Scenes of Human Control of Reindeer in the Alta Rock Art

An Event of Early Domestication in the Far North?

Ingrid Fuglestvedt

This article focuses on some evident differences between Phase 1 and Phase 2 rock art at Alta in western Finnmark in northern Norway. The earliest period (Phase 1, 5200–4200 cal. BC) of rock art production shows numerous scenes in which humans seem to take control of wild game. The compositions of corrals with reindeer inside may be indications of forms of early domestication suggested to have occurred within a context marked by the authority of successful hunters and the influence of emerging inequality. This element of control correlates with an apparent totemic influence in the expressions of rock art. The rock art produced in the succeeding period (Phase 2, 4200–3000 cal. BC), however, entirely lacks scenes communicating control of reindeer. This article suggests that this selective absence is an expression of a regained egalitarian social form and a reappraisal of an original animism.

Keywords: Stone Age petroglyphs, Finnmark, northern Norway, human-animal relationships, animism, totemism, reindeer domestication

Department of Archaeology, Conservation and History, University of Oslo
ingrid.fuglestvedt@iakh.uio.no

Introduction

The rock art of Alta in western Finnmark is a corpus of prehistoric depictions produced from the older Stone Age, through the Younger Stone Age and early Metal Age (500–200 cal. BC) (see e.g. Helskog 1988:32; Gjerde 2010:252). Carved onto the natural panels of what today stands out as a spectacular rock art area, this corpus comprises more than 5000 figures, mostly of reindeer, elk, elk-shaped boats and humans; in other words, an imagery typically related to the lives of arctic hunter-fisher-gatherers.

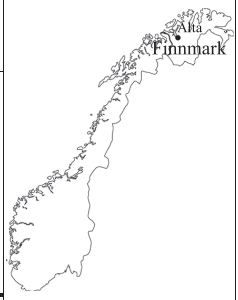
In Finnmark, agriculture was not introduced until the twentieth century. Still, this part of prehistoric Norway has a younger Stone Age, or 'Neolithic', which began in 4500 cal. BC and is defined by the introduction of early comb ware pottery, polished slate tools, bifacially retouched points and quadratic semi-subterranean houses (Olsen 1994:52–54; Skandfer 2005, 2009; Table 1). What comes to the mind concerning advanced architecture as part of a Late Stone Age package would be the large and multi-spaced Gressbakken house type. This house type is, however, of a later date than the period under discussion here. In the era corresponding to Alta Phase 1 rock art, a change to a more complex house form can still be documented. As pointed out by Olsen (1994:66–67; cf. Simonsen 1963), the early Late Stone Age has quite large subterranean houses with double fireplaces. These dwellings may measure up to 40 square metres in inner dimensions. More recently, similar house structures have been excavated at Slettnes in Finnmark, with dates going back to about 5000 cal. BC (Hesjedal et al. 1996:100–101). Thus, of relevance here, is that this type of dwelling dates back to a period corresponding to Alta rock art Phase 1.

The archaeological record of eastern Finnmark contains the earliest evidence of production and use of pottery in Norway; it precedes the early Funnel beaker pottery found in southern Norway by at least 500 years. Thus, during a phase which is still the (late) Mesolithic in the southern part of the country, the far north had several elements of what is normally regarded to be the core elements of a 'Neolithic package': ceramics, 'advanced' architecture and new technologies. The most essential element – agriculture – is, as we know, not present. Another essential element necessary to describing a society as Neolithic – the domestication of wild animals – also appears initially to be absent. A closer look, however, suggests that this may not be the case.

In his article on reindeer corrals in the oldest phase of the Alta rock art, Helskog (2011) suggested that depictions of circular fences around reindeer may indicate not only a certain level of human control of wild reindeer herds, but also some degree of taming. This level of domestication is known historically to have involved the keeping of a few reindeer as decoy

Table 1. The Mesolithic and Early Neolithic chronology in southern Norway compiled with the Older and early Younger Stone Age as defined for Finnmark. Basic structure of table extracted from Nyland (2016:Figure 3.1).

	Cal BC	Time sequence	South Norwegian Chronologies		North Norwegian Chronology		
			Eastern Norway	Western Norway	Finnmark		
Early Mesolithic	9500 – 9000	EM 1	Fosna	Fosna	OSA Phase 1	Older Stone Age	
	9000 – 8500	EM 2					
	8500 – 8000	EM 3					
Middle Mesolithic	8000 – 7500	MM 1					
	7500 – 7000	MM 2	Tørkop	Early micro blade tradition	OSA Phase 2		
	7000 – 6500	MM 3					
Late Mesolithic	6500 – 6000	LM 1					
	6000 – 5500	LM 2	Nøstvet		OSA Phase 3		
	5500 – 5000	LM 3		Late micro blade tradition			
	5000 – 4500	LM 4			Alta Rock Art Phase 1		
	4500 – 4000	LM 5	Kjeøy		Alta Rock Art Phase 2	Younger Stone Age	
Early Neolithic	4000 – 3300	EN 1					



animals, or for use in transport (for pulling sledges or riding). Until the introduction of proper reindeer pastoralism in late medieval times, the hunter-gatherer population in northern Norway always relied heavily on wild reindeer in addition to marine resources (Hansen & Olsen 2004). According to Bjørklund (2013), among others, the small-scale reindeer husbandry tentatively suggested by Helskog was likely a part of the human-wild reindeer relationship long before proper reindeer herding started.

In this article, I expand on Helskog's original suggestion. Similar to Helskog, I base my discussion on the Alta rock art. I argue that the 'Neolithic of the North' also involved a short period of reindeer domestication. I demonstrate how this is reflected in compositions of rock art showing human control of animals and, further, discuss this phenomenon in its cultural-historical context. As I have argued elsewhere (Fuglestvedt 2018), during the earliest phase of rock art production in Alta, the hunter-gatherers of western Finnmark were under the influence of a totemic ontology; this worldview implied and allowed for increased control of wild animals. The alleged element of control, however, disappears from compositions from the succeeding phase of rock art production. Thus, the apparent event of domestication seems to have been short-lived. Why? I propose explanations, drawing on a structural-historical approach (Braudel 1982), in which an original animistic ontology represents a firmer structure underlying the course of circumpolar history. I must emphasize that the term 'Neolithic of the North' is solely my own expression and should not be conceived of as part of a straw-man argument. In other words, I am not implying that anyone has taken the position that the Neolithic is a useful term for the Late Stone Age (see Skandfer 2009:91 and discussion below).

