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- AQ1 Please provide details of “Cameroon 1994” in the reference list.
AQ2 Please provide details of “Moore 2006” in the reference list.
AQ3 Please provide in-text citation for the following References: Brockington 2002; Evans-Pritchard 1940; Richards 1939; Steward 1955; Steward 1977.

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CHAPTER 17

Environmental Anthropology in Africa: From Cattle Complex to Environmentality

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INTRODUCTION: ENVIRONMENTAL ANTHROPOLOGY IN AFRICA

Anthropologists often credit Julian Steward (1902–1972) as the founder of the sub-discipline of environmental anthropology (Haenn and Wilk 2006; Kopnina and Shoreman-Ouimet 2011). During the 1950s, Steward and his students contrasted with other anthropologists of their day by focusing on causality in the interaction between culture and ecology. He was less interested in symbols and concepts than in human action – namely work and livelihood – what one of his students, Robert Murphy, called “sinew and sweat” (Murphy 1981, p. 128). This scientific approach treated society as the direct product of human adaptation to ecology. Prior to Steward’s “cultural ecology” (later called environmental anthropology), many anthropologists had studied the relationships between humans and their environments, whether as part of the understanding of how total context informs cultural analysis, or as the means to discern how cultures organize and make sense of their surrounding environments and resources. But while it is now clear that different approaches to the environment are necessarily entangled – rather than fractured by an unproductive debate opposing nature and culture (see Ortner (1972) for the conceptualization of this opposition through a gender framework, and MacCormack and Strathern (1980) for a critique of this dichotomy) – the study of human groups and their environment was

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mostly informed by a materialist concern about humans' interactions with and adaptation to the physical environment, whether climate, rainfall, terrain, and overall biotic contexts. Steward termed his approach cultural ecology rather than the anthropology of the environment precisely to establish a materialist perspective: he wanted to make clear that he was studying relationships and not simply one aspect of the world. Steward's ecological analysis was, for the most part, ahistorical, apolitical, materialist, and more attentive to matters of structure rather than individual agency (Biersack 2006), but today's sub-field of environmental anthropology, influenced by numerous theoretical movements, most notably post-structuralism, has shifted from synchronic to diachronic approaches, has become more political, informed by symbolic analysis, and reflexive (Kopnina and Shoreman-Ouimet 2011, pp. 6–7). These historical shifts in the theory and methods of environmental anthropology – including applied anthropology in the field of environmental conservation¹ – have recently made possible the constitution of environmentalism itself as an object of anthropological inquiry (Milton 1993, p. 7).

This chapter provides a (possible) genealogy of the intersections between culture and the environment within the anthropology of Africa. Our goal is to provide an overview of the main contributions Africanist anthropologists have made to the study of human-environment interactions, but we also endeavor to make an argument about the specificities of this discipline vis-à-vis other anthropological geographies, and in relation to the broader field of environmental anthropology. Using a chronological typology of environmental anthropology developed by other scholars as a point of departure (see Dove and Carpenter 2008; Kopnina and Shoreman-Ouimet 2011; Townsend 2000), we specify the terms of its application within African anthropologies.

As a distinct sub-field, the anthropology of the environment in Africa is rather recent, in contrast to other regions such as South America or Oceania. While in other areas anthropologists sought to make direct contributions to the study of the environment (such is the case with Julian Steward among South American Indians, Frederik Barth in Kurdistan and Pakistan, Roy Rappaport in New Guinea, or Darell Posey in the Brazilian Amazon) Africanists have addressed the topic of environment mainly as a part of other research questions related to the study of the stability and cohesion of African societies and their reproduction in the context of colonialism (Kuper 1983, p. 106). Africanists have generally avoided a focus on the environment as a distinct topic, in part because anthropological research on the environment tended to be carried within evolutionist and materialist frameworks² and this was something structural-functionalists were keen to avoid. Yet their work still provided important contributions to what is today defined as environmental anthropology. The genealogy we present here is necessarily incomplete and selective. Rather than being exhaustive, we have tried to provide references that illustrate general trends and speak more directly to the argument we develop about anthropology's "disciplinary ideology" (Stocking 1983, p. 7).

We begin with early studies of relations of determinism, interdependency, or influence of the environment in African cultures and political systems, as well as studies of the relationships between communities and natural resources in the context of the colonial project to extract resources and curtail Africans' access to them. We also explore how studies of hunter-gatherer and pastoralist societies, while initially informed by utilitarian perspectives of economic rationality and by the ecological concern of

cultural adaptation to the environment, later questioned those same notions of rationality and adaptation in order to critique the classification of human societies according to subsistence patterns. Finally, we discuss the theoretical implications for the discipline of conservation practices in Africa, some of which evoke colonial premises about the supposed irrationality of “natives” relationships to natural resources. Many of these practices are informed by regimes of environmental transnational governance that Arun Agrawal calls “environmentality,” in which new technologies of governing the environment, constitute new kinds of environmental subjects: “people who have come to think and act in new ways in relation to the environmental domain being governed” (2005, p. 7).

A BRIEF HISTORY OF ENVIRONMENTAL ANTHROPOLOGY

Scholars of environmental anthropology identify three important periods in the sub-field. First, prior to and following World War II, scholars focused either on the colonial practice of limiting natives’ access to resources (Dove and Carpenter 2008, p. xiv) or adopted cultural ecologists’ deterministic view that “cultural phenomena exist to serve the needs of ecological adaptation” (Milton 1993, p. 4). Convinced that adaptations to similar environments produced cross-cultural similarities (Kopnina and Shoreman-Ouimet 2011, p. 7), Steward advocated a comparative search for general laws and causal explanations. Research in this area was associated with students and scholars at the University of Michigan, where Steward began his career.

Second, environmental anthropology during the 1960s was characterized by the embrace of the ecosystem as a unit of analysis. Researchers studied small, bounded communities, and developed ethnoecology and ethnobotany as areas of focus (Townsend 2000, p. 21). This period was also marked by the discovery of “indigenous knowledge” (Agrawal 1995) or rationality in the management of environment and resources. Equally important in this period was Clifford Geertz’s (1963) interest in “systems theory” – a common theoretical framework at the time for scholars, like Geertz, who trained with Talcott Parsons and other social theorists at Harvard’s Department of Social Relations, a vibrant program that was eventually folded into the anthropology and sociology departments.

Systems theorists took the concept of ecosystem as “the logical conclusion to the interplay of culture, biology, and the environment” (Kopnina and Shoreman-Ouimet 2011, p. 9). Once the main features of the relationship between humans and non-humans within a bounded system were determined, the behavior of that system could be described and predicted. These analytical perspectives were soon criticized for the absence of historical contextualization, for the neglect of global-local interactions, and for the focus on stability rather than change or rupture.

Third, in addition to these criticisms, the rise of postmodern theory in the 1980s and 1990s stimulated more holistic and diachronic perspectives in which the concept of culture returned as the primary unit of analysis in the relationship between humans and their environments. Moreover, with the emergence of environmental movements and non-governmental organizations (NGOs), environmental anthropologists became more involved with political power and policy-making, by consulting and

participating in environmental conservation policies, by advocating for indigenous rights and land tenure, and by mediating the relationships between local populations and the environmental movement, at the same time they were conducting scholarly research (Kopnina and Shoreman-Ouimet 2011, pp. 10–11). This was a major break with the past, as anthropologists working in top-tier academic settings had been stigmatized as minor scholars if they engaged in activities that could be considered “applied anthropology.” This period has also been marked by an increased reflexivity, a more subjective and interpretive dimension in data collection and interpretation, and a more critical approach to environmental discourses (Dove and Carpenter 2008, p. 61) and practices.

