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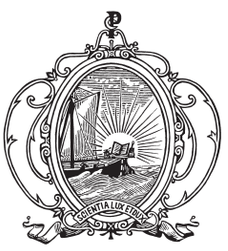

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THE DEFORMATION OF CATTLE HORN IN PAST AND PRESENT SOCIETIES: A PERSISTENT PASTORAL TRADITION IN AFRICA

Jérôme DUBOSSON

The practice of cattle horn deformation, already in prehistoric times, was first suggested by Charles G. Seligman in the 1930s, according to whom the origin could already be found in Ancient Egypt. Later, it follows a route along the White Nile and into Black Africa. His opinion is based on a formal analogy between the horns depicted in Ancient Egyptian bas-reliefs, the oldest dated around the middle of the third millennium BC, and the horns artificially deformed observed among the cattle of contemporary Nilotes of South Sudan.

However, the artificial deformation of cattle horns in Ancient Egypt has never been subsequently confirmed. Indeed, only Nubian sites testify with certainty to its antiquity. It has been observed on cattle skulls at Faras in Lower Nubia and at Kerma in Upper Nubia. Thus, it has been associated with the C-Group and the Kerma cultures, both dated around 2500-1500 BC.

The practice of cattle horn deformation has persisted in the Nile River Basin over a period of at least 4500 years, but it may well go back much further, both in time and in space. Indeed, the rock art in Nubia, and especially in the Central Sahara, provide cattle representations, which show strong similarities with the cattle of present-day East African herders. Thus, such a persistent and extended practice raises questions about its functions and meanings. The ethnographic material presented here, which provides clues about the technical and social aspects of cattle horn deformation, will help us understand how and why it has become a living tradition in numerous African pastoral societies.

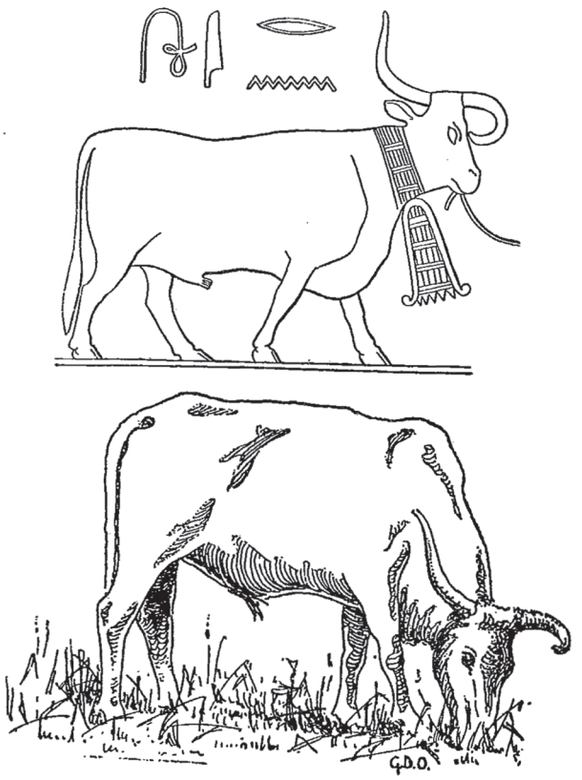

Figure 1. Examples of cattle with asymmetric horns. Fifth-dynasty ox from the Saqqara tomb of Manofer and Nuer ox from South Sudan in the early XXth Century. Seligman and Seligman 1932, 35, fig. 8.

Rock Art and archaeozoological Evidence of the Deformation of Cattle Horn

Charles G. Seligman was the first to suggest that the practice of cattle horn deformation was a millennial tradition in Africa (1932). According to him, its origin is to be found in Ancient Egypt. Only later, it follows a route along the White Nile and the Blue Nile and into Black Africa (Seligman 1932). His interpretation, inspired by the Hamitic theory, relies on a formal analogy between the horns depicted on Ancient Egyptian bas-reliefs, for the most ancient dated around the middle of the third millennium BC, and the horns artificially deformed that he observed among the cattle of contemporary Nilotes of South Sudan (Figure 1) (Seligman and Seligman 1932).

