1 · African Buffalo and the Human Societies in Africa: Social Values and Interaction Outcomes

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Introduction

The sustainable management of wildlife and other natural resources, including the African buffalo (*Syncerus caffer*), depends largely on the social—ecological context being considered (e.g. McGinnis and Ostrom, 2014), Decision VII/2 of the Convention of Biological Diversity¹). This context is largely defined by a combination of complex interactions between ecological (e.g. biomass, reproduction rate, climatic factors) and social (e.g. cultural values, norms, needs, practices) parameters and dynamics. These two intertwined dimensions can influence the way natural resources are perceived and subsequently managed, used and studied by actors interacting with natural resources, and vice versa. These interactions may lead to the sustainable use of resources by environmental stewards, or the overexploitation, cruelty and eradication of the natural bounty. Understanding these complex social—ecological dynamics consequently helps facilitate the fair and just conservation and sustainable use of wildlife species.

In this chapter, we bring together experiences on the sustainable use and management of the African buffalo from major regions of the African continent where the African buffalo is found in substantial numbers, especially in the wild and in areas adjacent to protected areas. In the first section, we will explore the socioeconomic values of the African buffalo

Principles of Sustainble Use, Convention of Biological Diversity, COP Decision VII/12: www.cbd.int/decision/cop/?id=7749

in its various contexts in Africa. We also examine the African heritage associated with the African buffalo in the form of folklore and poems depicting the interconnectedness of the species' symbolic importance to people. These cultural forms and traditions have been handed down from one generation to another for centuries. However, these African worldviews have been progressively lost in recent natural resource discourses and paradigms framed by the dominant Western worldview (Mtenje and Soko, 1998). Finally, we describe the reality of the relationship between humans and the African buffalo, including the goods and services and the disservices provided by the African buffalo to humans.

Global Names for the African Buffalo

Among African mammals, the African buffalo has one of the largest ranges. Although this range has contracted recently (Chapter 4), it has provided an opportunity for buffalo species and humans to interact for millennia. This scenario developed because people (*Homo sapiens*) likewise inhabited the entire continent (e.g. Taylor, 2011). Beyond their obvious contribution to human diets when hunted, buffalo are part of the cosmology of many African societies, traces of which date back to as early as the Middle Stone Age (Faith, 2008; Dusseldorp, 2010; Chapter 2). Rock paintings by the ancient San communities that roamed sub-Saharan Africa provide evidence of this familiarity with the African buffalo. This relationship transcends African borders, and the African buffalo plays a role in human cultures worldwide. As evidence of its long interface with humanity, the African buffalo is known in different languages across the globe. Figure 1.1 presents a random and small sample of names given to the African buffalo across Africa.

This linguistic diversity based on millennia of interactions between human societies and buffalo reflects the richness of figurative labelling of the buffalo in people's representations. The long experience of African people with wildlife is also reflected in their use of animal-related, figurative terms to describe people. Figurative language is usually used to convey a message in a sarcastic manner and they demonstrate how wild animals are socially integrated into African societies. These labels are also derived from the folklore, songs and stories told by elderly Africans to their children as a way of encouraging desired behaviour and character (Ben-Amos, 1975; Knappert, 1977, 1985; Mtenje and Soko, 1998). Animal-centred figurative language and labels are applied in African societies to denote human attributes such as strength, beauty, height and

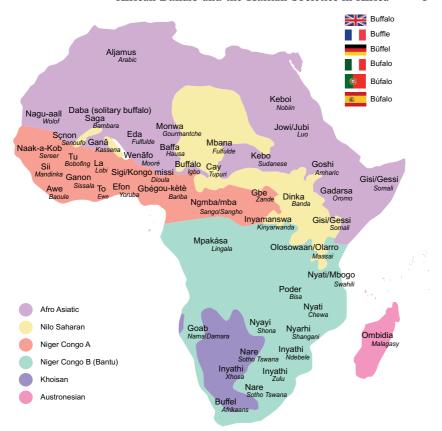


Figure 1.1 African names of the buffalo. A few randomly selected names of African buffalo among the 1,000 to 2,000 languages spoken in Africa. The location of the names is approximate due to sometimes wide or multiple location uses and overlap. The Roman alphabet has been intentionally used instead of the international phonetic alphabet. Many more African buffalo names are found in the lexicographic LEXICON database of the African languages by CNRS LLACAN laboratory, which lists 586 names for buffalo with 'buffle' as the entry point in the database and 631 names with 'buffalo' as the entry point (https://reflex.cnrs.fr/ Africa/index.php?state=src). For language families, see Z. Frajzyngier, Afroasiatic languages. Oxford Research Encyclopedia – Linguistics (https://doi.org/10.1093/acrefore/9780199384655.013.15). See also Segerer and Flavier (2011–2018), Good (2017) and Dimmendaal (2020).

wit, as well as poverty, ugliness, stupidity, etc. The point here is not that Africans perceive human beings as being equivalent to wild animals, but rather that as Africans live with animals, they draw from animal messages

about behaviour, collaboration, networks, social capital, appearance and fecundity (use value).

Animals, both domestic and wild, are therefore a 'living encyclopedia' and source of knowledge. In short, animals serve as 'hermeneutic texts' subject to multiple interpretations, including creating relationships within clans, predicting, impressing, condemning, judging and making important conclusions or recommendations. We remind readers that such euphemisms are also applied to groups, clans, tribes and even nations. The diversity of wildlife in Africa makes it possible to easily match many animal attributes with those of humans. Western readers may refer to the Fables of de la Fontaine, a work published in 1668, translated into every European language, and still widely read today (e.g. Lebrun, 2000).