Alta rock art Phases 1 and 2

The phases of rock art production in Alta are consistently found on belts of panels situated at height intervals between 22–25.5, 17–21, 14–17 and 8.5–10 masl, with the highest belt being the earliest art. The production sequence seems to be related to the falling post-glacial waterline (Gjerde 2010 fig. 152). This systematic pattern clearly indicates that the rock art had a shore connection (Helskog 1999). The strong indication that the figures were carved at shore-bound levels forms the basis for Helskog's division of the corpus into four phases. Hence, each level represents Phases 1–4, respectively (Helskog 1983, 1988:32–33). Later on, Helskog (2000, 2012a:29) revised this system and suggested both a five- and a six-phase division. In this article, I adhere to the original four-phase division, discussing the two first phases, Phases 1 and 2. Taking into account Gjerde's (2010:251–252) reconsideration of the absolute dating of the Alta rock art, carvings of Phase 1 are considered to have been produced some time between 5200–4200 cal. BC, whereas the depictions of Phase 2 were made between 4200–3000 cal. BC. There was probably a time gap in production of rock art between the two phases (Olsen 1994:46). The figures of the Alta rock art corpus are dispersed among rock panels of varying sizes throughout the landscape over an area of several square kilometres. They are named by section and site, with the sites known as Bergbukten, Ole Pedersen, Kåfjord and Storsteinen containing the main panels belonging to Phases 1 and 2 (Figure 1).

Generally, the two phases of rock art production both depict large game. Reindeer and elk appear both as solitary animals and in herds of various numbers. Compositions involving bears are prominent, even if depictions of elk and reindeer greatly outnumber them. Humans are present in both phases, as, for instance, crew in vessels. Boats, often hybrids, (that is, with a stern represented as a head of a reindeer or an elk) are also typical throughout the periods under discussion. Despite this commonality between Phases 1 and 2, there are also some marked differences. As also noted by Helskog (2011; 2012a:67–70), this marked difference concerns the expression of human control of animals or absence thereof.

In the oldest phase (Phase 1, 5200–4200 cal. BC), 40% of the total depictions of cervids are adorned with design patterns of different types (Fuglestvedt 2018 fig. 8.10). These are contractions and abbreviations of patterns originating in another type of composition: humans and elk-humans placed in rows and circles. Thus, design patterns are in most cases simplified representations of people standing in a chain. Patterns decorating the animals can thus be regarded as a representation of the human collective, indeed a strong symbol of society itself (see Chapter 4 in Fuglestvedt 2018 for a detailed elaboration of this point). In Phase 1, therefore, the humanization

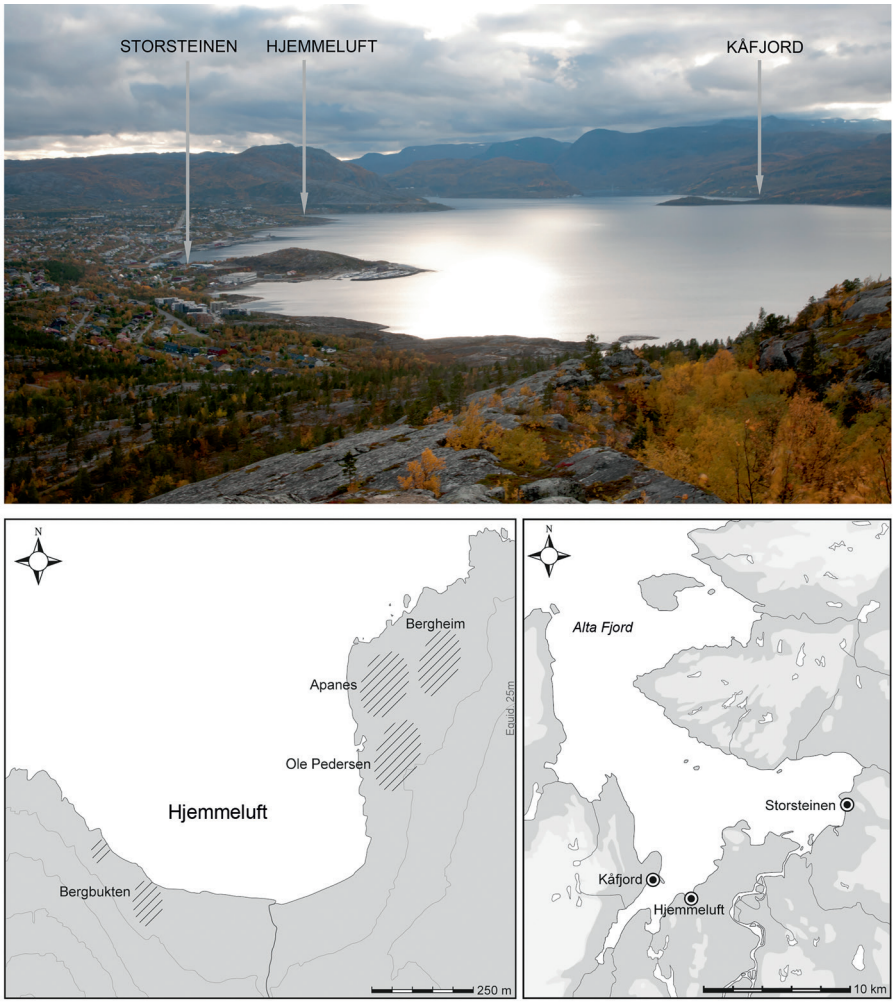


Figure 1. The Alta Rock Art area with the main sites belonging to Phase 1 and 2. The Bergbukten panels belong to the sites in Hjemmeluft. Photo by the author, digital illustration by Astrid J. Nyland.

of wild animals is conspicuous. As noted early on by Hagen (1976:148), and further elaborated by myself, this way of representing animals focuses on the *inner* qualities of the animals, their essence. In sharp contrast, the younger phase (Phase 2, 4200–3000 cal. BC) is totally bereft of this feature; all big game animals of this period appear as carved only in contour or in bas-relief. This represents a focus on the *outer* qualities of the animal; in a way, it presents the animals as they appear when confronted by humans in real life. These animals may stand out as more naturalistic (see also Helskog 1989). Animals depicted with an outer focus are indeed pre-