Many representations of cattle with such deformation have been found in Egypt. Examples are known from several dynasties, as early as the fourth and up to

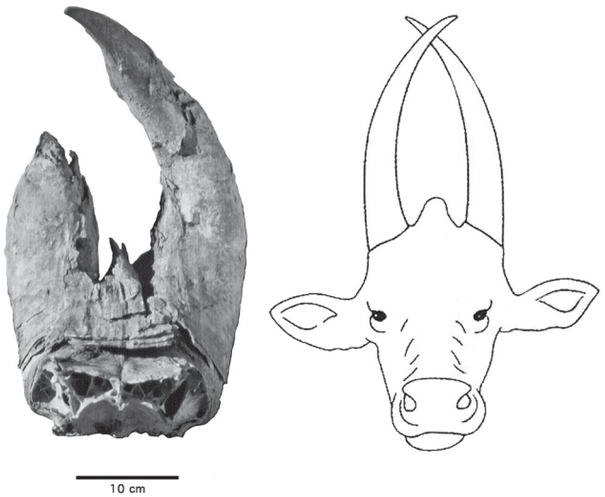

Figure 2. Bucrania with forward-pointing horns from Kerma grave 253 and a reconstruction of a bovine, Sudan. Chaix, Dubosson and Honegger 2012, 194, fig. 7.

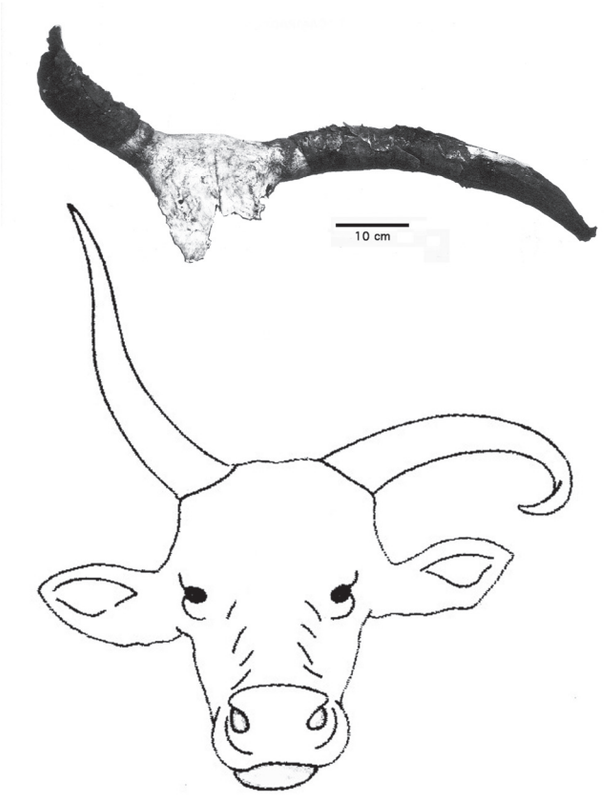

Figure 3. Bucrania with asymmetric horns from Kerma grave 190 and a reconstruction of a bovine, Sudan. Chaix, Dubosson and Honegger 2012, 195, fig. 9.

the twenty-fifth one (Schwabe 1984; Huard 1964; Leclant 1956), as well as from engravings in Upper Egypt and in the Eastern Desert, which may go back to the third millennium BC (Červíček 1986; Judd 2009). However, the artificial deformation of cattle horns in Ancient Egypt has never been subsequently confirmed by archaeozoological observations. It is only presumed from the observation of these sometimes painted, and mostly engraved representations of cattle. Incertitude prevails also regarding the meaning and function of markings on the hides and pendants under the necks of some cattle. Are they natural or artificial? Are they practical, decorative, magical or ritual elements?