The characteristics of the African buffalo given by elderly people in Harare (Mukamuri, personal communication, 2021) were undomesticated, unpredictable, assertive, dangerous and powerful. The buffalo is widely acclaimed in southern Africa for being so cruel because of its habit of urinating on the wounds of victims to check whether they are actually dead. If alive, it continues attacking until the adversary dies. Figurative language is also used by hunters in their descriptions of the African buffalo. The words include 'resistant', 'dangerous', 'vengeful' and having a 'piercing look'. In Ghana, however, the buffalo stands for 'uprightness', which is a positive connotation (Benson, 2021).

The African buffalo has also filled and still fills the imaginaries of European hunters. The species belongs to one of the Big Five, a classification of the most dangerous African mammals to hunt. In the book, *Horn of the Hunter*, Robert Ruark (1997) described the African Buffalo as follows: 'He looks at you as if you owe him money. I never saw such malevolence in the eyes of any animal or human being before or since'.² From another perspective, Kock (2005, 2014) and Michel and Bengis (2012) described the buffalo as a 'villain', when referring to the menace it causes when spreading diseases at the buffalo—livestock interface (Cortey et al., 2019; Chapter 9). This perception has not favoured the buffalo during some moments in history. For example, in the early twentieth century, entire buffalo populations outside protected areas were culled to control foot-and-mouth disease and rinderpest as part of efforts to boost commercial livestock production (see Chapter 12).

² www.johnxsafaris.com/hunting/cape-buffalo-hunts/

African Buffalo in Society: Mythology and Symbolism in Africa

Marks (1979) discusses the historical development of a culture among the Bisa of Zambia, which he termed the 'Buffalo Mystique'. Of significance in this culture was the high value placed on both tangible and intangible uses of buffalo, both central to the overall organization of the society. Similarly, in other parts of southern Africa, the close association between people and buffalo can be seen in the wide uses of the animal as a totemic symbol. It is in this region that many ethnic groups use the Nyati totem to organize clans and marriages.

The Bisa of Zambia recognize in the buffalo characteristics of strength, bravery and danger, but they also attribute a powerful 'spiritual' force to the animal. This notion is found in civilizations far removed from West Africa. For the members of the Malinke hunters' brotherhood, the buffalo is endowed with a particularly strong metaphorical spirit or major real element ('nyama'; Cissé, 1964), and it is for this same reason that the Hausa of Niger consider it a 'black' animal in the classification of animals based on the power of their spiritual essence (Levy-Luxereau, 1972).

The buffalo also appears in a series of 'horizontal' masks that have been observed over a wide area of West Africa (Frealle, 2002; Figure 1.2). The form of these masks varies, sometimes a buffalo is explicitly represented, notably in the grasslands of Cameroon, but sometimes other species are represented in a stylized manner (McNaughton, 1991). The reference to 'bush cow' appears in several of these masks, which are sometimes representations of hybrids between animals, humans and spirits. The dances and rituals involving the use of these masks are diverse, and although they are often associated with male initiation rituals, this is not their exclusive use. Generally speaking, these masks, especially those based on the form of stylized cattle, are seen as powerful and dangerous entities, associated with the transition from the wild (bush) world to humanized space (Berns and Fardon, 2011). Members of peasant societies have developed a rich cosmology in which the buffalo has a place. A review of myths on the origin of livestock in pastoral societies indicates that for several societies, buffalo are linked to the wild world while cows are associated with humans (Bonte, 2004; Box 1.1). At the other end of the African continent, a Berber myth (Frobenius and Fox, 1937) describes the first two creatures of the world as a buffalo and a heifer, with the former becoming the founding ancestor of wild animals and the latter



Figure 1.2 Anunuma Bush Buffalo Mask performs at a funeral. Tissé, Burkina Faso, 1984 (McNaughton, 1991). Photo by Christopher Roy (used with permission).

that of cattle. Furthermore, cows appear in the increasingly sophisticated costumes worn by the Swazi overlord during the *Ncwala*, the annual rite of royalty that lasts several days (Kuper, 1973). The power and ferocity of the buffalo also are represented in the rich Swazi cosmology.

According to Evans-Pritchard (1940), the Nuer People of South Sudan believe that the buffalo is 'cattle' that destroys people, for 'more people have died for the sake of a cow than for any other cause'. They have a story that tells how, when the beasts broke up their community and each went their own way to live their own lives, Man slew the mother of the Cow and the Buffalo. The Buffalo said she would avenge her mother by attacking men in the bush, but the Cow said that she would remain in the habitations of men and avenge her mother by causing endless disputes about debts, bride-wealth and adultery, which would lead to fighting and deaths among the people. This feud between Cow and Man has gone on from time immemorial, and day by day the Cow avenges the death of her mother by causing the death of men.

Hence, Nuer say of their cattle, 'They will be finished together with mankind', for men will all die on account of cattle and they and cattle will cease together (Evans-Pritchard, 1940).