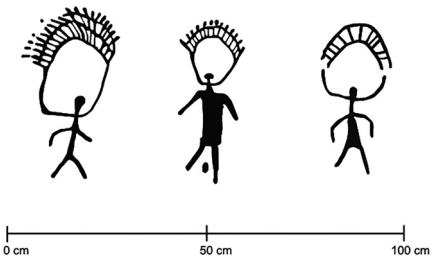


Figure 2. Humans with headdresses ('kiters') from the rock art of Kåfjord Upper/Alta Phase 1. Documentation by Karin Tansem/Alta Museum 2010, digital tracing by Hege Vatnaland). Reproduced with permission.

sent in Phase 1; however, in Phase 2, this is the *only* way that large game are represented.

Phase 1 is further characterized by depictions of humans engaging in a number of different activities and in various situations. Hunting scenes are depicted as confrontations between a single hunter and either single

Figure 3. Corral from Bergbukten 1, Alta Phase 1, Finnmark. Documentation by Karin Tansem/Alta Museum 2010. Reproduced with permission.

animals or herds of cervids. In these situations, the human party seems to either subdue the animal or rule over it. Moreover, depictions of rituals that mirror a hunting scene can be seen in the form of humans confronting each other while carrying elk head poles. Typical of such scenes is a large elk depicted between the confronting parties, or alternatively, in the near vicinity of the scene. An interesting feature of Phase 1 are the humans – most probably male – adorned with antler headdresses. This feature exists in several variations, the most intriguing of which, perhaps, are those in which antlers are depicted with near similitude to another Phase 1-figure category, namely, the so-called shaman's necklaces (Figure 2). We also witness dancing people in rows and circles, a small number of whom carry antler headdresses. Lastly, the occurrence of compositions including corrals, or animal fences, is a prominent feature of the oldest phase of rock art production. Altogether, there are depictions of nine corrals in Alta Phase 1. The most conspicuous of these are from Bergbukten 1 and from Kåfjord Upper. These two are relatively large and their fences are decorated. The former is composed of semi-circles, whereas the latter is somewhat circular in shape (Figures 3 & 4).

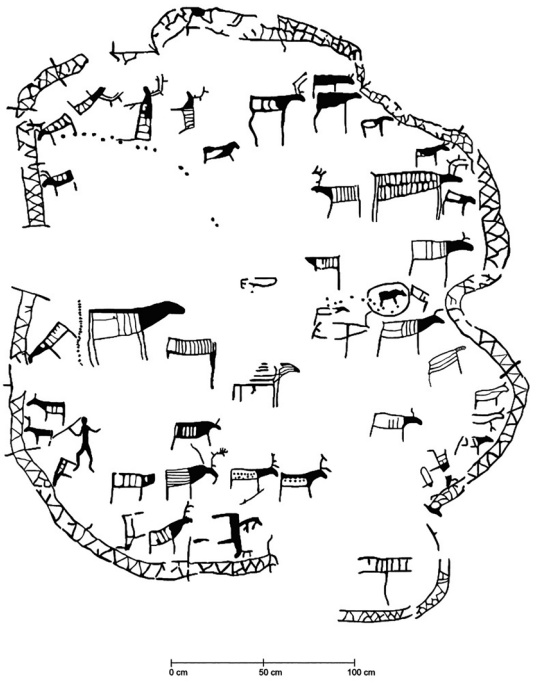


Figure 4. Corral from panel at Kåfjord Upper, Alta, Finnmark (documentation by Karin Tansem/Alta Museum 2010, digital tracing by Hege Vatnaland. Reproduced with permission.

Figure 5. Section of reindeer decorated with body designs, Bergbukten 4B, Alta Phase 1, Finnmark. Photo by the author.

In Phase 2, none of the depicted humans carries an animal headdress, there are no elk-head poles, and humans neither hunt nor confront cervids. In this phase, humans are not depicted as engaged in any specific activity and figures carrying head-gear or hunting equipment are absent. They appear as crew in boats, and in a few cases, they are holding up T-shaped weapons. Some of the elk-boats are more elk-like than boat-like.

There is probably a time gap of a few hundred years between the production of the Phase 1 and the Phase 2 rock art, as mentioned above. Still,

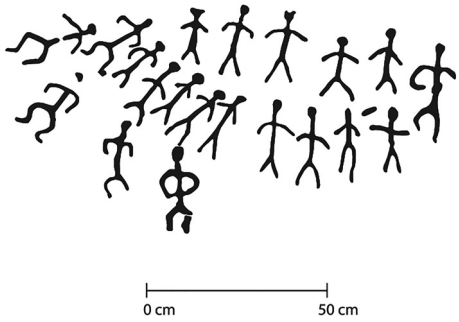


Figure 6. Dancing humans from Kåfjord Upper, Alta Phase 1, Finnmark. Documentation by Karin Tansem/Alta Museum 2010, digital tracing by Hege Vatnaland. Reproduced with permission.

Figure 7. Reindeer depictions in panel at Bergbukten 2, Alta Phase 2, Finnmark. Photo by the author.

the shift in expression between the two phases stands out as abrupt. In the earlier period, the element of human control over animals is pronounced. Humans adorned with the headdresses of elk, or holding elk-head poles and engaged in rituals or ritual killing, have already been mentioned. The mere existence of corrals strongly signifies human control of herds of reindeer, and the adorning of animals with design patterns can be regarded as a statement of the relatedness of these animals to humans (Figure 5). Thus, the contrast to the next phase of rock art production, which lacks all these elements, surely has cultural-historical significance (Figure 6). In this period, there are no manifestations of control and humans are not engaged in any specific activity; there are no elk-people, and the only hybrid beings are the elk-boats. Whereas the earliest phase expresses control, the next phase communicates an attitude of live-and-let-live vis-à-vis the animal realm.