Taking into consideration the most recent work in environmental anthropology, we could add a fourth period to this chronology: studies about the detrimental effects of human behavior on the environment. Topics of research include anthropogenic climate change, the loss of biodiversity, deforestation, and the overall degradation of landscapes and habitats by pollution, industrialization, and urbanization. Many scholars argue that we have entered a new geological era – the Anthropocene – defined by the irreversible effects of human actions on the planet (Crutzen 2002). This body of work includes the study of the relationship between humans and non-living or non-human phenomena (for some examples see Cruikshank 2005; Haraway 2008; de la Cadena 2010; Kohn 2013), as well as the positioning of alternative ontologies at the center of the anthropological inquiry (Viveiros de Castro 1998). Deemed by many scholars to be a new kind of anthropology (Kirksey and Helmreich 2010) – especially when informed by the concept of the Anthropocene and motivated by the possibility to radically conceive alterity – the methods and theories associated with this positioning have been characterized as an “ontological turn” (Carrithers et al. 2010). Research on the Anthropocene is now highly visible, but less in Africanist anthropology than in the anthropology of Latin America or Southeast Asia. At the end of the chapter, we provide a hypothetical explanation for this lack of engagement, putting forth the argument that the constitutive terms of African anthropology as a discipline have rendered the ontological turn meaningless.

CATTLE ONTOLOGY

The first group of African anthropologists concerned with environmental issues was mostly concerned with how the environment influenced African peoples’ practices, social organization, and cultural institutions. Herskovits and Evans-Pritchard’s focus on the central role of cattle in African pastoral societies are examples of this early approach to the environment: the first referring to the “cattle complex” and the second explaining the importance of the “cattle idiom” in the Nuer’s cosmology and social organization. Herskovits conceived of the “cattle complex” as “an expression of dominant cultural *values* rather than ecological adaption,” stressing the non-utilitarian reasons for possessing animals (Netting 1977, pp. 40–41). Herskovits employed a “culture-area” approach, dividing the African continent into nine cultural areas (Herskovits 1926; Kuper 1984, p. 194), of which the East African “cattle complex” was just one. None of the other areas (e.g. Bushmen, Hottentot, West Africa, Desert, and so on) was designated by its specific resources (Herskovits 1930).

In his ethnography of the Nuer, Evans-Pritchard went further, detailing the uses and significance of cattle in shaping Nuer cosmology and worldview. His linguistically-based analysis – translated into the notion of the “bovine idiom” – provided evidence that Evans-Pritchard was already very much in touch with the complexity of the relationships between humans and animals, and the relevance of such relationships in constituting cultural models. In a move that prefigured the later study of indigenous knowledge in the anthropology of the environment, Evans-Pritchard elucidated the concept of ecological time, and the Nuer’s culturally constructed notions of time and space.

Like Herskovits and Evans-Pritchard, Audrey Richards (1946) took cattle very seriously. Explaining that the “cult of cattle” in eastern Africa varies “from an intense affection and interest in the animals, to a ritual veneration and almost worship of the herd” (1932 [2004], p. 94), she defined *primary* (economic resources and means of exchange) and *secondary* values of cattle (objects of affection and of religious observance), only to conclude that the latter predominates over the former (1932 [2004], p. 97). Indeed, her cultural analysis of the importance of cattle could be seen as an early form an “ontological turn”; Richards noted that “in some mysterious sense, the cattle are members of the social organization of their human owners, and akin to them in a particular way” (1932 [2004], p. 96).

Later, in his work on Basotho perspectives on cattle, James Ferguson would also refer to the “Bovine Mystique.” He challenged the World Bank’s prescription to increase livestock production as a solution to the “development” problems in Lesotho by noting that stock-keeping had already been part of “development” plans since colonial and post-colonial times. Yet development practitioners continued to see the Basotho practice of raising cattle through a restricted dual perspective: either it was considered as part of an alternative economy, or as a remnant of traditional modes of living. In contrast to this utilitarian view, Ferguson argued that the Bovine Mystique “can only be understood in relation to a set of cultural rules which define and valorize livestock as a special domain of property; and that these rules are maintained and recreated as a product of contesting forces articulated around the oppositions men/women ..., senior/junior ..., and patron/client” (1990 [1994], p. 138). Moreover, he wrote, the Bovine Mystique is “continually being challenged, fought out, and renegotiated – in ideological practice, as the Mystique is defended and attacked in daily argument, oratory, and conversation – and in economic practice, as couples and communities come into conflict over actual decisions concerning their animals” (1990 [1994], p. 166).

Such studies did much more than highlight the central role cattle play in the social organization and cosmology of some African populations. They showed that cattle in many societies is a constitutive element of their ontology.

HUNTER-GATHERERS, PASTORALISTS AND OTHER CATEGORIES

Anthropologists studying hunter-gatherers during the 1960s and 1970s tended to focus on adaptation to their environments rather than on their relations to neighboring peoples or colonial states. One reason is that evolutionary anthropologists viewed people without domesticated animals or agriculture to be ethnographic analogies for

the study of the distant past. But what began as the evolutionist's search for ethnographic analogy led to the invention of a distinct category of human society. Despite repeated criticisms that hunter-gatherers (also called foragers) are not living fossils, and seldom live independently from pastoralist or farmer neighbors, anthropological research carried out among foragers continues to be dominated by biological anthropologists who give only lip service to the complex relations these groups have with neighboring farmers, pastoralists, trade routes, governments, urban systems, schools, missionaries, and media. It is in the interests of these anthropologists to treat foragers as distinct societies separate from the larger contexts (e.g. markets, farmers, etc.) in which they live because they study these societies as ethnographic analogies for the distant past. The justification is that for more than 99% of humans' existence we lived without agriculture. Yet, few contemporary foraging societies in the world, and none in tropical rainforest environments, have ever been observed living independent of other populations with other forms of subsistence, and some scholars question if foragers have ever been capable of surviving in rainforests without agriculture (Bailey et al. 1989). As Grinker (1994) showed, while the Efe (Pygmy) hunter-gatherers of the Democratic Republic of Congo claim that they only hunt and gather, the Efe work in their Lese neighbors' gardens; and others have shown that the Efe receive most of their calories from cultivated goods (Bailey et al. 1989). Grinker thus argued that there is no reason to consider that the Efe are not agriculturalists, especially given the fact that they hold rights of access to their Lese trading partners' farms. He wrote, "The Efe choose not build their own gardens because they *conceive of themselves* as hunter-gatherers ...The Lese gardens are in essence cooperative house gardens from which the Efe can expect to receive a share of the harvest" (1994, p. 137, emphasis added).

Not surprisingly, many hunter-gatherer studies have borrowed from biology the concept of ecosystem to integrate nature and culture (Dove and Carpenter 2008, p. 37) and, accordingly, they focused more on stability, balance, and functionality (as in ecosystems) than history, hierarchy, conflict, or rupture (Grinker 1992). The different foci of cultural and biological anthropologists in hunter-gatherer studies has led to intense academic conflicts, especially in research among hunter-gatherers in the Kalahari desert, in Namibia and Botswana. Many of the arguments revolve around two extreme positions: (i) that the hunter-gatherers are living today largely as they have lived for thousands of years, therefore providing an appropriate analogy for evolutionary study; and (ii) that hunter-gatherers are an underclass produced by more recent interactions over the last few hundred years within a complex political economy (Wilmsen and Denbow 1990) and that their subsistence practices are a creative adaptation to defeat by dominant and oppressive forces, followed by retreat into isolated areas inhospitable to agriculture (Dentan 1988).

The conventional positivist approach to hunter-gatherer studies, epitomized by Lee and DeVore's volume *Man the Hunter* (1968) was also indebted to Lesley White's (1949) notion of culture as a system. For White, cultures were not a mere aggregate of traces; rather, its elements were organized as a system. Searching for general laws of social organization, some anthropologists tried to associate daily practices like hunting, with religiosity and ritual, such as Radcliffe-Brown (1952) when suggesting that hunter-gatherers tended to maintain a "ritual attitude" towards the animals and plants from which they depended for their survival.

Examples of this type of approach are Richard Lee's early writings on the !Kung San (1968, 1979; Lee and DeVore 1976) and Robert McC. Netting's cultural ecology of the Kofyar from Northern Nigeria (1968) – all of which considered classic functionalist monographs. Most forager studies link hunting-gathering as a form of subsistence with a particular kind of social organization (see, for example, Ingold, Riches, and Woodburn, 1988a, 1988b).