Box 1.1 Buffalo Folklore from the Atuot People, Southern Sudan

Burton (1981) adds to a large basket of buffalo folklores from Africa by narrating one from the Atuot people. According to this folklore, once upon a time, men lived among themselves in their own camp in the forest. But among the animals they kept tethered were buffalo rather than cows. Men had no contact with women, but instead kept vaginas tied to their arms. At the same time, women lived in a camp by themselves by the river, tending herds of cattle, fishing and growing millet. The text continues: 'One day a buffalo calf strayed away from the other animals and did not return that evening. The next morning a man followed its trail, which led to the camp of women. Until this time when women desired sex, they went to the riverside and splashed the foam of the waves between their legs, giving birth to females only. When the man asked if his calf had come into the camp a woman answered no, and while he was satisfied with this reply, he soon took interest in another matter, asking the woman what the separation was between her legs. She answered: "This is vagina" and in turn asked what might be the thing dangling between his legs. When he answered, the man then said to the woman: "You bring that here and let me see if it is sweet." When he later said it was very, very good, all the other women of the camp rushed upon him and they had intercourse with him so much he died. A short while later the women said among themselves: "Now it is time to look after the cows", but each avoided the responsibility, saying: "It is now time to dry the millet so it can be pounded into flour." Then men from the other camp arrived in search of their friend. The women insulted them for thinking that their buffalo were like cows and went on pounding their grain. Seeing that the women appeared to take no interest in the cows, the men stole them. Later in the day each woman sought out a man of her liking and remained with him that evening. The next day, when each man wanted to marry a woman, the senior woman of the camp said: "You have given up your buffalo and that is good. But if you want to marry my daughters then you must give cows to replace them."

Taboos that forbid the use of buffalo or even coming into close contact with them are also present in some large sections of African communities spread across the continent. For example, some Pygmy groups in Cameroon avoid buffalo because of a commonly held belief that it is inhabited by powerful evil spirits (Duda et al., 2018; see Chapter 16). Southern Africa harbours large ethnic groups, which include the Shona, Shangaan, Sotho and Venda, people who view the buffalo as sacred and who are not allowed to eat or touch the animal because of totemism. However, such taboos are slowly losing their power among people due to modernity and the infusion of other religions, especially Christianity (see also FAO/CIG, 2002). Marks (1979) squarely lays the blame for the destruction of African culture associated with the African buffalo and other wildlife on the emergence of modern institutions of control and in particular the implementation of so-called 'participatory' conservation programmes (Benson, 2021).

The iconic or symbolic nature of the African buffalo is also present in many social spheres such as military units, soccer teams, merchandise such as bicycles and T-shirts, haulage trucks and even buses. Buffalo symbols on such materials are a global feature. An Internet search for such symbols reveals wide and global use of the emblems and symbols. A good example is the 'Buffalo bicycle' (www.buffalobicycle .com), 'built for big loads on tough roads in Africa', with production in Kenya, Malawi, Zambia and Zimbabwe (Figure 1.3). This product borrows characteristics attached to the African buffalo such as robustness and power. Documented examples of the use of buffalo symbols/ emblems in the military include the globally popular 'Buffalo soldiers', who were mainly former black slaves in the United States of America at the turn of the nineteenth century.³ This military unit was eventually immortalized and internationalized by the world-famous reggae musician Robert 'Bob' Nester Marley, who released a song named 'Buffalo Soldier'. The American Buffalo soldiers were widely respected for their bravery and power. More recent military buffalo emblems may be found in present-day Zimbabwe with the buffalo insignia used by the national army's 3rd Infantry Brigade, and in South Africa with that used by the 32nd Battalion of the South African National Defence Force.⁴ The same seems also to be the attraction for teams and individuals who wear T-shirts bearing buffalo signs.

https://en.wikipedia.org/wiki/Buffalo_Soldier

⁴ https://za.pinterest.com/pin/304204149811482618/



Figure 1.3 The 'Buffalo bicycle' is a well-appreciated product in the communal lands of Zimbabwe for its robustness, easiness to fix and adaptation to local conditions. Sengwe Communal Land. © A. Caron.

Buffalo Services: Subsistence and Trophy Hunting in Africa

African Subsistence Hunting

Palaeontological and archaeological evidence suggests that human ancestry in southern Africa dates back four million years, and throughout this time, humanity has hunted for survival (Crader, 1984; Walker, 1995; Plug, 2000; Badenhorst, 2003; Phillipson, 2005). Hunting can be done in pursuit of many benefits, for example maturity rituals, symbolism, recreation or trade, and for food, ecological balance and raising funds for conservation (Di Minin et al., 2016; Wanger et al., 2017; Hsiao, 2020). Despite different levels of compliance by all groups of people, hunting all over the world is regulated by laws and policies and its control is at the core of most wildlife conservation programmes.

Due to its size and abundance in large herds, the African buffalo played a significant role as a protein source for pre-colonial African

societies (Marks, 1976, 2016). In Zambia, for example, although agriculture was an important part of the livelihood system, buffalo meat was a stock component in the identity and destiny of Valley Bisa lineage hunters (Marks, 2016). The meat was (and still is) also consumed for its good taste and flavour. Buffalo meat was a major source of protein in Zimbabwe before Africans were banned from buffalo hunting in 1930 (Mutwira, 1989).

Buffalo hunting, as with the hunting of other large animal species, can be dangerous, yet it has remained an important cultural and historical human activity. Hunting connects people with nature and is widely practiced as a maturity ritual for men in many African societies (Atta et al., 2021). The great difficulty, risk and effort involved in hunting buffalo also mean it provides rigorous exercise and adventure and accords a high status to the hunter.

As more and more natural habitats are transformed for human use, and relatively more buffalo populations are consequently found in protected areas (Chapter 4), traditional and subsistence hunting by Africans has increasingly become illegal and is referred to as 'subsistence poaching' or 'illegal hunting'. This phenomenon has put African cultures in a difficult dilemma by impeding them from engaging in important social and traditional activities linked to buffalo hunting, as well as preventing access to valuable protein. Despite the dismal failure of these measures at the local level, scientific studies continue to call for local community involvement in wildlife management, community education, local institutions and benefit-sharing to minimize poaching and compensate for the loss in protein (Hulme and Murphree, 2001; Lunstrum, 2017; Muboko, 2017; Ntuli et al., 2019). However, even if these measures were effective, they cannot compensate for the social and cultural values that have been lost.