The Alta rock art is known for its immense variation in comparison to all other rock art areas in Norway and Sweden. Thus, this corpus provides the possibilities of revealing connections, associations and affiliations among categories of compositions. One such affiliation is the relationship between compositions of humans standing in rows and the design patterns. There is also a strong association between rows of humans and variations on the circle (Figure 7). Circle shapes are found in versions of humans standing in circles, as corral fences, and as shaman's necklaces, among others. In this

way, circles and design patterns are linked as they are both related to representations of humans that are chained together; taken together, this can be understood as communication of collective values, and indeed as a representation of human society. The designs in the corral fences in Kåfjord Upper and Bergbukten can be regarded as abbreviations of people and elk-people encircling the animals. The design of the fence thus also forms a reference to the design patterns on the animal bodies within the enclosure. The Alta material thus provides a key to understanding the origins of more widely seen design patterns in fifth millennium rock art in Norway.

Corrals as a strategy for collecting reindeer

The association of wild reindeer hunting with human-made constructions, such as systems of hunting pits and drive fences, is a well-known phenomenon throughout prehistoric and historic times all over the Scandinavian Peninsula and in the circumpolar area at large (for Finnmark and Northern Sweden, see e.g. Mulk 1994; Vorren 1998).

Hunting constructions could be added to landscape formations (valleys and isthmuses) that naturally drove the animals in the desired direction. Vorren (1958:1–8) describes the common method of hunting wild reindeer as involving the capturing of herds within drive fences, that is, two rows of stones or wooden poles arranged to make a funnel. Moving reindeer could thus be steered towards a cliff and killed when they hit the ground below. Alternatively, converging fences might end in a corral in which the reindeer were captured, and then killed and slaughtered by the hunters. Drive fences could be 5 to 600 metres in length, and the corrals, known by modern Sámi herders as *vuobman/vuopmanat* (Hansen & Olsen 2004:186), can measure between 50 and 130 metres in diameter (Vorren 1958:12–14, see 1958 fig. 2; Helskog 2011 fig. 2).

The two depicted corrals from Bergbukten and Kåfjord Upper show reindeer encircled within enclosures. The compositions also show strings of fences leading up to one or more openings in the enclosure. As far as our knowledge goes, there are no physical remains of structures like this from prehistoric times. Corrals are however known to have been in use in historical times. At Kjøpmannskjølen on the Varanger Peninsula, a corral associated with leading fences and hunting sites appears to have been in use during the Middle Ages (Hansen & Olsen 2004:186–187; Vorren 1998, front page).

Vorren (1958) connected encircled enclosures exclusively to hunting of wild reindeer. Referring to Blehr (1990) and Gordon (1990), however, Helskog (2011:25) points to the fact that reindeer pastoralists also use corrals to

collect domesticated herds: 'The difference is simply that the hunters killed most if not all animals, while the pastoralists separate and maintain herds, and slaughter animals according to ownership and need'. In a drawing of a corral by Turi (1910; reproduced as fig. 3 in Helskog 2011), the encirclement is divided by fences into three parts, illustrating the above-described sectioning associated with the capture of domesticated reindeer. Thus, the main difference between the two versions of corrals, as depicted, is that corrals used for collecting tame animals show some kind of division within them. Helskog (2011:30) points out some elements of the Alta rock art corrals that he regards as showing differences and similarities with historically known corrals. He notes, for example, that the former are not as circular as the latter. Indeed, the carved enclosures are quite irregular. Unlike Helskog, I do not regard this as an essential difference. First, the depicted corrals, like the Kåfjord corral, are somewhat circular; moreover, to see this corral *as* circular makes sense when understood as referring to, and part of, the general circle imagery presented in the Alta rock art (Fuglestvedt 2018). Half-circles and semi-circles are also referents to this specific imagery. The corral depicted in the Bergbukten panel is carved as an agglomeration of semi-circles (Figures 3 & 4). Of more interest is Helskog's recognition that the two carved corrals show indications of the sectioning typical of reindeer pastoralists. Thus, he claims that 'sectioning is particularly apparent in the two largest corrals in [Bergbukten and Kåfjord]' (Helskog 2011:30). He is not very specific about which details in the corrals suggest these divisions, but in the case of the Bergbukten corral, it is clear that every semi-circle creates a section or division. In the Kåfjord corral, a similar sectioning is less obvious even if the curvature of the fence may be seen as having some of the same features as the corral in Bergbukten. What could support the assertion that this corral is sectioned is the tendency in the Kåfjord composition for animals with similar body designs to gather in the same areas of the enclosure. In Turi's drawing, the fences make up the inner sectioning; inner fences, though, are absent from the depicted corrals in Alta. Yet, in Turi's drawing, the fences are the only sign of separation into sections; the herd of animals is homogeneously represented and, unlike the prehistoric depictions, there are no features to indicate groupings or categorizations within the herd.

The question of domestication

Against this background, Helskog (2011:32) suggests the possibility that Alta Phase 1 involved the tending of small reindeer herds. Such small-scale domestication could have served a number of purposes. Tame female rein-

deer offer access to milk, and thus to the secondary products normally associated with Neolithization. Tame females can also serve as decoys, to lure the male reindeer during the hunting of wild reindeer. Domesticated reindeer can also be used for riding and for pulling sledges. As also noted by Helskog, a discovery of sledge runners from the Mesolithic site Vis 1 in Siberia (Burov 1989:393) strongly suggests that the keeping of tame reindeer extended to this era of prehistory.