Despite the critiques, hunter-gather studies continued to fit the positivist framework of evolutionary anthropologists, most notably in research among the San. These studies often apply a form of cost/benefit analysis to explain choices that might seem irrational (from a utilitarian point of view), while also providing models from which Paleolithic diet changes related to human and agriculture development can be inferred. Although the earlier analyses were informed by a functionalist logic, they were nonetheless very important in challenging the Malthusian assumptions and theories of resources' scarcity used by Utilitarians. Marshall Sahlins's (1972) famous analysis of "the original affluent society," relying on Lee's data, simultaneously dealt a crushing blow to formalist approaches to economics among hunter-gatherers and highlighted the pretentious illusion that capitalism was the path to wealth and happiness.

Starting in the 1980s, some studies on hunter-gatherers employed a more complex approach that deconstructed the concept of community, focusing instead on the concept of indigeneity and its connection to the environment. Thus, although indigeneity has always been a principle of difference – notably during colonial dominance – more recently it has emerged as an identity marker used to make claims, and an organizing principle (imposed from the outside or mobilized from the inside) in the access to rights and resources. As an identity marker, indigeneity can be self-attributed which complicates the notion of bounded community. The 1989 International Labor Organization convention recognizing indigenous rights facilitated a connection between indigeneity and environmental conservation (Brody 2001; Niezen 2003; Tsing 2009) – one that had been established earlier, with the 1987 Brundtland Report.³ The concept of indigeneity however, was not received well in Africa due to its connection to the pejorative idea of "tribalism" and its concomitant colonial legacies. For the Maasai in northern Tanzania, Dorothy Hodgson (2011) described the transnational agenda in which indigeneity emerged, and how Maasai activists began to deploy the category to make claims on the state, all the while being very cautious to avoid language that could suggest associations with tribalism or ethnicity. Later, John Comaroff and Jean Comaroff explained how ethnicity itself became a commodity in southern Africa as part of identity-making and affirmation strategies: the San, for example, were encouraged to transform their cultural heritage into an enterprise to generate income (2009, p. 93), while KwaZulu-Natal "seem[ed] to be mutating slowly into a culture park, a tourist destination, the *ur*-space of tradition in the country at large" (2009, p. 11).

Steven Robins also examined the tensions created by the use of categories of indigeneity to access resources among the Khomani San in the northern Cape province of South Africa. Examining some of the concerns over the "authenticity" of some "Bushman"⁴ (according to a colonial legacy of stereotypes some are perceived as pristine relics of hunter-gatherers while others are "fake"), Robins highlighted how identity representations feed international donor conceptions of "Bushman" authenticity, influencing their struggles for land, traditional leadership offices, and donor funding

(2001, p. 839). Such concerns, shared by NGOs and donors, divided the San amongst themselves, between “traditionalists” and “western Bushmen.” For Robins this divide is the outcome of an ambiguous dual mandate of NGOs: that of cultural recovery of the San, and “civilization” defined in terms of the principles of liberal democracy.

Adam Kuper contested the validity of terms like “native,” or “indigenous” altogether. For Kuper, the terms are fabricated representations of identity that will inevitably be unrepresentative and “far from the realities on the ground.” While such representations may be deployed with the generous intention of providing land (or other resources) to “indigenous” groups, they still “rely on obsolete anthropological notions and on a romantic and false ethnographic vision” that can have “dangerous political consequences” (2003, p. 395).

AQ1 Similarly, Peter Geschiere has equally questioned the notion of “community” used by the World Bank and the environmental NGOs involved in the formulation of Cameroon’s 1994 forestry. Given the fact that “the very notion of community is highly elusive and relative in its application” (2004, p. 239) the new law ended by promoting “worrying forms of exclusion and xenophobia” in relation to access to forest resources (2004, p. 253).

FROM COLONIALISM TO ENVIRONMENTALISM: THE PERSISTENCE OF SOME ANXIETIES

Many anthropologists of Africa developed their work under the auspices of colonialism but with the purpose of providing a better understanding of peoples’ social organization, and, many hoped, easing the degree of control colonial authorities exerted. However, these studies, informed not only by the colonial context but by functional-structuralism generally construed African populations as isolated entities, disconnected from outside influences. Anthropologists like Fortes and Evans-Pritchard sought to understand the mechanisms that led to coherence, stability, and the reproduction of the social order. Even conflict was explained as a means to achieve social solidarity. In doing so, these studies elided the effects of the colonial encounter, not to mention the encounter with the anthropologist himself. Evans-Pritchard for instance, was accused of focusing too much on social equilibrium of the Nuer, ignoring the colonial political context in which his work was developed “in order to recapture a presumed pre-contact cultural essence or structural form [that] existed in the past” (Stocking 1991, p. 67; see also Hutchinson 1996). Indeed, the British colonial government commissioned Evans-Pritchard to study the Nuer in the 1920s, after they had conducted a punitive expedition. He was, however, clear to identify “the legacy of state depredations in current Nuer mistrust toward the government” (Dove and Carpenter 2008, p. 10).

Talal Asad has played down the role of anthropology in sustaining colonial power (or as the famous saying goes, “as the hand-maiden of colonialism”), arguing that “the knowledge [anthropologists] produced was often too esoteric for government use” (Asad 1991, p. 315).⁵ However, Asad also noted that anthropology might not have been that important for colonial power, but colonialism was crucial to anthropology by making fieldwork possible. Moreover, “European power, as discourse and practice, was always part of the reality anthropologists sought to understand, and

of the way they sought to understand it” (Asad 1991, p. 315). Asad reinforces the argument that environmental anthropology often sought to understand how Western utilitarianism was imposed upon colonized populations, forcing them to change their relationship to their environments and natural resources. This was the case with livestock, swidden agriculture, and the adoption of commercial crops.

The problem of large herds

Colonial authorities frequently tried to limit the numbers of grazing stock or cut the size of herds because they believed overgrazing would degrade the environment (Netting 1977, p. 49). This effort was of course, met with great resistance by African populations due to the integration of cattle into their social and cultural organization. Despite the efforts of anthropologists to explain the complexity and importance of cattle for some African societies, current environmental discourses continue to insist that keeping livestock is detrimental to soil and vegetation. Thus, herding bans are common in environmental conservation, even when such banning endangers populations’ livelihoods.⁶

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Swidden agriculture

Slash and burn⁷ agriculture was also a source of anxiety for colonial powers because it was associated with nomadic agriculture and mobility in general, and was therefore, an implicit threat to the control of people and land aimed by authorities. After independence, slash and burn continued to be problematic from the point of view of the newly constituted and centralizing states, as anthropologists Henrietta Moore and Megan Vaughan have described well for northern Zambia (1994). Unlike many of their functionalist predecessors, Moore and Vaughan analyzed social and economic changes over a period of 100 years and across multiple levels, from household to the national economy. Moore and Vaughn resist adopting any concept of “social breakdown” caused by colonialism, arguing instead that social relations “have been continuously and creatively reworked” (1994, p. 233). We should note however, that despite their processual analysis, the research questions that moved them were related to social organization, and not the environment itself.

For colonial authorities, slash and burn also represented a misuse of important resources and, as such, while fighting those practices corresponded to the goal of protecting timber for the logging industry, colonial projects aimed to transform traditional agricultural practices into more productive ones. In fact, native populations pursued diversity in their crops as a way to mitigate risk, and rotated crops in different plots of land as means to increase productivity. Moreover, as Moore and Vaughan have pointed out for the Bemba and others, systems of slash and burn were not only extremely complex, but also “well-adapted to local environmental conditions, as well as...flexible and responsive to change” (1994, p. 26). Nonetheless, colonial authorities generally considered these practices backward and primitive.

James Fairhead and Melissa Leach (1996) also questioned assumptions about natives’ misuse of natural resource, challenging common misconceptions about the drivers of deforestation in Guinea’s forest-savannah mosaic. Considered as a

contribution to ecological anthropology, their ground-breaking work provided an alternative view of the Guinean landscape that directly contradicted the discourses of policy-makers and the international environmental community. At the core of Fairhead and Leach's argument was the idea that it is not possible to separate "natural" from social phenomena. Drawing on historical documentary evidence and oral recollections, they were able to deconstruct a prominent discourse of forest degradation. They concluded:

Far from being relics of the destruction of an extensive forest cover, most of Kissidougou's forest islands prove to have been created by local populations or extended from much smaller forest patches. And far from undergoing progressive diminution, woody cover on the upland slopes and plateaux between the forest islands has generally increased during this century. (1996, p. 83)

More recently, but following the legacy of Moore and Vaughan, Berry, and Fairhead and Leach, other authors, such as Tamara Giles-Vernick's (2002) on Central Africa, and Pauline von Hellermann's (2013) on Nigeria, have argued that deforestation is more often the outcome of Western practices of scientific forestry, than local populations' practices of slash and burn.