Western Trophy Hunting

Interestingly, the experience of Western hunters indicates that the values, risks and perceptions attached to buffalo hunting are cross-cultural. Considered as a pest preventing the establishment of European livestock systems (due to competition and disease transmission) or as a noble thing to hunt, wildlife was targeted by colonial hunting and entire wildlife communities were decimated (Chapter 12). Trophy hunting in Africa developed in the twentieth century as an extreme sport for the perceived 'brave gentlemen', and today is a key management tool for the

conservation of large tracts of Africa (Chapter 16). The African buffalo is a key species for trophy hunting in Africa. One reason is that its hunt bears a special aura for practitioners. A person who can take down a buffalo is viewed by some as very brave and a real man among all the other men in the community, in fact, a superhero (Erena et al., 2019).

The danger associated with buffalo hunting is not only associated with buffalo but also with other wild animals and the surrounding environment. Attacks on humans by wild animals, especially buffalo, can lead to permanent injuries or even death. Hunting a buffalo is a hair-raising experience. The sense of danger surrounding buffalo hunting, and hunting in general, is summed up by one writer (Box 1.2). Unfortunately, we could not find any similar accounts written by local African hunters.

Chapter 16 shows the relevance of trophy hunting and the special position of buffalo hunting in the wildlife economy and conservation in Africa. Unfortunately, the price of buffalo hunting is beyond the range of many ordinary traditional African hunters, who therefore cannot reconnect with this thread of their culture through legal and sustainable buffalo hunting. Interestingly, some African countries like Tanzania used to offer low-priced hunting permits to locals. However, the system became fraught with back-door deals whereby some westerners ended up using these permits to hunt buffalo. Innovative economic and social models of trophy hunting in which benefits are fairly shared with local communities and which draw from the knowledge, skills and experience of local individual hunters to provide a special experience to foreign hunters could be a path towards more integration between African cultures and wildlife economies on the one hand, and foreigner and African hunters' values on the other. Such models were partially explored by the CAMPFIRE programme (Communal Area Management Programme for Indigenous Resources) in Zimbabwe in the 1990s.

The CAMPFIRE initiative was an attempt to provide economic value to local human populations through the sustainable use of natural resources such as wildlife. It was first introduced in Zimbabwe in the mid-1980s, later expanded into Botswana and Namibia, and presented comparatively high economic benefits generated notably through buffalo hunting. CAMPFIRE sought to make the hunting of buffalo and other wild animals for sport an economic activity generating revenue for development projects seeking to improve local communities' living conditions and incomes. Despite some internal and external short-comings, this form of genuine and inclusive public—private community partnerships (PPCPs) offers some opportunities for all stakeholders and

Box 1.2 Extracts from a Buffalo Hunt Experience, One Among Many that can be Found on the Internet (https://journalofmountainhunting.com/augusts-in-africa/)

'Looking into a wounded Cape buffalo's discomfortingly intelligent eyes takes you to depths few other animals seem to possess, depths made more profound by the knowledge that this animal is one very much capable of ending your life.'

'With his ferocious temper, treacherous intellect, and stern indifference to the shocking power of all but the most outlandishly large-calibre rifles, the Cape buffalo is routinely touted as the most dangerous member of the African Big Five (...).'

'In open flat country, he may present no serious threat to a hunter sufficiently armed, but you so seldom encounter him on baseball-diamond-like surroundings rather more often he'll be in some swampy thicket or dense forest where he is a clever enough lad to go to cover, and fierce enough to come out of it when it is to his advantage.'

'But when something like that gets into your blood, the rest of life comes to lack an ingredient you never knew, before, that it was supposed to have. I believe it got into mine one evening when we chased a breeding herd in and out of the forest for hours, jumping it and driving it ahead of us, trying to get a good look at one of the bulls in it.'

wildlife conservation (Hulme and Murphree, 2001; Frost and Bond, 2006; Chapter 16). The major limiting factor is a lack of meaningful profit for local households despite the huge challenges they face from living with wildlife (Gandiwa et al., 2013; Poshiwa et al., 2013). Weak local institutions, as well as usurped decision–making and benefit–sharing by politicians and local authorities, were also significant issues that corrupted the CAMPFIRE programme in Zimbabwe (Dzingirai, 1995).

Medicinal Use of the African Buffalo

African buffalo body parts are widely used by traditional healers and shamans as medicines to treat a wide range of diseases and ailments, and frequently as an aphrodisiac (Montcho et al., 2020). Almost all of the buffalo's body parts are used for medicinal purposes, but notably the horns and tails (Atta et al., 2021). The wide use of bones and skulls

has been reported in South Africa, particularly among the Xhosa tribe (Nieman et al., 2019). Apart from their use as a putative cure for sickness, buffalo parts are used against witchcraft, bad luck, bad spells and to induce bravery. What is clear is that the use of buffalo parts as putative charms emanates from the characteristics of the animal that humans have observed over many years and their culturally constructed belief systems. These characteristics include its fighting ability, strength and instinctive ability to sense and avert impending danger. A more detailed presentation of claimed medicinal values and other uses of buffalo is presented in Chapter 16.

Buffalo Disservices: Human-Buffalo Conflicts

As with many large vertebrate species, negative interactions between buffalo and humans are often referred to as human—wildlife conflicts (HWCs). The term is omnipresent in the conservation literature (Bhatia et al., 2020), with studies focusing largely – if not only – on imagined conflicts between wild animals and rural populations living at the edge of African protected areas (e.g. Hoare and Du Toit, 2001; Brandon et al., 2010; de Garine–Wichatitsky et al., 2013; Ocholla et al., 2013; Megaze et al., 2017; Matseketsa et al., 2019). Readers will find a profusion of papers and reports explaining the ecological mechanisms of buffalo-related HWCs, the consequences of such conflicts, as well as methods and practices which could reduce their occurrence (e.g. Brandon et al., 2010; Geleta et al., 2019).