The precise nature of reindeer pastoralism proper is a matter of nuance and discussion (see Sommerseth 2011 and Bjørklund 2013 for clarifying elaborations). Domesticated reindeer were introduced around 1400 AD (Storli 1996; Sommerseth 2011). Before the shift to reindeer pastoralism, the population of hunter-gatherers in northern Norway generally relied on reindeer hunting and on marine resources. It is a widely held assumption that during historical times, however, reindeer subsistence commonly involved the keeping of domesticated herds in addition to hunting. Domestication may have started with the keeping of castrated male animals for transport purposes, and of female reindeer for milk production and as decoy animals. Generally, it is possible to regard domestication prior to full Sámi pastoralism as occurring simultaneously with, and at times in a dynamic with, the hunting of wild animals, and not as a distinct alternative to hunting. The tame herd could be supplemented by wild reindeer, and tame animals could be used as decoys in the hunting of wild animals. In scenarios in which herds amounted to fewer than 75–100 animals, it is likely that tame animals were primarily raw material for clothes and tools. Small herds are not large enough to provide sufficient food resources. Bjørklund (2013:183) estimates the number of tame animals in a reindeer herd must be up to 200 to 250, if subsistence is to be based only on this animal; thus, contexts in which herds count a smaller number of animals, the hunting of wild reindeer must have been maintained as well. The potential complexity in the interplay among forms of subsistence – hunting, fishing and herding – has recently been confirmed in a study by Salmi and Heino (2019). Scenarios of small-scale domestication could likely have occurred in prehistoric times as well. Archaeologists have indicated that small-scale domestication took place in the Viking Age (Hansen & Olsen 2004:204–205; Sommerseth 2011:117). Røed et al. (2008), in their article on the genetics of Eurasian wild versus domestic reindeer populations, demonstrate that processes of domestication must have taken place independently and possibly recurrently. The implication of this work is that local incidents of domestication during longer or shorter periods may have taken place at any time during prehistoric and historic times. More importantly, in this connection, is the statement by Røed et al. that 'The domestication of mammals is a slow process, which in its early phases may involve the management and

control of wild herds rather than the capture of a few individuals and their subsequent breeding in captivity' (Røed et al. 2008:1854).

The assumption that Alta Phase 1 represents a period of domestication cannot be directly proved; hence, Helskog is cautious about drawing definitive conclusions on this matter. As stated at the beginning of this article, my intention is to expand on this point. To begin with, we agree upon the fact that there is no other phase in Alta that shows such a strong degree of control of reindeer herds. The corrals are depicted with hunters, and more precisely, humans with lifted spears, inside the encirclement. This may indicate hunting more than slaughtering or domestication. Still, the depiction shows control of herds, principally in the same way as described by Røed et al. (2008). By their very presence, corrals indicate strong control of wild reindeer, which is a condition of semi-domestication. The indication of sections in the two depicted corrals may show, alternatively, a small herd of domesticated animals; in other words, small-scale domestication. To conclude, if there were any phase in the prehistory of Finnmark in which reindeer were domesticated in the ways described above, it would have been the period in which corrals are depicted. To repeat, this period (Alta Phase 1) is set at between 5200–4200 cal. BC. Helskog (2011:29) suggests that the age of corral depictions can be more narrowly dated to 4700–4200 cal. BC. Thus, if the corrals represent the domestication of reindeer, this event corresponds more or less to the definition of the younger Stone Age in Finnmark, and to the introduction of comb ware pottery, slate tools and subterranean houses as well as the presence of secondary products (milk); in other words, it corresponds with a number of core elements of the traditional Neolithic concept.

The earliest younger Stone Age phase in Finnmark is defined as beginning in 4500 cal. BC; however, new datings of Early Comb Ware from Finland and Russia (Kola) suggest that this pottery and its related technology appear around five hundred years earlier, perhaps even as early as 5500 cal. BC (Skandfer 2005; Skandfer 2009:88). In that case, the Phase 1 Alta rock art and the use-phases of early Comb Ware overlap almost perfectly. This early ceramic tradition ends at 4500/4200 cal. BC (Skandfer 2009:88–89). As stated above, Alta Phase 1 dates to the period 5200–4200 cal. BC. Hence, there are reasons to state that Phase 1 rock art production and the use of pottery in Finnmark are corresponding phenomena. Comb ware, however, is present only in eastern Finnmark, more than 200 km from Alta as the crow flies. Since the detection of the Gamnes panel (Niemi et al. 2015) close to Kirkenes in eastern Finnmark, there are, however, reasons to regard these comb-ware users as producers of rock art. Given that the Gamnes panel has almost perfect similitude to the style characteristics of Alta Phase 1, the east-west contact appears obvious.

Rock art as a display of reality

Admittedly, there is no direct evidence for the domestication of reindeer in Finnmark during Alta Phase 1, unless we take the compositions of rock art – and corrals – at face value. How can doing so be justified?

The human condition in the practical world is one of producing and dwelling. From a phenomenological approach, this human condition is such that real-world practices, for instance technology, always co-exist with an inter-subjectively inherited symbolic order. This apperceptive horizon provides the activities with motivations, meaning, sense, or explanations (Fuglestvedt 2009). A life-world contains both the material and the immaterial, and is a product of human engagement with a specific environment (e.g. Lévi-Strauss 1969). The symbolic order carries both history and tradition; therefore, the concrete and the symbolic levels merge. It could be said that the practical and the symbolic orders belong to the same habitus of bodily dispositions (see Glørstad 2010). Both levels, however, are realized in the practical world, regardless of whether the practical world is embodied in a place of dwelling or rock art production. Large animals and large herds of reindeer were important resources for sustenance, and just because they were, they represented the inevitable resource for thinking and perceiving.

Against this background, I have defined hunters' rock art on the Scandinavian Peninsula as depictions and compositions displaying *thematizations* (Fuglestvedt 2018); that is to say, I have not primarily pursued 'the meaning' of rock art. Rather, rock art shows the reality of Stone Age thinking (see Lévi-Strauss 1966), or alternatively, rock art offers depicted versions of the contents of the minds of its makers. These thematizations, or *motemes*, revolve around the relationship between the humans and the herds of reindeer and elk. The frequency of depictions of large game globally underscores the role of large game for virtually all hunter-gatherers worldwide. In Stone Age Finnmark, the herds were part of the physical reality and inevitably were the most important resource, one that was both practical and moral. Rock art is the display of a reality of the Stone Age mind, a mind that reflected a specific life-world of values, beliefs, traditions and technologies. Therefore, when animals were depicted – as herds or as single animals to be stalked – this depiction presents a mirror of the real world of Stone Age Finnmark. The rituals depicted are also real situations and so is the adornment – the design patterns – on animal bodies. This is not to say that the animals were literally painted or tattooed; it demonstrates the reality of certain concepts in the minds of Stone Age people.