Productive crops

When colonial authorities forced African populations to adopt commercial crops and change their traditional practices of agriculture, this often meant restricting their access to land and ultimately endangering their food security. Sara Berry described the imposition of commercial agriculture in Africa – which was translated into the increased monetization of rights to land, labor, and credit transactions – while also noting the contradictions of such colonial policy: since the success of African agriculture threatened European commercial interests, administrators "wavered between encouraging export crop production and African commerce and limiting it" (1993, p. 26). Arguing against utilitarian perspectives of resources' access and use (adopted by ~~both~~ colonial authorities, "development" practitioners, and some scholars) Berry demonstrated how colonial rule sought to impede the "misuse" of natural resources by Africans, precluding them from farming or grazing, and protecting Europeans' commercial interests. In the four case studies (Ghana, Nigeria, Kenya and Zambia) Berry demonstrated that culture, power, and material resources act in mutually constitutive ways to shape the course of economic and social change (1993, p. 13). Therefore, ideas and practices relating to property, power, and legitimacy cannot be understood in terms of fixed rational choices, since people try to maintain as many options open as possible (1993, p. 14).

Carrying capacity and resource exhaustion

Colonial assumptions regarding the use of natural resources were framed by Malthusian principles about excessive population growth vis-à-vis limited resources or a low carrying capacity of the environment. Such principles, easily connected to environmental determinism, helped justify the (forced) adoption of more "rational"

practices of herding, farming, and forest management while ensuring peace. Notwithstanding the evidence against these misconceptions, much of which was provided by anthropologists, geographers and, later, political ecologists, the idea of resource scarcity as a driver for conflict has gained traction among many political scientists (see Kaplan 1994; Williams 2016). Arguing against this Malthusian rationale linking war with deforestation, Paul Richards offered a compelling argument to make sense of the Sierra Leone's conflict. Asserting that Sierra Leone was not facing any environmental crisis and that the war was a "consequence of political collapse and state recession" (1996, p. 124), Richards highlighted how both rebels and government forces deployed what is commonly called "indigenous knowledge" about the forest, in practical and symbolical ways, to mobilize people in the war and defeat the opponents. In the same logic, he concluded, the forest provides an intellectual heritage absolutely essential for the re-establishment of social bonds and peace.

Persistent anxieties

Significantly, current environmentalists' discourses reproduce the utilitarian logic deployed by colonial authorities and their anxieties regarding the good management of natural resources. Associating slash and burn with primitive agricultural techniques, environmentalists often accuse African populations of a lack of awareness of the value of forests which, in their view, explains not only the destruction of forest to expand farming fields, but also the degradation of forest areas for the production of charcoal. A short perusal of the grey literature produced by large environmental NGOs, and international organizations like the World Bank, provides evidence for these claims.⁸ The same can be said about the detrimental effects of cattle in conservation areas. With the mainstreaming of concerns regarding climate change, forests acquired greater relevance within the environmental community, since deforestation is deemed to be one of the major causes of increased greenhouse gases emissions (Canadell and Raupach 2008; Santilli et al. 2005). Fighting deforestation in countries from the Southern hemisphere thus became a priority for environmentalists, who consider the traditional practices of nomadic agriculture to be one of the most important causes of deforestation.

In this context, some environmental organizations have pushed for land tenure reforms, not just as part of discourses on rights of indigenous populations, but as a way to prevent nomadism. This push echoes the work of colonial authorities who tried to aggregate populations in villages in order to facilitate control over them, preventing their expansion into the forest or agricultural fields used for commercial crops.⁹ But while the pursuit of land tenure for native populations can be seen as a charitable endeavor, its effects can turn out to be less than desirable, as such pursuit is also responsible for the gradual disappearance of communal lands. And if, for environmentalists, these communal lands are a conservationist's nightmare – as argued by Hardin (1968) in his "Tragedy of the Commons" – for many African populations these lands are a crucial equity element in the distribution of available resources (see Berry 2001 for claims over and distribution of land during colonial and post-colonial periods in Ghana). Furthermore, land tenure opens the opportunity for the commercialization of land, depriving populations from their livelihoods.

ENVIRONMENTALITY AND ENVIRONMENTALISM AS OBJECTS OF ANTHROPOLOGICAL INQUIRY

Environmental NGOs have been involved in the conservation of African resources for decades and the expansion of their activities, beginning in earnest during the 1990s, transformed environmentalism itself into an object of anthropological inquiry. Research has focused, on one hand, on the practices and discourses of environmentalists and their impact on populations and their environments and, on the other hand, on the global-regional-local connections established through those practices and discourses. In any case, Agrawal's concept of environmentality applies (2005), even if authors do not explicitly mention it. Indeed, anthropologists are keenly interested in the new technologies of government developed by the environmental movement. These technologies are increasingly informed by ostensibly quantifiable and verifiable data, science-based, positivist approaches, and shaped by a neoliberal ideology of privatization and commoditization. As such, these technologies have great power to re-order the worlds in which people live, physical and cultural. As Timothy Mitchell (2007, p. 244) writes, economy can often be construed as "a set of instruments of calculation and other technical devices, whose strength lies not in their representation of an external reality but in their usefulness for organizing socio-technical practices, such as markets." Furthermore, new ways of characterizing or measuring the world reflect not only the way we order real, material things in the world, but also shape the way we think – for example, by introducing concepts such as waste and efficiency.

Simultaneously, these new environmentality regimes are increasingly transnational, as conservation discourses tend to be produced in policy-making centers (in Western countries), originating practices to be applied in the Global South. Once again, this logic reproduces colonial assumptions regarding natives' primitiveness (reflected in environmentally damaging practices of poaching, eating bush-meat, or slash and burn) and lack of knowledge or even awareness of the value of nature. Therefore, this global-local environmental conservation is performed under the template of "development" aid, in which poor African countries are taught how to preserve their fauna, forests, and landscapes. Indeed, the world of environmental conservationists is peopled with white men and women; few if any Africans have achieved public recognition. According to Elizabeth Garland, this type of inequality is "grounded in centuries of literal and symbolic appropriation of African nature by the West, and also in the structures of racism that this history of appropriation underpins" (2008, p. 59; for a critical examination of how race and nature work as a terrain of power see Moore et al. (2003)).

Led by transnational institutions like the World Bank (see Michael Goldman (2001a) and (2001b) for understanding of the World Bank's production of authoritative "green knowledge," used for restructuring states and subjects) and the United Nations, and operationalized by large U.S. based environmental NGOs, this new form of environmental governance has focused on the protection of big and charismatic fauna – through enclosure and fencing off of local populations – and on the implementation of schemes for the conservation and management of forests and landscapes (i.e. land).

The creation of protected, enclosed parks from which communities are completely excluded, and especially the conservation of wildlife (and most notably the "charismatic mega-species")¹⁰ has become an object of considerable interest in anthropological

research in Africa. James Igoe (2004) has examined how natural parks in Africa are tied to the enclosure movement in England and North America, informed by the premises of "The Tragedy of the Commons," as well as infused with colonial ideologies of "Manifest Destiny" and "Civilizing Mission." Fortress conservation echoes colonial practices in which the right to hunt was a powerful symbol of class privilege (Neumann 1998, p. 37). Igoe and Brockington (2007) have also examined the meanings and effects of the neoliberalization of environmental conservation. In their introduction to a special issue of the journal *Conservation and Society*, they argued that this neoliberalization invokes the commodification of nature which, in turn, has created new types of territorialization that restrict local residents' access to land and resources. Moreover, this neoliberalization has coincided with the emergence of large conservation NGOs that not only capture the funding available for environmental causes, but also often ally themselves with corporate interests. Both these authors and anthropologist Paige West (2006) edited an issue of the *Annual Review of Anthropology* on "Parks and Peoples," examining the social, economic, and political effects of environmental conservation projects. Through the analysis of the environmentality regimes performed by these parks, as well as the violence, conflict, and power relations enabled by such conservation processes, the authors argued that anthropology has to move beyond current examinations of language and power to attend to the ways in which protected areas produce space, place, and peoples.