Buffalo engage in three types of conflicts with humans: crop raiding, disease transmission to cattle and humans (i.e. zoonoses) and direct accidents when encountering humans. Buffalo are not usually the main wildlife raiding crops (but can be locally), and often are overtaken by elephants, baboons (Mukeka et al., 2018) and especially rodents and insects (Lahm, 1991; Deodatus, 2000). In addition, many years of studies on HWC in Gabon placed the large rodents in the first position of HWC ahead of the elephant (Lahm, 1991), although this could have changed due to demographic changes in elephant populations estimated to be 95,000 in last census (Laguardia et al., 2021). However, any crop raiding can have a significant impact on the food security and livelihoods of farmers living near protected areas (Magama et al., 2018). Secondly, livestock owners living close to buffalo populations often consider the buffalo to be a reservoir for several important diseases that can harm cattle and people (e.g. bovine tuberculosis, foot-and-mouth disease and

anthrax; for example de Garine-Wichatitsky et al., 2013; Zumla et al., 2020; Simpson et al., 2021; Chapters 9, 10 and 12). Finally, encounters with buffalo, especially bachelor males, when local residents move around their natural habitat (e.g. to fetch water) can end in death (Dunham et al., 2010; Chomba et al., 2012; Geleta et al., 2019). Although they are sometimes referred to as 'widow maker' or 'black death', buffalo 'only' kill an estimated 200 people each year in Africa, much fewer than crocodiles, hippopotamus and elephants.

Although negative interactions are real, we feel that framing them as conflicts is inadequate. This is largely because it logically calls for conflict resolution methods, often considered 'silver bullet' technical solutions expected to work in all circumstances, but ultimately failing to address context-specific underlying issues (Redpath et al., 2015; Davidar, 2018;). From a sociological perspective, HWCs do not exist independently of the social context where they take place, and in this regard, protected areas and their peripheries are often cultural battlegrounds, with long-lasting historical acts of injustice (Duffy, 2000; Blanc, 2015). Indeed, a central feature of these conflicts is that they involve a plurality of stakeholders whose worldviews, perspectives and agendas are often incompatible (Hill et al., 2017). The notion of HWC is mostly associated with negative interactions involving charismatic animals that reveal the conflicting values and interests held by different groups of people. Few would resort to the HWC narrative to define non-charismatic nuisance animals (e.g. rodents), or animals that all actors consider to be pests and which are managed through traditional animal damage control approaches (e.g. lethal control: Marchini et al., 2014; Redpath et al., 2015). This is partly why these interactions are so complicated to address, because like other social-ecological issues, they can be considered to be 'wicked problems' (Rittel and Webber, 1973).

Perrotton et al. (2017) bring to the fore the wicked nature of buffalo—human conflicts in the western part of Zimbabwe. The authors demonstrate how, although all of the human actors involved acknowledge the reality of a conflictive relationship with and about buffalo, it is impossible to define both the nature and the cause of the conflict. While some actors are concerned about zoonosis, others complain about livestock—buffalo competition for grazing, and for some the 'real' issue is that the presence of livestock in protected areas (instead of buffalo) decreases the attractiveness of the place for tourists who would rather see buffalo. How can the conflict be addressed if we cannot clearly define it? As for the causes to address, for some the root of the problem is the

number of cattle on the territory, while for others it is the modalities of access to grazing land, while yet others blame human demography, or the failure of wildlife damage compensation mechanisms, or an obsolete narrative about the wilderness being a pristine place with no trace of human presence that is told to tourists.

Several alternative narratives were proposed and could fit negative interactions with the buffalo: buffalo-livestock competition, human-wildlife competition or human-wildlife coexistence (Madden, 2004). Unfortunately, despite the critiques, the HWC framework remains popular (Bhatia et al., 2020), probably thanks to its simplicity and ease of use to describe a diversity of situations, allowing it to become a buzzword used to amplify conservation initiatives, or to create and maintain a sense of urgency justifying funding (Peterson et al., 2010). Continued use of the term HWC denotes a superfluous or rather fake equality between human beings and wildlife and an attempt to mask the less publicized and real 'human-to-human conflicts', a recurrent 'Cold War' type of relationship located within global, regional and national conservation paradigms, aimed at the exclusion of one group of people by another, especially local communities, but framed as 'wars between people' and 'innocent' wildlife (Gandiwa et al., 2013).

Conclusion

The African buffalo across its vast African range has coexisted with humans for millennia. This coexistence is part of the bestiary of the few imaginaries and mythologies that have managed to reach us. Sometimes, as the obscure brother of the cattle or cow that never agreed to be domesticated, it forms part of the original stories that today define some African cultures. Although other buffalo species have been domesticated in Asia, the African buffalo is broadly perceived or generally considered to be undomesticated, unpredictable, assertive, dangerous and powerful, and these characteristics spill over to the humans (mostly men!) who carry its name or symbolically co-opt its soul. These representations of the species in African cultures seem to have percolated more recently into the imaginaries of European cultures, especially from the angle of hunting and photographic safaris. Despite some of the representations of the species in global culture, African cultural values associated with the buffalo are declining in Africa as these cultures are not perpetuated and are being lost.

The buffalo is also at the centre of services and disservices to different actors, providing uses but also generating conflicts in African landscapes.