To date, only Nubian sites testify with certainty to the antiquity of the practice of cattle horn deformation: Faras in Lower Nubia and Kerma in Upper Nubia (Chaix, Dubosson and Honegger 2012; Hall 1962). Thus, the practice has been associated with the C-Group and the Kerma cultures, both dated around 2500-1500 BC. In these cultures, funerary rituals involved the sacrifice of cattle and the deposit of their bucrania on the ground's surface, in front of the tumulus covering the grave. At Kerma, up to five thousand bucrania were regularly thus placed for the burial of an individual, a clear indication of an intense pastoral life style. Among these deposits, cattle skulls with specific traces and morphological features resulting from anthropic action were discovered. However, not all bucrania show a deformation of their horns. For example, at Kerma, there is on average one deformed specimen for eight heads of cattle (Chaix, Dubosson and Honegger 2012).

For prehistoric times, two types of deformation have been distinguished, based on the specific morphological features of these Nubian cattle skulls. The first type consists in bringing together the two horns, in order to make them grow parallel to each other (Figure 2). As the horns go forward and upward, the animals with such deformation are called 'cattle with forward-pointing horns' (Chaix and Hansen 2003; Chaix 1996). This type is by far the most frequent at Kerma, but has not been identified at Faras. The second type consists of pulling forward and downward one of the horns, generally the left one, while the other keeps its natural growth direction (Chaix 2004). Thus, it produces a horn asymmetry (Figure 3). This type is less frequent at Kerma, but it is the one and only type of deformation identified at Faras.

During the third and the second millennia BC, cattle became the predominant motif in the rock art of the Eastern Desert and of Nubia (Judd 2009; Kleinitz 2012;

Hellström and Langballe 1970; Otto and Buschendorf-Otto 1993; Morrow, Morrow, Cherry and Wilkinson 2010; Almagro Basch and Almagro Gorbea 1968). There, rock art, comprised mostly of petroglyphs made by chipping or hammering, represents cattle with long horns. They may be isolated on a surface or appear in a herd, held by the tail, the horn or on a lead, and their calves may also accompany them. They are represented in a style similar to the one known from the C-Group pottery, and the shapes of certain horns are similar to those found in the eastern necropolis of Kerma and in the C-Group cemetery of Faras (Williams 1983). The simultaneity in time, and the proximity of the sites with these Nubian cultures, strongly suggest the existence of living cattle with artificially deformed horns, perhaps also adorned with burnt-in patterns and decorative pendants suspended from the neck (Figure 4).

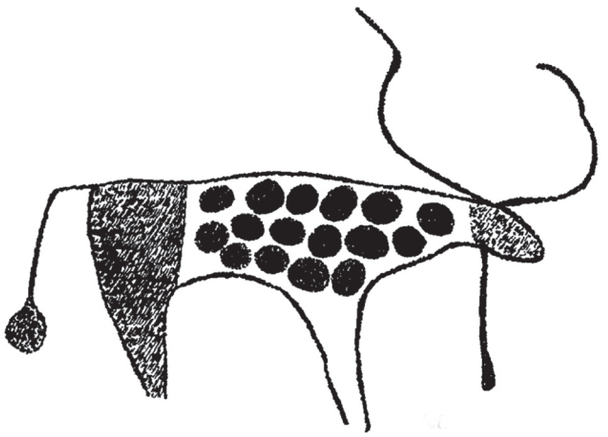

Figure 4. Engraving of a bovine with pendants and decorated hide at Geddi-Sabu, Sudan. Allard-Huard 2000, 74, fig. 36.

Pendants, motifs on the hide, and deformed horns are specific cattle traits, which indicate a well-established tradition of domestication. They are most probably linked to a particular 'cattle aesthetics', the manifestations of which are visible on the rock art of the Nile valley, as well as that of the Sahara. In present-day Chad (Ennedi, Borkou, Tibesti), among the thousands of engraved or painted bovines, only a few possess such distinctive traits (Dupuy and Denis 2011; Lenssen-Erz 2012; Bailloud 1997; Keding, Lenssen-Erz and Pastoors 2007; Lenssen-Erz, Bubenzer, Bolten and Darius 2007; Allard-Huard, Arcangioli, Arcangioli, A *et al.* 1996). Sometimes, rendered with special elaboration, these representations of bovines are clearly differentiated from others (Figure 5). This may suggest an original phenomenon, but it is still difficult to tell if these traits were related to secular or ritual practices. Moreover, are the hides representing actual hides decorated by men of that time (with clay, dung, pigments, scarifications, etc.), or do they are to be considered the expression of the prehistoric painters' and engravers' imaginations? Are the renderings of horns and pendants representing natural or artificial realities? The rarity of such cattle depictions and the quality of their execution suggest however cattle imbued with a special status, whether they belong to the real world or to that of the supernatural.