In a related study, Garland (2008) has argued that wildlife conservation in Africa is a capitalist process that seeks to appropriate the value of African nature, transforming it into global capital. Dan Brockington has developed his work around the issues of environmental conservation and development, offering critical perspectives on conservation policies in different parts of the world. In an article about community-based conservation, Brockington argued against this "hipsterish" concept because it presumes that communities actually have a voice in conservation policies and that these can be implemented fostering equality. Using the example of the Mkomazi Game Reserve in Tanzania, he concluded:

The inequalities that accompany conservation policies may not threaten conservation areas if there are myths to sustain them. The representation of conservation, its images and publicity, and its blindness to the harm it causes, plays a significant role in sustaining its activities. (2004, p. 426).

McDermott Hughes (2006) has also compared current conservation practices with colonial rule, stating that the former has inherited the practices and questions of the latter. Unlike colonialism, however, "wealth-in-people" makes no sense for environmentalists who instead, value wild landscapes and "environmental services," thus pursuing a politics of enclosures, transforming "empty lands" into conservation areas. Donald Moore has equally examined how practices of conservation have seriously constrained the livelihoods of Zimbabweans by preventing them from hunting, fishing, or simply harvesting wood, fruit, and reeds. The Nyanga Park with its militarized guards has imposed a policing regime on Kaarezians' livelihoods, often criminalizing customary hunting rights. While describing some Kaarezian cultural practices Moore remarked that these "should not be romanticized to suggest that 'traditional' or 'indigenous' environmental knowledge and practice *necessarily* nurtures nature in

sustainable ways...Yet, in Kaerezi, the cultivated conduct of caring for landscape refracted through the cultural politics of belonging to both a community and a landscape” (2005, p. 125). And exploring what supposedly consists of a shift in environmental conservation practices, Christine J. Walley’s work on Mafia Island Park in Tanzania (2004) showed how new approaches tying conservation with development actually reproduce old practices. That is, while the park was presented as encouraging the participation of local residents, its technocentric management kept poor people marginalized from the park and from accessing important resources.

Another new paradigm in environmental conservation, but still related to parks, links the protection of biodiversity to international cooperation and peace. This approach, operated by the so-called peace parks, or “transfrontier conservation” has been critically examined by several authors who, despite not being anthropologists, strongly rely on ethnographic methods: namely Bram Büscher (2013), Maano Ramutsindela (2007), and Elizabeth Lunstrum (2010).

More recently, Lynn Meskell, an anthropologist and archaeologist, described how communities in South Africa’s Kruger Park were viewed as encroaching or threatening to the integrity of the heritage site, thus rendering them, and their claims to land, both illegitimate and suspect (2012, p. 21). Meskell also demonstrated how public-private partnerships, liberalization and corporate social responsibility have reshaped conservation and heritage management: the Kruger Park is a parastatal militarized organization that operates like a state imposing a disciplinary regime which has cost human lives. She wrote that “the coercive nature of conservation continues irrespective of regime change in South Africa and demonstrates that the decolonization of nature remains a thorny issue for postcolonial states” (2012, pp. 106–107).

In Madagascar, Genese Sodikoff (2012) has taken yet a different approach to conservation policies and their impacts on local livelihoods by exploring the subjectivities produced by environmentality regimes. Tracing the history of such regimes back to colonial times, Sodikoff highlighted a central contradiction in the work developed by the international conservation community: while hiring local people as “conservation agents,” due to their privileged knowledge and connections, these workers are paid low wages and therefore remain dependent on the same slash and burn practices that they are supposed to eradicate in their new role as conservationists.

These studies also bring into relief the increasingly interdisciplinary character of environmental anthropology in Africa as well as the complexity of the new social landscape of environmentality. Whereas former colonial metropolises and other Western actors used to be the leading figures in African conservation, recently, new players have emerged, either as culprits of environmental degradation, or as new aid partners. If China is usually associated with what is often portrayed as an uncontrollable predation of Africa’s resources – an image that emerges in stark contrast to the commercial relations maintained between African and European countries since the end of colonialism – Brazil has gained some reputation within the so-called South-South Cooperation.

Gao and Clark (2014) and Gao et al. (2016) have examined how Chinese consumers’ motivations are strongly positively correlated with elephant and rhino poaching in Africa, arguing that conservation efforts must be contextualized within Chinese culture and domestic ivory market. Although the Brazilian “cooperation” with African countries has not focused on the conservation of the environment, it does involve

rural areas. Shankland and Gonçalves (2016), for example, examined an agricultural program in which Brazil and Japan jointly financed an agribusiness initiative in the savannah zone of Mozambique's Nacala Corridor region. In this particular piece, they examined the importance of imaginaries of similarity between the Mozambican savannah and Brazil's cerrado for those both defending and contesting the program, generating more nuanced discussions of what South-South cooperation means.

THE "ANTHROPOCENE" AND ONTOLOGICAL UN-TURNS IN AFRICA

At the beginning of this chapter we noted that a broader chronology of environmental anthropology that includes the "ontological turn" could require the addition of a new period in the sub-discipline. Whether the Anthropocene or new ontologies will be part of this sub-field's history or not it is too soon to say, but we have noted that Africanists have seldom engaged with this theoretical framework. Scholars like Archambault, for example, while engaging with this "post-humanist" and "multispecies" anthropology to explore the human-plant relationships in Inhambane, Mozambique, are still oriented towards an anthropocentric analysis of such relationships and their meanings (2016, p. 248). Africanists' lack of engagement with this framework is not the result of an unwillingness or inability to move beyond existing theoretical approaches in anthropology but rather follows from the historical constitution of anthropology of Africa itself, which suggests there is no need for a new periodization of the anthropology of the environment in Africa. That is, while the "ontological turn" acknowledges the existence not just of other worldviews, but of other worlds – hence the possibility of a radical alterity – Africanists have long taken seriously the existence of such other worlds and their implications in the lives of the populations they have studied. Such is the case with kinship (which includes dead ancestors and spiritual kin) and witchcraft studies – in approaches that go well beyond the recognition of other cosmologies but instead, take these cosmologies as forms of kinship and consider "witchcraft" in its own terms rather than as an easy, and valid comparative category.

So, for instance, Lubkemann has demonstrated how those displaced during the war in Machaze, Mozambique, when attempting to reconstitute their disrupted social relations, included the spirits of the dead in that reconstruction (2002, p. 190). More specifically, he asserted,

Machazian beliefs that ancestral spirits had both vested interests of their own, as well as interests in all forms of social interaction among the living, proved particularly important in shaping post-conflict behaviour because novel forms of tension had been introduced into social interaction by wartime changes in domestic and kinship relations. (2002, p. 3).

In similar ways, Parker Shipton has showed how among the Luo, in Kenya, debt and obligation involve not just the living, but also the dead. Moreover, given that death does not mean the end of contractual obligations, the institution of "ghost marriage" (as described by Evans-Pritchard on the Nuer) underwrites the importance of spiritual kins and ancestors. As highlighted by Shipton, "ghost marriage" "defies any boundaries between the living and the dead, and between one sex and another" (2007, p. 167).

Regarding witchcraft, despite its limits, Evans-Pritchard's work on Zande beliefs was foundational to a wide range of influential philosophical works on rationality and relativism that challenged objectivist and comparative arguments for reified "modes of thought" (Wilson 1991), including Evans-Pritchard's own assumption that "Witches as the Azande conceive them, clearly cannot exist" (Evans-Pritchard 1937, p. 18). Explaining the mechanisms and doctrine of witchcraft in their own terms, without questioning their scientific validity, Evans-Pritchard highlighted how it provides Azande with a "natural philosophy by which the relations between men and unfortunate events are explained" and with a "system of values which regulate human conduct" (1937, p. 18). This does not mean that Evans-Pritchard believed in witches himself, but he did endeavor to make clear that the Azande were not irrational creatures with primitive beliefs about other worlds. More specifically, he clarified that in the face of misfortune,

[I]t was obvious that they did not attempt to account for the existence of phenomena... by mystical causation alone. What they explained by witchcraft were the particular conditions in a chain of causation which related an individual to natural happenings in such a way that he sustained injury. (1937, p. 21)

More recently, Harry West defined witchcraft (or *uwavi*, as used in Mueda, Mozambique) as a language of power "through which ordinary people express their fears and dreams" (2005, p. 3) and through which the Muedan reality can be understood. Moreover, West argued, *uwavi* provided Muedans with a form of understanding the "profound contradictions in the emerging neoliberal order. Through *uwavi* discourse, Muedans (re)made their world, although not at their whim" (2005, p. 8). Taking seriously the radical alterity inherent in these *uwavi* discourses, West described how Muedans organize their lives and worldview around the existence of an invisible realm that "simultaneously mirrors and negates the visible" (2005, p. 43). Sorcerers not only cross over into this invisible realm and cross back again, but also mask their actions "by transforming themselves into animals or by making animals do their bidding" (2005, p. 45), thus rendering the anthropologist's approach necessarily "multispecies" or "post-humanist."