An invaluable source of protein for subsistence livelihoods, its access is now mostly forbidden by law to most African users, particularly in southern African countries. However, within the wildlife economy, the buffalo is a key asset that can generate important profits for the beneficiaries of hunting and photographic safaris who are too rarely its former African users (Chapter 16). For animal health services, mostly the products of livestock production systems imported in colonial times, the buffalo represents in some instances a public enemy like the tsetse fly, influencing meat trade policies, land uses and boundaries in many parts of the continent, and once again not for the benefit of local residents (Chapters 9, 10 and 12). The buffalo is also a central species in HWC, creating fear and negative feelings.

The African buffalo is therefore an emblem of the coexistence between humans and nature in Africa. It is feared and respected, hated and loved, hunted, eaten and protected. The 'bush cow' that never accepted to be domesticated, the wild cattle 'made in Africa' still resists human domination and fascinates many.

References

- Atta, A.C.-J., O. Soulemane, B. Kadjo, and Y.R. Kouadio (2021). Some uses of the African buffalo *Syncerus caffer* (Sparrman, 1779) by the populations living around the Comoé National Park (North-East Ivory Coast). *Journal of Animal & Plant Sciences* **47**(2): 8484–8496.
- Badenhorst, S. (2003). The Archaeofauna from iNkolimahashi Shelter, a Later Stone Age shelter in the Thukela Basin, KwaZulu-Natal, South Africa. Southern African Humanities 15: 45-57.
- Ben-Amos, D. (1975). Folklore in African society. Research in African Literatures 6(2): 165–198.
 Benson, G. (2021). African traditional religion and natural resource management: the role of totems and deity worship in Ghana. American Journal of Environment Studies 4(1): 13–37.
- Berns, M.C. and R. Fardon (2011). Central Nigeria unmasked. Arts of the Benue River Valley. *African Arts* **44**(3): 16–37.
- Bhatia, S., M. Stephen, S.M. Redpath, et al. (2020). Beyond conflict: exploring the spectrum of human–wildlife interactions and their underlying mechanisms. *Oryx* **54**(5): 621–628.
- Blanc, G. (2015). Une Histoire environnementale de la nation. Regards croisés sur les parcs nationaux du Canada, d'Éthiopie et de France. Paris: Publications de la Sorbonne,.
- Bonte, P. (2004). Des peuples du bétail. Origines mythiques et pratiques rituelles de l'Élevage en Afrique de l'Est. *Techniques & Culture* [En ligne]: 43–44.
- Brandon P.A., P. Scott and A. Antypas (2010). Sitting on the fence? Policies and practices in managing human–wildlife conflict in Limpopo Province, South Africa. *Conservation and Society* **8**(3): 225–240.
- Burton, J.W. (1981). The wave is my mother's husband: a piscatorial theme in pastoral nilotic ethnology. *Cahiers d'Études Africaines* **84**: 459–477.
- Chomba, C., R. Senzota, H. Chabwela, et al. (2012). Patterns of human wildlife conflicts in Zambia, causes, consequences and management responses. *Journal of Ecology and the Natural Environment* **4**(12): 303–313.

- Cissé, Y. (1964). Notes sur les sociétés de chasseurs malinké. *Journal de la Société des Africanistes* **34**(2): 175–226.
- Cortey, M., L. Ferretti, E. Pérez-Martín, et al. (2019). Persistent infection of African buffalo (*Syncerus caffer*) with foot-and-mouth disease virus: limited viral evolution and no evidence of antibody neutralization escape. *Journal of Virology* **93**(15): e00563–19.
- Crader, D.C. (1984). The zooarchaeology of the storehouse and the dry well at Monticello. American Antiquity 49(3): 542–558.
- Davidar, P. (2018). The term human–wildlife conflict creates more problems than it resolves: better labels should be considered. *Journal of Threatened Taxa* **10**(8): 12082–12085.
- de Garine-Wichatitsky, M., E. Miguel, B. Mukamuri, et al. (2013). Co-existing with wild-life in transfrontier conservation areas in Zimbabwe: cattle owners' awareness of diseases risks and perceptions of the role played by wildlife. *Comparative Immunology and Microbiology and Infectious Diseases* 36: 321–332.
- Deodatus, F. (2000). Wildlife damage in rural areas with emphasis on Malawi. In H.H.T. Prins, J.G. Grootenhuis, and T.T. Dolan (Eds.), *Wildlife Conservation by Sustainable Use*. Boston: Kluwer, pp. 115–140.
- Di Minin, E., N. Leader-Williams and C.J.A. Bradshaw (2016). Banning trophy hunting will exacerbate biodiversity loss. *Trends in Ecology & Evolution* 31:99–102.
- Dimmendaal, G.J. (2020). Nilo-Saharan. In R. Vossen and G.J. Dimmendaal (Eds.), The Oxford Handbook of African Languages. Oxford: Oxford University Press, p. 364.
- Duda, R., S. Gallois and V. Rayes-Garica (2018). Ethnozoology of bushmeat: importance of wildlife in diet, food avoidances and perception of health among the Baka (Cameroon). *Revue d'ethnoécologie* 14. https://doi.org/10.4000/ethnoecologie.3976.
- Duffy, R. (2000). Killing for Conservation: Wildlife Policy in Zimbabwe. James Currey Ltd.
- Dunham, K., A. Ghiurghi, R. Cumbi and F. Urbano (2010). Human-wildlife conflict in Mozambique: A national perspective, with emphasis on wildlife attacks on humans. Oryx 44(2): 185-193.
- Dusseldorp, G.L. (2010). Prey choice during the South African Middle Stone Age: avoiding dangerous prey or maximising returns? *African Archaeological Review* 27: 107–133.
- Dzingirai, V. (1995). 'Take Back Your Campfire': A Study of Local Level Perceptions to Electric Fencing in the Framework of Binga's CAMPFIRE Programme. CASS Occasional Paper NRM Series, July 1995.
- Erena, M.E., H. Jebessa and A. Bekele (2019). Consequences of land-use/land-cover dynamics on range shift of Cape buffalo in Western Ethiopia. *International Journal of Ecology and Environmental Sciences* **45**(2): 123–136.
- Evans-Pritchard, E.E. (1940). The Nuer: A Description of the Modes of Livelihood and Political Institutions of a Nilotic People. Oxford: Clarendon Press, p. 271.
- Faith, J.T. (2008). Eland, buffalo, and wild pigs: were Middle Stone Age humans ineffective hunters? *Journal of Human Evolution* **55**: 24–36.
- FAO/CIG. (2002). Assessment of bushmeat trade during the annual closed season on hunting in Ghana (1st August–1st December 2001). Accra, Ghana: Conservation International (www.fao.org/docrep/010/ai793e/ai793e00.htm).
- Frealle, P. (2002). Les animaux dans les masques d'Afrique de l'ouest. Maison Alfort, Thèse, Ecole Vétérinaire.
- Frobenius, L. and D.C. Fox (1937). African Genesis. New York: Stackpole Sons.
- Frost, G.H. and I. Bond (2006). CAMPFIRE and the Payment for Environmental Services. London: International Institute for Environment and Development.
- Gandiwa, E., I.M.A. Heitkönig, A.M. Lokhorst, et al. (2013). CAMPFIRE and human-wildlife conflicts in local communities bordering northern Gonarezhou National Park, Zimbabwe. *Ecology and Society* **18**(4): 7.

