness. The latter are associated with specific rules of behavior and prohibitions, and lie under the control of an earth priest or another ritual or political chief: the sites described above fall under this category, and are linked to the foundation of villages and the control over land rather than to the elaboration and transmission of religious beliefs. Because of this heterogeneity, some scholars have recently proposed to use alternative definitions such as *lieux exceptés* (sites of exception), that would highlight the exceptionality and the inversion of rules that characterize these sites (Dugast, 2010).

Prohibitions are fluid. Tracing a clear picture of the *interdits* (prohibitions) concerning the (mis)use of resources or of space in sacred sites and their relative sanctions is quite a complex task: different informants report different prohibitions, or different versions of the same order of prohibition. Furthermore, some prohibitions are often referred to precise places in some occasions but in reality concern the whole forest, as is the case with the ban on sexual intercourse. More generally, prohibitions seem to be situational and fluid in their nature and hardly cause any kind of universal patrimonialization of precise animal and vegetable species; still, many rules prohibit hunting or gathering in restrained portions of the forest, or along certain directions.

The sacred is multi-sited and mobile. The *juu* (spirits) are theoretically everywhere, and their influence is not limited to the areas more strictly defined as shrines or sacred groves, although in these areas the sacred becomes more dense and allows the geographical concentration of ritual activities in some specific forest sites. Interestingly enough, sacred groves can sometimes be reproduced in a nearer position: sites such as Dunjugu and Beekanga, whose original site is some kilometers distance from the village, have a corresponding site at the location of the 'ancient village' of Massadéyirikoro, where the same spirits can be evoked and the same kind of sacrifice can be performed. Sometimes there is an element representing a concrete link between the original and the reproduced sites, such as in the case of the basin near the village called Dunjugu, where fragments of stone coming from the original segment of the Comoé river called Dunjugu are supposed to be buried (the use of stones to reproduce shrines is documented among the Dagara of Southern Burkina Faso by Kuba, Lentz, 2002).

Local politics and social hierarchies matter. Although the degree of secrecy and exclusiveness of ritual practices and rules connected to the performance of sacrifices varies significantly, according to the case (and to the informants), it is obvious that not everyone is able to deal with the sacred. Some individuals are given this responsibility; they are chosen usually because of their belonging to certain lineages (the roles of earth priest and of "chief of the knife" – i.e. of sacrifices – are hereditary) and their age (in a lineage expressing the earth priests, the oldest man alive will be asked to preside the ritual when possible); and they supervise different places according to their competence (the control of earth shrines, and the rituals in favor of farming and good harvest will certainly be a responsibility of earth priests). The distribution of the sacred and the composite structure of its management refer to broader political hierarchies and kinship relations in the village: to obtain a clearer picture of them, one needs to broaden the analysis to the whole social structure...

7 Risks and implications of 'indigenous knowledge' perspectives: a provisional conclusion

Given these general observations, any parallel between the creation and management of sacred sites and their prohibitions in the forest, on one side, and the enforcement of protected areas and regulations on conservation by the State or international agencies, on the other, must be dealt with a lot of precaution. In the case of sacred sites around Massadéyirikoro, the rules and prohibitions I summarized hardly ever lead to any kind of patrimonialization of limited portions of the forest, or of vegetable and animal species. The possibility of shooting animals or consuming fruits varies according to the distance from the village or the sacred site, on the direction pointed by the weapon, or sometimes even on the gender or the social role of the individual – ritual chiefs can have stricter limitations in some sacred sites, but are allowed to enter shrines usually forbidden to the rest of the village. The flexibility of social rules and ritual practices is also underlined in Siebert's study on sacred forests in Northern Benin, which concludes:

Local concepts of sacred forests reveal that the forests were not conceived as 'sacred' per se; they did not embody gods but merely served as abodes for them. Thus, gods and trees are not identical. Also, the protective norms did not actually protect the trees in the forest, but instead referred to the forest gods. There is no evidence that trees and forests in themselves were conceived as sacred or that they were protected for their own sake. (...) Thus, it is not possible to infer an ecological consciousness

or motivation from the existence of protective norms around sacred forests. (Siebert, 2008: 174-5)

Indeed, critics of the 'cultural' or 'religious turn' in conservation practices insist on the lack of precise and universal rules that would allow interpreting sacred sites as institutions explicitly aimed at the preservation of biodiversity. The lack of intentionality, it is argued, necessarily invalidate the comparison between sacralization and – modern and results-oriented – conservation.

But, if the metaphor is flawed, one can still question the unintended material consequences of the presence of sacred sites on the preservation of biodiversity. Several scholars have shown the impact of taboos and social norms on the reduction of human pressure and resource extraction, for example in the case of Madagascar (Lingard *et al.*, 2003; Jones *et al.*, 2008). Empirical studies on the ecological impact of sacred groves of Western Africa are rarer, and they do not converge: while Lebbie and Guries's review of sacred groves in southwestern Sierra Leone (Lebbie, Guries, 2008) appreciates the biodiversity value of the sites examined, the study by Liberski-Bagnoud, Fournier and Nignan (2010) on the southern region of Kaya in Burkina Faso comes to different conclusions. Their results show that sacred groves among the Kasena present an ordinary degree of biodiversity; plus, they do not constitute remains of primary forests but rather spaces that have undergone anthropization and vegetation change as much as the rest of the forest.

As we have seen, the issue connects with much larger debates both in anthropological theory and in development theories and practices. The reflection on indigenous knowledge – and its conceptual variations – has certainly had the merit of reversing neo-malthusian positions that invariably devaluated the knowledge of local populations in the global South. From Posey's account of *apêtê* forest islands among the Kayapó of the Brazilian Amazon (see for ex. Posey, 1985), to Fairhead and Leach's critical deconstruction of colonial and post-colonial narratives of deforestation in Guinea (Fairhead, Leach, 1996), much has been written to demonstrate the contribution of human action to the (re)generation of vegetation patches previously viewed simply as remnants of primary forests, and more broadly to the creation and shaping of 'wilderness'. IK theorists have followed, adding more case studies to show examples of effective or sustainable systems of natural resources management built through local knowledge.

But, despite its emancipatory potential, IK-inspired research bears some ambiguities, such as the risk of proposing reductionist and effectiveness-oriented explanations of complex social and cultural phenomena. Here is where the reflection over indigenous knowledge connects with the 'ecologically noble savage' debate, raising doubts over the possibility of clearly identifying conservationists attitudes among indigenous people, especially when conservation is defined as any action purposely intended to preserve resources (see Ruttan, Borgerhoff Mulder, 1999).

Furthermore, by adopting 'conservation' – defined through criteria that originated in Western intellectual history and scientific thought – as a benchmark on which to evaluate non-Western cultural practices, scholars and development actors might end up promoting the integration of bits of 'other' knowledge into frameworks still heavily dominated by mainstream technoscience.

Only in-depth analyses can shed light on the appropriateness of IK-related theoretical interpretations in one context or another. In this article, I have described some characters of sacred sites in lower Komonola, observed during my ethnographic researches in the region, and I have tried to argue that ritual practices and prohibitions connected to these sites do not seem to be primarily concerned with biodiversity conservation goals. On the other hand, my study has not focused extensively on the political implications of emphasizing the positive role of sacred groves on the preservation of forest resources, and the causes and consequences of the growing engagement with IK discourses both at a local and at a global level – an aspect that requires greater attention. Indeed, more ethnography is certainly needed on the institutional contexts where the discourses of indigenous knowledge, environment and participatory conservation emerge and are implemented

– including NGOs, academic departments and political institutions – so that not only the validity of a concept, but also its uses, misuses and implications can adequately be criticized.

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