Geschiere classified witchcraft as a process indelibly tied to modernity, connecting it to politics and power. He argued that by being both a tool for obtaining power, and a weapon that can be used by the powerless, witchcraft is a form of political action (1997, p. 9). Raising the issue of whether witchcraft is 'real' or not, Geschiere did not deflect it by resorting to emic/etic distinctions. Instead, he asserted that the discourse of witchcraft creates its own realities, people do in fact try to hurt others and therefore, they are witches; "the widespread fear that witchcraft is running wild has shocking effects in everyday life" (1997, p. 21).

In a later work, Geschiere revisited the issue of witchcraft providing a clear statement against ontological approaches, which he accused of taking radical cultural differences as a given and outside history (2013, p. xxv). In his view, although it is tempting to compare notions of witchcraft in terms of a multiplicity of possibilities that have no beginning and no end (as in Deleuze and Guattari's idea of the "rhizome"),

[O]ntology refers all too easily to a vision of radical cultural contrasts that, moreover, often degrades into a conceptual opposition between the West and “the rest.” [C]ontinuing to work from assumptions of “ontological” cultural contrasts between societies or cultures is most unproductive in the present-day world, so deeply marked by creative hybridization and cultural mixing. (2013, p. 216)

Considering that objects of study are not just produced by theoretical approaches but that such objects can, in themselves, inform theory and shape cognitive methods in an intrinsic dialogic relationship,¹¹ it could be hypothesized that anthropological approaches to Africa – informed by the idea of “wealth-in-people” (Guyer 1993, 1995) – rendered the “ontological turn” less necessary or useful. More specifically, while the colonial encounter in Latin America or Southeast Asia was defined by natural resource extraction, in which the “exotic primitive” was a part of the same “pristine” nature (Garfield 2004; Cunha 2012; Tsing 2005) for colonial authorities in Africa, with only a few exceptions, economic value over the long term was found more in the use and extraction of people and labor (e.g. slavery). This is one reason why Africanist anthropologists were so focused on the topic of political and social organization. And while early anthropologists working in Latin America were largely unable to take seriously indigenous cosmologies in their own terms until they had moved beyond a simple cultural relativism, this epistemological step had been a condition of possibility for the anthropology of Africa since its beginnings.

NOTES

- 1 Although environmental anthropology is more frequently associated to the field of applied anthropology, here we are focused in theoretical approaches that can help us to support our argument.
- 2 Most early Africanists were from Great Britain and France and, unlike their American peers, not only rejected evolutionary anthropology, but were also more oriented towards functionalist analysis (especially in the context of colonial power during which anthropologists tended to adopt synchronic analysis that romantically kept the societies under study as outside the historical processes of modern civilization (Stocking 1987, p. 289)).
- 3 Appointed in 1983, by the UN, the Brundtland Commission prepared a report with the goal of convincing governments to pursue “sustainable development” due to the increased pressure on the environment. The report *Our Common Future*, coined the definition of “sustainable development” and pressed authorities to protect indigenous groups, many of whom living in ecologically vulnerable areas.
- 4 There is little consensus about how to designate the various groups that have been called “Bushmen.” At Nyae Nyae, in Namibia, where much of research among “Bushman” hunter-gatherers has been carried out, people often refer to themselves as “Bushman” (an Afrikaans word). But the term is widely considered offensive by most researchers in the region. It is now common practice to refer to these populations by their language – in Nyae Nyae, for example: “Ju/’hoansi speakers.”
- 5 Kuper also notes that the anthropological work presented to colonial authorities was largely insignificant to the colonial project, or simply ignored. District Commissioners were suspicious of anthropology, and believed that colonial authorities had far more experience and knowledge about the native than anthropologists (1983, pp. 105–112).

- 6 Conflicts over cattle invading natural parks and conservation areas to graze are frequent throughout Africa. See Moore (2006), Hughes (2006), and Neumann (1998).
- 7 Dove and Carpenter note that slash and burn, swidden, nomadic and robber agriculture all refer to shifting cultivation resorting to fire to clear fields. All of the terms have colonial origins and negative connotations notably in current environmental discourses. Anthropologists and other scholars decided to use *swidden*, an archaic of old-English *swithen* (to singe) because its archaism was considered to have no normative loading (2008, p. 26).
- 8 See Tinker et al. (1996), Siteo et al. (2012), World Bank (2008) for some examples.
- 9 A practice that was reproduced by some post-colonial authorities too, as exemplified by Tanzania's ujamaa village campaign, conducted by President Julius Nyerere, with the intent of "modernizing" the country (see Scott 1998).
- 10 Garland explains that conservationists use this term to describe animals like pandas, gorillas, and whales that are useful for fundraising (2008, 74).
- 11 As an example of this, in a known debate between Meyer Fortes and Edmund Leach about solidarity in groups, some critics suggested their dispute "arose from their concern with ethnographic regions. Descent theory might be helpful in much of Africa; alliance theory seemed to fit in many South-East Asian societies" (Kuper 1983, p. 177).

AQ3 REFERENCES

- Agrawal, Arun. 1995. "Dismantling the Divide Between Indigenous and Scientific Knowledge." *Development and Change* 26: 413–439.
- . 2005. *Environmentality: Technologies of Government and the Making of Subjects*. Durham, NC: Duke University Press.
- Archambault, Julie Soleil. 2016. "Taking Love Seriously in Human-Plant Relations in Mozambique: Toward an Anthropology of Affective Encounters." *Cultural Anthropology* 31 (2):244–271.
- Asad, Talal. 1991. "Afterword: From the History of Colonial Anthropology to the Anthropology of Western Hegemony." In *Colonial Situations: Essays on the Contextualization of Ethnographic Knowledge*, edited by George W. Stocking Jr., History of Anthropology, vol. 7, 314–324. Madison: The University of Wisconsin Press.
- Bailey, Robert C., Genevieve Head, Mark Jenike, Bruce Owen, Robert Rechtman, and Elzbieta Zechenter. 1989. "Hunting and Gathering in Tropical Rain Forest: Is It Possible?" *American Anthropologist* 92:59–82.
- Berry, Sara. 1993. *No Condition Is Permanent – The Social Dynamics of Agrarian Change in Sub-Saharan Africa*. Madison: The University of Wisconsin Press.
- . 2001. *Chiefs Know Their Boundaries: Essays on Property, Power, and the Past in Asante, 1896–1996*. Portsmouth, NH: Heinemann, James Currey.
- Biersack, Aletta. 2006. "Reimagining Political Ecology: Culture/Power/History/Nature." In *Reimagining Political Ecology*, edited by Aletta Biersack and James B. Greenberg. Durham, NC: Duke University Press.
- Brockington, Dan. 2002. *Fortress Conservation: The Preservation of the Mkomazi Game Reserve, Tanzania*. Oxford: International African Institute.
- . 2004. "Community Conservation, Inequality and Injustice: Myths of Power in Protected Area Management." *Conservation and Society* 2 (2):411–432.
- Brody, Hugh. 2001. *The Other Side of Eden: Hunter-Gatherers, Farmers, and the Shaping of the World*. London: Faber and Faber.
- Büscher, Bram. 2013. *Transforming the Frontier: Peace Parks and the Politics of Neoliberal Conservation in Southern Africa*. Durham, NC: Duke University Press.
- Canadell, Josep G., and Michael R. Raupach. 2008. "Managing Forests for Climate Change Mitigation." *Science* 320 (5882):1456–1457.