As stated above, both the practical and symbolic levels of being are realized at any site, be it a dwelling or a rock art site. It could be argued, though, that rock art sites provide a better archaeological access to the symbolic

level. This is a complex issue: there cannot be any doubt that the compositions in rock art represent the symbolic world of their makers. The question is the degree to which the rock art reflects the practical or 'real' world, that is, the world of material objects and of dwelling, hunting and communal life. Another aspect of practical life is landscape use. However, and in line with arguments put forward above, landscape use is always associated with a specific landscape perception (e.g. Ingold 2000). Gjerde (2010) has demonstrated several cases in which the two aspects of landscape mingled together; in other words, 'how the physical landscape interact[s] with the cosmological landscape' (Gjerde 2010:280). As an example, the micro-topographical features of the large panel in Bergbukten accord with the physical landscape in Alta. The features of this micro-topography show hunting of elk and reindeer 'inland', ritual activity and hunting of bear closer to the 'coastline', and fishing of halibut from boats in the 'fjord'. The arrangement of the compositions in the panel also accords with circumpolar notions that reindeer belong in the upper-world and the elk in the underworld. Thus, reindeer are depicted in the upper part of the panel, whereas an elk is depicted on the 'sea-bottom' with a halibut to be fished (e.g. Gjerde 2010:128 figs 63 & 146). Stone Age Finnmark was a specific environment for, at the same time, the practical, material and symbolic; it is a world reflected in rock art. Corrals are to be regarded as part of this physical environment; thus, they mirror a reality that simultaneously is a source of symbolism (Helskog 2011:31). Corrals depicted in rock art should be taken at face value, and as such, as evidence of the existence of some kind of domestication of reindeer in the era of Phase 1 rock art.

The Alta rock art as expressions of animism and totemism

Descola's (2013) seminal work *Beyond Nature and Culture* marks the culmination of what has come to be described as the ontological turn in anthropology. This turn concerns a serious attempt to understand non-Western ways of categorizing, as well as a critique of modernist dichotomies such as the nature-culture split. According to Descola (2013), any society or tradition carries a world perception, which, in its main features, can be called animism, totemism, analogism or naturalism. Animism and totemism are the worldviews relevant to approaches to Stone Age hunter-gatherers and the discussion here.

One of my main tenets has been that Mesolithic rock art is basically animistic. Animism implies an understanding in which the humans see themselves as a society separate from, but parallel to those of other living

beings (Willerslev 2007), such as the society of elk, or the society of reindeer, and so forth. This is a strong motivation for humans' reflections on themselves; the animals are understood as a kind of human, and as such, they live similar lives but in a remote realm. In this place, they also look a little bit like humans. Coming into the human realm, however, they appear in the way we know them in real life. The animals are conceived of as persons with intentions and wills and as such, they share the same type of inner faculties (interiority) as the humans. Animals and humans are different in their outer appearance or coat (physicality, see Descola 2013 fig. 1). The human relationship with the animal community is of a communicative nature. On the humans' part, this communication focuses on the animals giving themselves during hunting. Success in hunting might thus be related to efficacious negotiations with the animal community, or the community's 'master'.

By its very existence, hunters' rock art is communicative in an animistic sense. The evidence of its compositions indicates that animistic concepts were present during the Stone Age of northern Europe. A repeated motif in Alta and throughout the Scandinavian Peninsula generally is a herd of large game. This is a depiction of the animal community, but it also represents herds of animals potentially available to offer themselves to the humans. The Alta rock art corpus contains a number of other types of compositions thematizing animistic communication. An essential feature of this human-animal relationship is its minimizing of the distance between humans and animals, implied in human use of animal attributes, as in compositions in which humans carry antlers and elk-head poles in confrontations with big game. Another example of mediation between categories are depictions of elk-boat hybrids. Animistic depictions are basically naturalistic. They signal that the animal is an autonomous *person*, and represents the way it actually appears when confronted by a human hunting it. In brief, the creation of rock art can be understood as an animistic communicative practice in itself, as well as a display of scenes that thematize this animal-human relationship.

The Alta rock art is animistic in its basic form. Phase 1 imagery, however, seems to be affected by a 'totemic impact'. According to Descola's (2913) system, the human-animal relationship within totemism implies that humans and animals share interiority as well as physicality. Totemism within late Mesolithic Nordic rock art is mainly manifested in the occurrence of body-fill in animal bodies and sometimes in human bodies. This body-fill consists of different design patterns. The Alta rock art has its own patterns. Representing animals in this totemic manner, I suggest, reflects contact with groups in the south. Hunters' rock art in southern Norway is archaeologically contemporaneous with Alta Phase 1 (cf. Table 1). The totemic impact

in South Norwegian rock art is, however, considerably stronger than in the north, and probably reaches its peak in the fifth millennium cal. BC. The percentages of totemic animal depictions at the rock art sites at Ausevik and Vingen (the western part of southern Norway) are 71 and 75%, respectively, whereas for the eastern Norwegian group of rock art, the figure is 74% (Fuglestvedt 2018 figs 8.19–8.21). The average number for the Alta Phase 1 carvings is 40%.

Totemism is a worldview that stresses the material commonality between a human group and the landscape to which they belong. Humans are thus seen to share essence with their physical milieu and the animals they hunt (Ingold 2000; Descola 2013). Totemists are focused on the categorization of clans (of different landscapes) and on communicating the minute differences among them (e.g. Lévi-Strauss 1966). Generally, totemism involves the praising of society itself and of collective values (Durkheim 2001[1912]). Animals are part of the social category (Ingold 2000; Descola 2013). As humans share substance with the landscape, so do the other living beings of this specific landscape. Unlike animism, this worldview implies that animals are part of the human group. The totemic ontology thus opens the human mind to stronger control of wished-for game. This approach to the environment regards landscape and animals as of the same material origin as the humans dwelling in it. Mythic stories may tell of a creation in which the killing of game happened in a distant past; the animal may be understood as part of a once-and-for-all created landscape (Ingold 2000). The killing – and control – of animals in the present is consequently just a deed to recreate human existence in a specific landscape. Hence, a totemic approach to the environment invites concepts that allow for control of wild animals. Animism and totemism are not mutually exclusive, but as analytical concepts, they represent two main ontological modes. When the 'totemic impact' overrides a basic animic attitude, the consequence may be that the animal loses its status as a person with its own intention and will. I suggest totemism is part of the context for understanding the domestication of reindeer during the fifth millennium cal. BC in Finnmark.