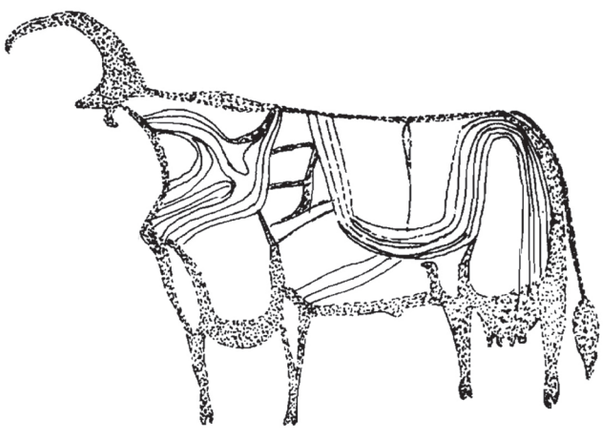

Figure 5. Engraving of a bovine with forward pointing horns, pendant under the neck and motives on the hide in Tibesti, Chad. Allard-Huard 2000, 173, fig. 85.

In the Chadian and Eastern Sahara, depictions of cattle with horn asymmetry are rather common. Their representations are supposed by researchers to be the work of herders, either spreading cultural traits from Nubia on their way to the Sahara (passing south of the Ennedi and then to the Tibesti), around the third or second mil-

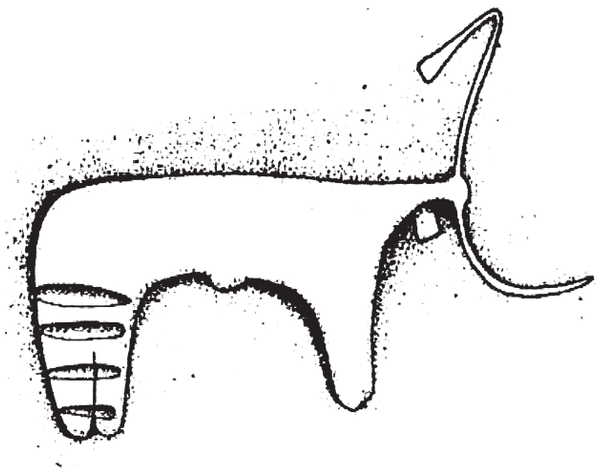

Figure 6. A bovine with a pendant on the left horn and under the neck at Chabbé in Sidamo, Ethiopia. Joussaume 2007: 110, fig. 37.

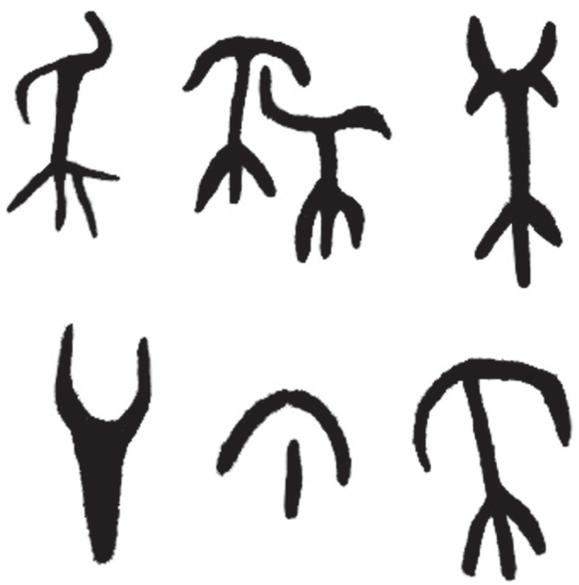

Figure 7. Paintings of cattle with various shapes of horns in the Bukoba District, Tanzania. Arundell 1936, fig. 1-2.

lennia BC and up until the Iron Age, or alternatively, herders already living in the Western Tibesti as early as the fourth millennium BC, who later moved to the Nile valley, subsequent to the desertification of the Sahara (Allard-Huard 2000).