- Carrithers, Michael, Matei Candea, Karen Sykes, Martin Holbraad, and Soumhya Venkatesan. 2010. "Ontology Is Just Another Word for Culture: Motion Tabled at the 2008 Meeting of the Group for Debates in Anthropological Theory, University of Manchester." *Critique of Anthropology* 30 (2):152–200.
- Comaroff, John, and Jean Comaroff. 2009. *Ethnicity, Inc.* Chicago, IL: The University of Chicago Press.
- Cruikshank, Julie. 2005. *Do Glaciers Listen? Local Knowledge, Colonial Encounters, and Social Imagination.* Vancouver: The University of British Columbia.
- Crutzen, Paul. 2002. "Geology of Mankind." *Nature* 415 (6867):23.
- Cunha, Manuela Carneiro. 2012. *Índios no Brasil – História, direitos e cidadania.* São Paulo: Editora Claro Enigma.
- De la Cadena, Marisol. 2010. "Indigenous Cosmopolitics in the Andes: Conceptual Reflections Beyond 'Politics'." *Cultural Anthropology* 25 (2):334–370.
- Dentan, R. K. 1988. "Band-Level Eden: A Mystifying Chimera." *Cultural Anthropology* 4: 276–284.
- Dove, Michael R., and Carol Carpenter. 2008. *Environmental Anthropology: A Historical Reader.* Malden, MA: Blackwell Publishing.
- Evans-Pritchard, E. E. 1937. *Witchcraft Oracles, and Magic Among the Azande.* Oxford: Clarendon Press.
- . 1940. *The Nuer – A Description of the Modes of Livelihood and Political Institutions of a Nilotic People.* Oxford: Clarendon Press.
- Fairhead, James, and Melissa Leach. 1996. *Misreading the African Landscape: Society and Ecology in a Forest-Savanna Mosaic.* Cambridge: Cambridge University Press.
- Ferguson, James. 1990. *The Anti-Politics Machine – "Development," Depoliticization, and Bureaucratic Power in Lesotho.* Minneapolis: University of Minnesota Press.
- Gao, Yufang, and Susan G. Clark. 2014. "Elephant Ivory Trade in China: Trends and Drivers." *Biological Conservation* 180:23–30.
- Gao, Yufang, Kelly J. Stoner, Andy T. L. Lee, and Susan G. Clark. 2016. "Rhino Horn Trade in China: An Analysis of the Art and Antiques Market." *Biological Conservation* 201:343–347.
- Garfield, Seth. 2004. "A Nationalist Environment: Indians, Nature, and the Construction of the Xingu National Park in Brazil." *Luso-Brazilian Review* 41 (1):139–167.
- Garland, Elizabeth. 2008. "The Elephant in the Room: Confronting the Colonial Character of Wildlife Conservation in Africa." *African Studies Review* 51 (3):51–74.
- Geertz, Clifford. 1963. *Agricultural Involvement: The Process of Ecological Change in Indonesia.* Berkeley: University of California Press.
- Geschiere, Peter. 1997. *The Modernity of Witchcraft: Politics and the Occult in Postcolonial Africa.* Charlottesville: University Press of Virginia.
- . 2004. "Ecology, Belonging and Xenophobia: The 1994 Forest Law in Cameroon and the Issue of 'Community'." In *Rights and the Politics of Recognition in Africa*, edited by Harri Englund and Francis B. Nyamnjoh. London: Zed Books.
- . 2013. *Witchcraft, Intimacy and Trust – Africa in Comparison.* Chicago, IL: The University of Chicago Press.
- Giles-Vernick, Tamara. 2002. *Cutting the Vines of the Past: Environmental Histories of the Central African Rain Forest.* Charlottesville: University Press of Virginia.
- Goldman, Michael. 2001a. "The Birth of a Discipline: Producing Authoritative Green Knowledge, World Bank-Style." *Ethnography* 2 (2):191–217.
- . 2001b. "Constructing an Environmental State: Eco-Governmentality and Other Transnational Practices of a 'Green' World Bank." *Social Problems* 48 (4):499–523.
- Grinker, R. R. 1992. "History and Hierarchy in Hunter-Gatherer Studies." *American Ethnologist* 19 (1):160–165.
- . 1994. *Houses in the Rainforest: Ethnicity and Inequality Among Farmers and Foragers in Central Africa.* Berkeley: University of California Press.

- Guyer, Jane I. 1993. "Wealth in People and Self-Realization in Equatorial Africa." *Man* 28 (2):243–265.
- . 1995. "Wealth in People, Wealth in Things – Introduction." *Journal of African History* 36:83–90.
- Haenn, Nora, and Richard R. Wilk. 2006. *The Environment in Anthropology: A Reader in Ecology, Culture, and Sustainable Living*. New York: New York University Press.
- Haraway, Donna. 2008. *When Species Meet*. Minneapolis: University of Minnesota Press.
- Hardin, Garrett. 1968. "The Tragedy of the Commons." *Science* 162 (3859):1243–1248. <https://doi.org/10.1126/science.162.3859.1243>.
- Herskovits, Melville J. 1926. "The Cattle Complex in East Africa." *American Anthropologist* 28 (1):230–272.
- . 1930. "The Cultural Areas of Africa." *Africa: Journal of the International Africa Institute*, 3 (1):59–77.
- Hodgson, Dorothy L. 2011. *Being Maasai, Becoming Indigenous – Postcolonial Politics in a Neoliberal World*. Bloomington: Indiana University Press.
- Hughes, David McDermott. 2006. *From Enslavement to Environmentalism: Politics on a Southern African Frontier*. Seattle: University of Washington Press.
- Hutchinson, Sharon E. 1996. *Nuer Dilemmas: Coping with Money, War, and the State*. Berkeley: University of California Press.
- Igoe, James. 2004. *Conservation and Globalization: A Study of National Parks and Indigenous Communities from East Africa to South Dakota*. Belmont, CA: Thomson/Wadsworth.
- Igoe, James, and Dan Brockington. 2007. "Neoliberal Conservation: A Brief Introduction." *Conservation and Society* 5 (4):432–449.
- Ingold, Tim, David Riches, and James Woodburn, eds. 1988a. *Hunters and Gatherers 1: History, Evolution and Social Change*. Oxford: Berg.
- . 1988b. *Hunters and Gatherers 2: Property, Power and Ideology*. Oxford: Berg.
- Kaplan, Robert D. 1994. "The Coming Anarchy: How Scarcity, Crime, Overpopulation, and Disease Are Rapidly Destroying the Social Fabric of Our Planet." *Atlantic Monthly*, February:44–76.
- Kirksey, S. Eben, and Stefan Helmreich. 2010. "The Emergence of Multispecies Ethnography." *Cultural Anthropology* 25 (4):545–576.
- Kohn, Eduardo. 2013. *How Forests Think: Toward an Anthropology Beyond the Human*. Berkeley: University of California Press.
- Kopnina, Helen, and Eleanor Shoreman-Ouimet. 2011. *Environmental Anthropology Today*, edited by Helen Kopnina and Eleanor Shoreman-Ouimet. London: Routledge.
- Kuper, Adam. 1983. *Anthropology and Anthropologists: The Modern British School*. London: Routledge and Kegan Paul.
- Kuper, Adam. 2003. "The Return of the Native." *Current Anthropology* 44 (3):389–402.
- . 1984. "Function, History, Biography: Reflections on Fifty Years in the British Anthropological Tradition." In *Functionalism Historicized: Essays on British Social Anthropology*, edited by George W. Stocking Jr., History of Anthropology, vol. 2, 192–213. Madison: The University of Wisconsin Press.
- Lee, Richard B. 1968. "What Hunters Do for a Living: Or, How to Make Out on Scarce Resources." In *Man the Hunter*, edited by Richard B. Lee and Irven DeVore, 30–48. Chicago, IL: Aldine.
- . 1979. *The !Kung San: Men, Women, and Work in a Foraging Society*. New York: Cambridge University Press.
- Lee, Richard B., and Irven DeVore. 1976. *Kalahari Hunter-Gatherers: Studies on the !Kung San and Their Neighbors*, edited by Richard B. Lee and Irven DeVore. Cambridge, MA: Harvard University Press.
- Lubkemann, Stephen C. 2002. "Where to Be an Ancestor? Reconstituting Socio-Spiritual Worlds Among Displaced Mozambicans." *Journal of Refugee Studies* 15 (2):189–212.