Reindeer domestication as an asset of successful hunters

Who, then, were the controllers of the animals? And who were the principal mediators between the human society and the society of reindeer and elk? In other words, who domesticated reindeer and had the role of ritual master? The answer, it follows, is the most successful hunters. Large terrestrial animals are the most valuable resource among hunter-fisher-gatherers on a

global scale. This is a universal anthropological fact. Even if there are several incidents of female hunting in prehistory as well as among historically recorded small-scale societies, hunting – and big game hunting, in particular – is an activity primarily of men (see, for instance, Kelly 2013:64; 218–223, with references). This is also an activity of high prestige, regardless of how much the group relies on terrestrial meat. Large animals, when hunted, are a means of sharing and of maintaining an egalitarian social form. Hunting big game, however, involves paradoxes because it also embodies the sources of inequality. The successful hunter is owner of the animal and even if the hunter is obliged to share, the highly valued position as hunter and holder of this valuable resource provides an opportunity for social manipulation, for example through feasting (see Hayden 2014). Hence, successful hunting is the wellspring of power and of emerging male authority. This potential, however, is often contained through social control; thus foraging societies might be kept egalitarian over immensely long time spans. The 1500 years covering early Mesolithic Norway is but one prehistoric example of this, and testifies to the potential durability of egalitarian structures.

This is not the place to discuss why egalitarian structures 'untie'. Still, in order to describe the prehistoric context under discussion here, some attention should be given to Sanday's (1981) cross-cultural study of the female-male power balance and its relationship to big game hunting. Well known is that certain places in the landscape, such as tidal channels, provide a stable, year-round supply of fish. Such places condition increased sedentism among hunter-gatherers. To use Binford's (1980) much-used terminology, they facilitate the transition from 'forager' to more of a 'collector'. Following Sanday (1981), this situation of semi-sedentism, the settling down near a reliable resource, gives men the opportunity to take longer hunting trips and to make alliances with hunters from other semi-sedentary groups. The gains from hunting and gift-exchange with remote groups play a part in the processes of increasing social inequality, and also increase the distance between women and men on an in-group level.

Against this background, some features of the context under discussion should be established. Late Mesolithic Norway represents an environmental situation that conditioned a semi-sedentary lifeway and settling down next to stable resources in the landscape. By this period, egalitarian structures had been challenged for a long time (e.g. Bergsvik 2006; Glørstad 2010; Fuglestvedt 2018). Bergsvik (2002, 2006, 2009) has found evidence of a flow of precious raw materials across group boundaries in late Mesolithic and early Neolithic western Norway. He interprets this within the frames of increased sedentism and of successful hunters seeking out alliances with similar hunters among distant groups (compare Glørstad 2010). Here, I expand on Bergsvik's conclusions, by claiming that this network of gift-ex-

change also included groups in northernmost Norway. The idea of a long-distance, north-south network can be supported empirically through the study of styles and patterns in rock art (Fuglestvedt 2018). The phenomenon of rock art in itself becomes central here, as the upturn in late Mesolithic production is expression of an increased status of successful hunters. Rock art sites were places for large aggregations, feasting and rituals. An interesting question is why the Alta rock art displays variability and creativity to a much greater extent than other rock art areas in Fennoscandia. The Alta rock art includes stylistic impulses from a large over-regional area; thus, the probable scenario is that the spectacular status of the Alta rock art is connected to its attracting people from long distances and various directions, such as southern Norway, northern Sweden and western Russia. Such aggregations may not have taken place on a regular basis; what we observe could as well be a relatively low number of incidences facilitated by networks of successful hunters in Fennoscandia. Still, one may ask: if Alta is to be regarded as the most important hub, what gave this place such a status? A tempting suggestion is that this place was inhabited by the very best hunters and the greatest mediators between the human and animal realms. This authority could be set in relation to the evidence of rock art; namely, increasing control of reindeer herds, *including elements of domestication*.

Not only can we observe increased control of animals, but also these men were in all probability literally depicted on the Alta rock art panels. Successful hunters will, through their special contacts and roles as mediators with the animal community, use elk-like attributes. This elk 'gear' not only applies to hunting situations, but also to rituals. Referring to Sahlins' (1972) *Stone Age Economics*, Glørstad (2010:232) proclaims that late Mesolithic men of authority were 'the bulls of society'. Interestingly, what is regarded as status weapons of late Mesolithic southern Norway have antler-like shapes and attributes (see for instance Glørstad 2010 fig. 7.6). Phase 1 in Alta contains several cases of men carrying antlers. In a composition at Kåfjord Upper, people are dancing in a circular formation. Some of the dancing people are carrying elk headgear (see Figure 6). Other versions of the circle imagery in Alta typically show people in circle or semi-circle formations but always with an elk-human or big elk depicted as part of the composition. A big elk nearby is also present in ritualized hunting scenes, that is, depictions of men approaching each other while holding elk-head poles. The corrals may be regarded as part of the above-mentioned circle imagery. As explained earlier, the decorated fences have designs that appear to be abbreviations of people and elk-people in a row and circle. Thus, the corral fences may have several levels of meaning: they depict the corral; the design may depict the building material of the fence, for instance, braided birch (cf. Turi's drawing in Helskog 2011); and at the same time,

the fence with its design, may depict the community of humans surrounding and controlling the reindeer herd.

A normal depiction in hunter rock art in Norway at large is that of elk antlers visually bent in the direction of the representation of something quite different. One example of this are the boat-shaped antlers (Lahelma 2007), which are exemplified in the antlers of the large elks at Åskollen and Utenga in Buskerud, eastern Norway. Another is the elk with an antler shaped as a semi-circle at Møllerstufossen, which is reminiscent of the circle imagery found in Alta. The Alta material has its own version of transformed antlers, which are found on a number of depicted humans dressed with 'antler-circles', a category I have tentatively called 'kiters' (see Figure 2). This version of depicted antler could be seen as connected to the group of circle images of the Alta Phase 1 rock art, as it forms a reference to corral fences and depictions of humans standing in circles. It also carries a strong reference to the so-called shamans' necklace (Figure 8). Thus, the 'antler-circles' could be seen as the latter category just turned upside-down and placed on the head of the depicted human. Thus, the men depicted in Phase 1 in Alta carry the society-circle and/or the corrals on their heads. Could there be a stronger sign of control of reindeer and people?