- Geleta, M., H. Jebessa and A. Bekele (2019). Human-buffalo conflict around Jorgo-Wato Protected Forest, western Ethiopia. *Global Veterinaria* 21: 17–23.
- Good, J. (2017). Niger-Congo languages. In R. Hickey (Ed.), The Cambridge Handbook of Areal Linguistics. Cambridge: Cambridge University Press, pp. 471–499.
- Hill, C.M., A.D. Webber and N.E. Priston (Eds.) (2017). Understanding Conflicts about Wildlife: A Biosocial Approach (Vol. 9). New York: Berghahn Books.
- Hoare, R.E. and J.T. Du Toit (2001). Coexistence between people and elephants in African savannas. *Conservation Biology* **13**: 633–639.
- Hsiao, T. (2020). A moral defense of trophy hunting. Sport, Ethics and Philosophy 14(1): 26–34. Hulme, D. and M.W. Murphree (2001). African Wildlife and Livelihoods: The Promise and
- Performance of Community Conservation. Oxford: James Currey, p. 336. Knappert, J. (Ed.) (1977). Bantu Myths and Other Tales. Religious texts translations series NISABA 7. Leiden: Brill.
- Knappert, J. (1985). Myths and Legends of Botswana, Lesotho and Swaziland. Leiden: Brill.
- Kock, R.A. (2005). What is the famous wildlife/livestock disease interface? A review of current knowledge. Presented at Southern and East African Experts Panel on Designing Successful Conservation and Development Interventions at the Wildlife/Livestock Interface: Implications for Wildlife, Livestock and Human Health. AHEAD Animal Specialist Group for the Environment and Development Forum. IUCN/SSC Veterinary. Gland, Switzerland and Cambridge, UK, 14–15 September 2003.
- Kock, R.A. (2014). African buffalo a reflexion on pathways to healthy animal harvest and production systems. African Buffalo Symposium Presentations, 5–6 August 2014, Paris.
- Kuper, H. (1973). Costume and cosmology: the animal symbolism of the Newala. *Man*, **8**(4): 613–630.
- Laguardia, A., S. Bourgeois, S. Strindberg, et al. (2021). Nationwide abundance and distribution of African forest elephants across Gabon using non-invasive SNP genotyping. Global Ecology and Conservation 32: e01894.
- Lahm, S.A. (1991). Human use of forest resources and local variations of wildlife populations in North-Eastern Gabon. Unpublished report, 6335 Lamda Drive, San Diego, California 92120 USA.
- Lebrun, M. (2000). Regards actuels sur les Fables de La Fontaine (Vol. 8). Villeneuve d'Ascq: Presses Universitaires Septentrion.
- Levy-Luxereau, A. (1972). Etude ethno-zoologique du pays Hausa en République du Niger. Paris: Société d'Etudes Ethno-zoologiques et Ethno-botaniques.
- Lunstrum, E. (2017). Feed them to the lions: conservation violence goes online. *Geoforum* **79**: 134–143.
- Madden, F. (2004). Creating coexistence between humans and wildlife: global perspectives on local efforts to address human—wildlife conflict. *Human Dimensions of Wildlife* 9: 247–257.
- Magama, Y.A., M. Babagana, A.U. Usman, et al. (2018). Assessment of wildlife species mostly involved in human-wildlife conflict around Yankari Game Reserve, Bauchi State, Nigeria. *International Journal of Contemporary Research and Review* 9(9): 20262–20277.
- Marchini, S., B. Ferraz and A. Zimmermann (2014). Planning for coexistence in a complex human-dominated world. In B. Frank, J.A. Glickman and S. Marchini (Eds.), Human-Wildlife Interactions: Turning Conflict into Coexistence. Cambridge: Cambridge University Press, p. 414.
- Marks, S. (1976). Large Mammals and a Brave People: Subsistence Hunters in Zambia. Seattle: University of Washington Press.
- Marks, S.A. (1979). Profile and process: subsistence Hunters in a Zambian community. *Africa: Journal of the International African Institute* **49**(1): 53–67.
- Marks, S.A. (2016). Life as Hunt: Thresholds of Identities and Illusions on an African Landscape. New York: Berghahn Books.