As in other areas of African rock art, cattle are the principal animals represented in the Central Sahara, often with great precision (Allard-Huard 2000; Lajoux 2012; Le Quellec, De Flers and De Flers 2005). There, the depictions of horns show an important diversity of shapes, but almost everywhere horns can be observed supposedly deformed (Dupuy 1989; Lutz and Lutz 1997; Le Quellec 1993). Two types of deformation are known, but their frequency is not the same. As the Central Sahara shows more cattle with forward-pointing horns than the Chadian and Eastern Sahara, it is thought to be the centre of origin of such a deformation, especially the Tassili-n-Ajjer (Chaix and Hansen 2003). The practice could have existed there as early as the middle of the sixth millennium BC. Cattle also show specific traits, such as decorated hides, notched ears, and pendants under their necks.

In the Horn of Africa, engravings and paintings possess a rich diversity, still largely unexplored and open to interpretation. Cattle are the most represented figures on the rock surfaces, in a naturalistic, highly conventionalized or schematic style (Bravo 2009; Bouakaze-Khan 2002). The emergence of pastoral rock art is here linked to the introduction of cattle from north and north-east Africa, around the middle of the third millennium (Joussaume 1995). Herders and their animals, probably because of the desiccation of the Sahara, moved southward, introducing a new mode of life and its associated practices and representations to the indigenous populations of hunter-gatherers, with whom they eventually merged (Joussaume, Amblard and Gutherz 1991; Bouakaze-Khan 2007). Rock art is here regarded as a ritual activity permitting the regulation of intergroup relations, as human and animal populations increased and extended their territories over time. Specific bovine traits, such as elements depicted under the necks or at the tip of the horns, markings on the hides and deformed horns, appear at different sites in the Horn of Africa, with varying forms from group to group, suggesting possible transcultural links (Figure 6) (Červíček 1971; Červíček and Braukamper 1975; Brandt and Carder 1987; Gutherz and Jallot 2011; Bachechi 1995; Le Quellec 2003; Calegari 1999; Joussaume 2007).

Plate 1. A Hamar favourite ox (errawak) resting on the bank of the Omo River with its distinctive traits: deformed left horn, branded hide, notched ears, collar, and pendant, Ethiopia.

In East Africa, the rock art is mostly comprised of paintings, many of which are to be found in the centre of Tanzania, on the islands and shores of Lake Victoria, and on the slopes of Mont Elgon, on the border of Uganda and Kenya. However, pastoral paintings are rare and found mostly in caves and rock shelters (Anati 1986). They consist of small figures of cattle and anthropomorphic representations, as well as geometric motifs (Figure 7). They are dated around the end of the second millennium BC and the beginning of the first millennium AD (Coulson and Campbell 2001). Stylistic similarities with the Horn of Africa, especially Ethiopia, suggest a northern origin of this pastoral rock art (Ndiema 2005; Wright 1961). Cattle are drawn as though viewed from above; they possess long horns and sometimes a hump; emphasis is placed on their horns, which show various shapes (Figure 7). Generally, horns are oriented together upwards or downwards (Chaplin 1974; Arundell 1936). Horn asymmetry is however also present, with the left horn turned downwards in most instances, suggesting a possible deformation. Ancient engravings of geometric signs, mostly found in the surroundings of Lake Turkana, are interpreted as cattle brands or clans symbols (Lynch and Robbins 1977). There is a strong similarity with contemporary herders living in the area, who still draw similar motifs and human figures on rocks, these being associated with ceremonies of meat feasting. During these ceremonies, cattle are slaughtered and the clan motifs branded on their hides reproduced on the walls of the rock shelters used by the herders (Gramly 1975; Chamberlain 2006; Russell 2012; Russell and Kiura 2011; Odak 1992; Lynch and Donahue 1980).