- Lunstrum, Elizabeth. 2010. "Reconstructing History, Grounding Claims to Space: History, Memory, and Displacement in the Great Limpopo Transfrontier Park." *South African Geographical Journal* 92 (2):129–143.
- MacCormack, Carol P., and Marilyn Strathern. 1980. *Nature, Culture, and Gender*, edited by Carol P. MacCormack and Marilyn Strathern. Cambridge: Cambridge University Press.
- Meskel, Lynn. 2012. *The Nature of Heritage – The New South Africa*. Oxford: Wiley-Blackwell.
- Milton, Kay, ed. 1993. *Environmentalism – The View from Anthropology*. London: Routledge.
- Mitchell, Timothy. 2007. "The Properties of Markets." In *Do Economists Make Markets? On the Performativity of Economics*, edited by Donald Mackenzie, Fabian Muniesa, and Lucia Siu, 244–275. Princeton, NJ: Princeton University Press.
- Moore, Donald S. 2005. *Suffering for Territory: Race, Place, and Power in Zimbabwe*. Durham, NC: Duke University Press.
- Moore, Donald S., Jake Kosek, and Anand Pandian. 2003. *Race, Nature, and the Politics of Difference*, edited by Donald S. Moore, Jake Kosek, and Anand Pandian. Durham, N C: Duke University Press.
- Moore, Henrietta L., and Megan Vaughan. 1994. *Cutting Down Trees: Gender, Nutrition, and Agricultural Change in the Northern Province of Zambia, 1890–1990*. Portsmouth, NH: Heinemann.
- Murphy, Robert. 1981. "Julian Steward." In *Totems and Teachers*, edited by Suydel Silverman, 171–208. New York: Columbia University Press.
- Netting, Robert McC. 1968. *Hill Farmers of Nigeria: Cultural Ecology of the Kofyar of the Jos Plateau*. Seattle: University of Washington Press.
- . 1977. *Cultural Ecology*. Menlo Park, CA: Benjamin Cummings.
- Neumann, Roderick P. 1998. *Imposing Wilderness: Struggles Over Livelihood and Nature Preservation in Africa*. Berkeley, Los Angeles, London: University of California Press.
- Niezen, Ronald. 2003. *The Origins of Indigenism: Human Rights and the Politics of Identity*. Berkeley: University of California Press.
- Ortner, Sherry. 1972. "Is Female to Male as Nature to Culture?" In *Woman, Culture, and Society*, edited by M. Z. Rosaldo and L. Lamphere. Stanford, CA: Stanford University Press.
- Radcliffe-Brown, Alfred. 1952. *Structure and Function in Primitive Society*. Glencoe, IL: The Free Press.
- Ramutsindela, Maano. 2007. *Transfrontier Conservation in Africa: At the Confluence of Capital, Politics and Nature*. Wallingford, UK: CABI.
- Richards, Audrey I. 1932 [2004]. *Hunger and Work in a Savage Tribe*. London: Routledge.
- . 1939. *Land, Labour and Diet in Northern Rhodesia: An Economic Study of the Bemba Tribe*. Publication for the International African Institute. Oxford: Oxford University Press.
- Richards, Paul. 1996. *Fighting for the Rainforest: War, Youth and Resources in Sierra Leone*. Cambridge: Cambridge University Press.
- Robins, Steven. 2001. "NGOs, 'Bushmen,' and Double Vision. The Khomani San Land Claim and the Cultural Politics of 'Community' and 'Development' in the Kalahari." *Journal of Southern African Studies* 27: 833–853.
- Sahlins, Marshal. 1972. *Stone Age Economics*. Chicago, IL: Aldine.
- Santilli, Márcio, Paulo Moutinho, Stephan Schwartzman, Daniel Nepstad, Lisa Curran, and Carlos Nobre. 2005. "Tropical Deforestation and the Kyoto Protocol." *Climatic Change* 71 (3):267–276.
- Scott, James. 1998. *Seeing Like a State – How Certain Schemes to Improve the Human Condition Have Failed*. New Haven, CT and London: Yale University Press.
- Shankland, Alex, and Euclides Gonçalves. 2016. "Imagining Agricultural Development in South–South Cooperation: The Contestation and Transformation of ProSAVANA." *World Development* 81:35–46.
- Shipton, Parker. 2007. *The Nature of Entrustment: Intimacy, Exchange, and the Sacred in Africa*. New Haven, CT: Yale University Press.

- Sitoe, Almeida, Alda Salomão, and Sheila Wertz-Kanounnikoff. 2012. *The Context of REDD+ in Mozambique*. Bogor, Indonesia: CIFOR. www.cifor.org/publications/pdf_files/OccPapers/OP-79.pdf.
- Sodikoff, Genese. 2012. *Forest and Labor in Madagascar – From Colonial Concession to Global Biosphere*. Bloomington: Indiana University Press.
- Steward, Julian. 1955. *Theory of Culture Change: The Methodology of Multilinear Evolution*. Urbana, IL: University of Illinois Press.
- . 1977. *Evolution and Ecology*. Urbana, Chicago and London: University of Illinois Press.
- Stocking, George W. 1983. "The Ethnographer's Magic: Fieldwork in British Anthropology from Tylor to Malinowski." In *Observers Observed: Essays on Ethnographic Fieldwork*, edited by George W. Stocking Jr., History of Anthropology, vol. 1. Madison: The University of Wisconsin Press.
- . 1987. *Victorian Anthropology*. New York: The Free Press.
- . 1991. *Colonial Situations: Essays on the Contextualization of Ethnographic Knowledge*, edited by George W. Stocking Jr., History of Anthropology, vol. 7. Madison: The University of Wisconsin Press.
- Tinker, P. Bernard, John S. I. Ingram, and Sten Struwe. 1996. "Effects of Slash-and-Burn Agriculture and Deforestation on Climate Change." *Agriculture, Ecosystems and Environment* 58 (1):13–22.
- Townsend, Patricia. 2000. *Environmental Anthropology: From Pigs to Policies*. Prospect Heights, IL: Waveland Press.
- Tsing, Anna Lowenhaupt. 2005. *Friction – An Ethnography of Global Connection*. Princeton, NJ: Princeton University Press.
- . 2009. "Adat/Indigenous – Indigeneity in Motion." In *Words in Motion: Toward a Global Lexicon*, edited by Carol Gluck and Anna Lowenhaupt Tsing, 40–64. Durham, NC: Duke University Press.
- Viveiros de Castro, Eduardo. 1998. "Cosmological Deixis and Amerindian Perspectivism." *The Journal of the Royal Anthropological Institute* 4 (3):469–488.
- Von Hellermann, Pauline. 2013. *Things Fall Apart? The Political Ecology of Forest Governance in Southern Nigeria*. New York: Berghahn Books.
- Walley, Christine J. 2004. *Rough Waters: Nature and Development in an East African Marine Park*. Princeton, NJ: Princeton University Press.
- West, Harry G. 2005. *Kupilikula – Governance and the Invisible Realm in Mozambique*. Chicago, IL: The University of Chicago Press.
- West, Paige, James Igoe, and Dan Brockington. 2006. "Parks and Peoples: The Social Impact of Protected Areas." *Annual Review of Anthropology* 35:251–277.
- White, Leslie. 1949. *The Science of Culture: A Study of Man and Civilization*. New York: Farrar, Straus.
- Williams, Paul D. 2016. *War and Conflict in Africa*. Cambridge: Polity Press.
- Wilmsen, Edwin N., and James R. Denbow. 1990. "Paradigmatic History of San-Speaking Peoples and Current Attempts at Revision." *Current Anthropology* 31:489–505.
- Wilson, Bryan, ed. 1991. *Rationality*. Hoboken, NJ: Wiley Blackwell.
- World Bank. 2008. *Forests Sourcebook: Practical Guidance for Sustaining Forests in Development Cooperation*. Washington, DC: The World Bank. <http://siteresources.worldbank.org/EXTFORSOUBOOK/Resources/completestorestssourcebookapril2008.pdf>.