- Matseketsa, G., N. Muboko, E. Gandiwa, et al. (2019). An assessment of human–wildlife conflicts in local communities bordering the western part of Save Valley Conservancy, Zimbabwe. Global Ecology and Conservation 20: e00737.
- McGinnis, M.D. and E. Ostrom (2014). Social–ecological system framework: initial changes and continuing challenges. *Ecology and Society* **19**(2).
- McNaughton, P. (1991). Is there history in horizontal masks? A preliminary response to the dilemma of form. *African Arts* **24**(2): 40–53.
- Megaze, A., M. Balakrishnan and G. Belay (2017). Human–wildlife conflict and attitude of local people towards conservation of wildlife in Chebera Churchura National Park, Ethiopia. African Zoology 52(1), 1–8.
- Michel, A. and R.G. Bengis (2012). The African buffalo: a villain for inter-species spread of infectious diseases in southern Africa. *The Onderstepoort Journal of Veterinary Research* **79**(2): E1–E5.
- Montcho, M., J.P. Ilboudo, E.D. Dayou, et al. (2020). Human use-pressure and sustainable wildlife management in Burkina Faso: a case study of bushmeat hunting in Bobo-Dioulasso. *Journal of Sustainable Development* 13: 3.
- Mtenje, A.I and B. Soko (1998). Oral traditions among the northern region Malawi Ngoni. *Journal of Humanities* **12**: 1–18.
- Muboko, N. (2017). The role of transfrontier conservation areas and their institutional framework in natural resource-based conflict management: a review. *Journal of Sustainable Forestry* **36**(6): 583–603.
- Mukeka, J.M., J.O. Ogutu, E. Kanga and E. Roskaft (2018). Characteristics of human—wild-life conflicts in Kenya: examples of Tsavo and Maasai Mara regions. *Environment and Natural Resources Research* 8(3): 148.
- Mutwira, R. (1989). Southern Rhodesian wildlife policy (1890–1953): a question of condoning game slaughter? *Journal of Southern African Studies* **15**(2): 250–262.
- Nieman, W.A., A.J. Leslie and A. Wilkinson (2019). Traditional medicinal animal use by Xhosa and Sotho communities in the Western Cape Province, South Africa. *Journal of Ethnobiology and Ethnomedicine* **15**: 34.
- Ntuli, H., S.C. Jagers, A. Linell, M. Sjöstedt and E. Muchapondwa (2019). Factors influencing local communities' perceptions towards conservation of transboundary wildlife resources: the case of the Great Limpopo Trans-frontier Conservation Area. Biodiversity and Conservation 28: 2977–3003.
- Ocholla, G.O., J. Koske, G.W. Asoka, et al. (2013). Assessment of traditional methods used by the Samburu pastoral community in human wildlife conflict management. *International Journal of Humanities and Social Science* **3**(11): 292:302.
- Organization for Economic Cooperation & Development, Development. Development Assistance Committee, OECD Staff, & Development (OECD) Staff (2001). The DAC Guidelines: Poverty Reduction. Paris: OECD.
- Perrotton, A., M. de Garine-Wichatitsky, H. Valls-Fox and C. Le Page (2017). My cattle and your park: codesigning a role-playing game with rural communities to promote multistakeholder dialogue at the edge of protected areas. *Ecology and Society* 22(1).
- Peterson, J.N., J.L. Birckhead, K. Leong, et al. (2010). Rearticulating the myth of human-wildlife conflict. *Conservation Letters* **3**(2): 74–82.
- Phillipson, D.W. (2005). African Archaeology (3rd ed.). Cambridge: Cambridge University Press.Plug, I. (2000). Overview of Iron Age fauna from the Limpopo valley. South African Archaeological Society, Goodwin Series 8: 117–126.
- Poshiwa, X., R.A. Groeneveld, I.M.A. Heitkönig, et al. (2013). Reducing rural households' annual income fluctuations due to rainfall variation through diversification of wildlife use: portfolio theory in a case study of south eastern Zimbabwe. Tropical Conservation Science 6: 201–220.

- Redpath, S., S. Bhatia and J. Young (2015). Tilting at wildlife: reconsidering human–wildlife conflict. Oryx 49(2): 222–225.
- Rittel, H.W. and M. Webber (1973). Dilemmas in a general theory of planning. *Policy Sciences* **4**: 155–169.
- Ruark, R.S. (1997). Horn of the Hunter: The Story of an African Safari. Huntington Beach: Safari Press.
- Segerer, G. and S. Flavier (2011–2018). RefLex: Reference Lexicon of Africa, Version 1.1. Paris: Lyon. http://reflex.cnrs.fr/.
- Simpson, G., P.N. Thompson and C. Saegerman (2021). Brucellosis in wildlife in Africa: a systematic review and meta-analysis. Scientific Reports 11: 5960.
- Taylor, N. (2011). The origins of hunting and gathering in the Congo basin: a perspective on the Middle Stone Age Lupemban industry. *Before Farming* **2011**(1): 1–21.
- Walker, N.J. (1995). The Late Pleistocene and Holocene Hunter-Gatherers of the Matopos (Studies in African Archaeology 10). Uppsala: Societas Archaeologica Upsaliensis.
- Wanger, T.C., L.W. Traill, R. Cooney, et al. (2017). Trophy hunting certification. Nature Ecology & Evolution 1: 1791–1793.
- Zumla, A., D.S. Hui, I. Esam, et al. (2020). Reducing mortality from 2019-nCoV: host-directed therapies should be an option. The Lancet 395(10224): e35–e36.