Thousands of rock art sites are thus scattered in North and Northeast Africa. They have their own peculiarities, testifying to specific cultural centres. However, some representations of cattle show important similarities, concerning distinctive elements of their

bodies (horns, hides and necks). They raise questions about the mobility of men and ideas during prehistoric times. Interpretations of their possible meanings should be made with caution, because even if they share strong similarities, they are not always contemporary, nor do they have the same frequency everywhere. In fact, the distribution of rock art is uneven both in time and space. Nevertheless, considering the practice of cattle horn deformation, the actual distribution of rock art sites suggests a general movement from the Sahara and the Nile Valley to the southeast, passing through the borders of modern-day Sudan and Eritrea, and then to the southwest through Ethiopia to finally reach Kenya and Tanzania. In a way, the practice seems to follow the spread of pastoralism through the African continent (Gifford-Gonzalez and Hanotte 2011; Lesur, Hildebrand, Abawa and Gutherz 2013; Prendergast 2011; Linseele 2013).

Anthropology of Cattle Horn Deformation

Today, the practice of cattle horn deformation is limited to five countries of East Africa (South Sudan, Ethiopia, Kenya, Uganda and Tanzania), but it is common to more than thirty pastoral groups, transcending ethnic and linguistic frontiers (Dubosson 2014). Thus, it shows a strong intergroup dynamic, which revolves around the domestication of cattle through time and space. The practice is associated with a particular phenomenon, considered an element of the East African Cattle Complex (Herskovits 1926), namely the institution of the favourite animals. In these pastoral groups, men are prone to develop during their teenage years a symbiotic and complex relation with a bovine (bull, ox or cow), which becomes a prestige item, due to its appearance and personality, as well as a specific member of the human society. Man and animal become mutually dependent, and their relation reinforces the individuality of the herder, while facilitating his social integration and cultural training.

Among the Hamar of southwestern Ethiopia, as in other ethnic groups of East Africa, favourite animals are subjected to a series of different body markings, which can be understood as a process of embellishment and of symbolic transformation[1] (Plate 1). The first step is the castration of the bovine, even though the favourite animal can be either a bull or a cow. The second step is the incision of ears, in order to create a notched motif all around the rim. This notched motif is characteristic of a favourite animal amongst the Hamar. Other motifs exist but they are related to clan symbols or ownership markings. An expert, who is usually rewarded for his work with the gift of a goat, generally cuts the ears. The owner of the animal and his agemates restrain the animal on the ground and assist the expert. This body marking often occurs a few minutes before another important one, that of the dewlap.

Often, on the same day, the dewlap is deeply incised with a knife by an expert, in order to create a natural, single or double, pendant. This is a delicate operation, which must be done with great care, in order that the animal may rapidly recover and to avoid it bleeding too profusely. The pain is intense and up to four men have to forcefully restrain the animal on the ground. The incision is done for beauty, the pendant being considered by the Hamar as an ornament. They like its swinging when the animal walks in the bush. It also serves to make space for the necklace, which the favourite animal will wear after the deformation of horn. Only a few pastoral groups, living in Southern Ethiopia and northern Kenya, undertake this practice.

The visual appearance of cattle is essential, especially that of the favourite animals, which have to please the owner's eyes (Plate 1). They distinguish themselves from other animals in the herd, arousing interest and envy among men. Their hides are decorated with geometric motifs, such as lines, circles or dots. Such branded motifs are produced with a heated spear directly applied on the skin. Motifs vary according to the desire of the owner, who asks an expert to produce them. Herders can thus personalize their favourite animals, according to their individual sense of aesthetics. Other motifs can also be drawn, but they are not proper ornaments, as they represent the clan or family symbols of the animal's owner.

The last step in the making of a favourite animal is the deformation of the horns. This is done when the animal is around three years old, in a riverbed, at a cattle camp or in the village of the owner. An expert also undertakes this procedure, as it significantly jeopardizes the life of the animal. Most groups use a stone as a tool for the deformation. The expert deals precise and repetitive blows with a stone on the horn sheath, in order to free it from its bony base. Then, the expert pushes and twists the horn in the direction of the fractures and fixes it with a rope attached to the frontal and

[1] I will mainly focus on the Hamar of the South Omo (Ethiopia), for it is among them that I have conducted my ethnographic fieldwork during the last ten years.

the tip of the horn. Thanks to the rope, which falls off by itself about a month later, this technique creates the tension needed for the desired alignment of the horn and also keeps it fixed in place.

In East Africa, the deformation may involve one or both horns, depending on the ethnic group. Most ethnic groups tend to deform one horn, generally the left horn, pushing it toward the ground, while keeping the natural upward direction of the right one. Some groups deform both horns, forcing them to grow parallel to each other and forward or forcing them to meet each other over the head of the animal (Insoll, Clack and Rege 2015).

Fresh cow dung is later applied to the wounds as a disinfectant and painkiller. Finally, in order to mark their participation at the event, additional lines on the coat are applied with fresh cow dung by the men and women present. They have a temporary aesthetic value as well as a propitiatory one. Once the procedure is completed, the animal gets up by itself and rejoins the herd.

The deformation is a major social event for the owner, who sends invitations beforehand to his age-mates, friends, and distant family. If the deformation is successful, the animal is confirmed in its symbolic and apotropaic role. Indeed, a favourite animal is considered responsible for the well-being of its owner; it incorporates his good fortune. The owner can now receive a name related to the coat colour of his animal. He is referred to as 'father of such and such colour' and will be known by his new name all around the country, as the people who participated in the event return to their homes. Being now the owner of such an animal, he composes songs for it, in which he celebrates its qualities and those of his age-mates who have helped him during this process of embellishment. When he dances with his age-mates and in front of the girls, he raises his arms, imitating the horn shape of his favourite animal. At such a moment, it is often said that man and animal become one, as the herder identifies himself with his favourite animal.

The Persistence of a pastoral Tradition

Today, the practice of cattle horn deformation is the last and most important step in the embellishment process of the favourite animal. It is to be understood in the context of this cultural phenomenon, and it may also have been the case in the past, as numerous strands of evidence point to complex and intimate relations between man and animal. The practices and representations related to this phenomenon are so complex that it is more likely that the cultural phenomenon was at one point invented and subsequently diffused throughout the African continent. It undoubtedly evolved over time, as it was passed to different groups who fully adopted all or only parts of it. Differences are attested between groups, testifying to local adaptations and innovations. However, it generally appears to have kept its fundamental elements, an emphasis on the cattle horns, hides and necks, which are modified, branded and decorated (Dubosson 2016). Its importance within pastoral groups and its persistence can be explained by the desire to create in the members of a society a strong commitment to their herds. Indeed, this phenomenon, with its persuasive function and poetic form, is a way of strengthening this commitment, because the favourite animal represents the entire herd. The exaggerated way in which it is decorated, praised in song, ritually slaughtered and psychologically invested with feelings ensures a devotion not only to the animal in question, but also to the whole herd of which it is a part.

In order to understand the kind of commitment created by the favourite animal, it may be useful to recall a custom, which used to be common to most of the pastoral groups of southern Ethiopia and northern Kenya (Strecker 2012). When outsiders threatened them, the warriors would drive their favourite animals towards the enemy, singing the praise of these animals and showing that they were ready to die for them if the enemy dared to touch them. Nobody knows who invented this custom, but it is certainly a good strategy for committing the individual herdsmen to the herds and even risk death in their defence. Without asserting too rigid a conservatism regarding African societies, we believe that looking at pertinent regional archaeological remains through the lens of this phenomenon and its related practices and representations can renew our approach toward, and knowledge of prehistoric pastoralism.

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