There is immense wealth in figurative creativity in the Alta Phase 1 corpus, in comparison to rock art sites and areas in southern Norway, and a brief discussion of reasons for this relative richness is worthwhile, even though it must be based in speculation. One relevant assumption is that the visual creativity of Phase 1 is related to a scenario involving a number of successful hunters; alternatively, it could be connected to a short tradition of such men having luck as aggrandizers (Hayden 2014) and controllers/domesticators of reindeer. The natural environment in northern Norway provided the possibility to take control of herds of big game. This provided the successful hunters of Alta with a special asset of attraction. This was not an option in the south. As we know, elk, unlike reindeer, are next to impossible to domesticate. The appearance of successful hunters in the Stone Age of Finnmark had a strong influence, but only for a limited period of time. My suggestion is that their presence came about as part of southern contacts during a shorter period in the fifth millennium cal. BC (Fuglestvedt 2018). Alta Phase 1 not only shows relationships with the south, but also with the Nämforsen carvings in northern Sweden, and to rock art sites in western Russia, of which the Vyg by the White Sea is the closest. Thus, the wealth of the imagery of Phase 1 probably came about as a result of contacts in several directions. Still, the southern contact – with its totemic impact and forms of authority – would, for this context, be the relevant background to understand the domestication of reindeer. Control of game is, as already mentioned, a key factor for a hunter to succeed. In the north,

Figure 8. 'Shaman's necklaces' from Bergbukten 1, Alta Phase 1, Finnmark. Photo by the author.

the attainment of increased authority had special conditions. As mediators between the human and animal realm, successful hunters could have been in control of the past, extending and manipulating the group's mythic origin stories. The special creativity and figurative wealth found in Alta could as well be regarded as a derivative of the creativity in the production myths.

The abrupt close of an event, or a reappraisal of the circumpolar Stone Age tradition

The era of the successful hunters must have ended by the close of Alta Phase 1 in Finnmark. The time gap to the succeeding Alta Phase 2 seems to correlate with a marked decline in the population of northern Norway (Jørgensen 2018). This younger phase of rock art production, dated to 4200–3000 cal. BC, still stands out as an abrupt change in comparison to the preceding phase. As elaborated in an earlier section, in this period there are no corrals, no body designs, no men carrying antler as headgear, and generally no compositions communicating attempts to control the animals. The outer-focused style of large-game depiction indicates that the animals had regained their status as persons. Phase 2 marks the end of small-scale and semi-domestication, at least for the centuries to come. With this, the communities in the north seem to have returned to a pure animistic relationship with elk and reindeer.

My claim is that this animism was the dominating ontology among hunter-gatherers in northern Norway at the start of rock art production in the area. Even if Phase 1 rock art was strongly influenced by a totemic ontology, the basic animistic trend is equally present. The totemic impact is still considerably less than in southern Norway. Phases 1 and 2 both have imagery related to bears (Helskog 2012b). In circumpolar traditions, the bear has an extraordinary role and is a highly respected person. Probably, the human relationship with this animal can never be anything but animistic. Thus, the continuity of bear imagery throughout Phases 1 and 2 is likely an element that underlines the strong animistic tradition in the north. Totemism, and the authority connected to successful hunters and their increased control of animals through domestication, played a dominant role in Phase 1 rock art. Still, this should only be regarded as an *event* in the prehistory of northernmost Norway. Thus, Phase 2 represents an animism that came to be enduring in the circumpolar area. If there was a Neolithic of the north, it should be regarded as a small current on the waves of history, one that relates to the late Mesolithic upturn in rock art production that took place on a supra-regional scale.

Animism not only imbues animals with personhood, but also assigns the hunter obligations towards the animal community. One such obligation is sharing. If hunters do not share meat with other households, the animal-master may not send live animals back to the hunting grounds of the humans. Sharing is an essential constituent of the human-animal relationship characteristic of animism; sharing is at stake in the human-animal relationship, and is essential for the goodwill of the animals; sharing is entwined with the upholding of egalitarian structures. Thus, animism, sharing and egalitarianism are three interconnected phenomena. This is not to say that sharing does not exist within totemism and within the context of successful hunters' authority. Sharing would most certainly be essential in their pursuit of power and in their role as aggrandizers for feasting. Sharing within this setting might also uphold egalitarianism on an ideological level. The various contexts of sharing and gift-exchange are indeed complex, and call for more research within Stone Age archaeology. In this article, I have connected a phase of domestication to a short-lived scenario of influence of successful hunters and of a totemic ontology within Phase 1 in Alta. Phase 2 expresses a strong distance from the control of animals, and as I have claimed above, this marks a restarting of animism and egalitarianism among northern hunter-gatherers. My hypothesis is that this egalitarian-animistic complex forms a structure of the *longue durée* (Braudel 1982) in the far north. These structures were decisive for the course of history among the populations of hunter-gatherers up until historical times. Certainly, semi-domestication and small-scale domestication were prac-

ticed during the Iron Age and historical times. My suggestion, however, is that this domestication took place within the firm tradition of animism along with an economy of sharing.

In conclusion, animism is related to a strong inclination to share, and sharing is the basis for sustaining an egalitarian society. The regained condition of pure animism in Phase 2 may be regarded as a seminal moment in the course of history in the northern parts of Norway and Fennoscandia. This history involves populations of hunter-fisher-gatherers who were carriers of a tradition in which the union of animism and egalitarianism had a strong foothold in the course of history. This tradition of hunter-fishers is probably to be regarded as one aspect of the cultural duality involved in the ethnic processes that are believed to have started in the Early Iron Age (Odner 1980). If not the direct progenitors of the Sami people, hunter-gatherers of the younger Stone Age can still be perceived as the transporters of a firm egalitarian-animistic structure that one could say was embedded in the landscape and came to be the dominating ethos in Sami society (Tanner 1929; Mulk 1994; Odner 2010; but see discussion in Hansen & Olsen 2004:175–185). This echoes Gjessing's (1944) idea of an arctic tradition of hunter-gatherer life, a circumpolar reappraisal (cf. Westerdahl 2010). In this connection, we might talk of a reappraisal in a double sense: the reappraisal of prehistoric archaeology and the reappraisal of animism and egalitarianism when hunter-gatherers of the younger Stone Age took up their tradition. This life involved an animistic relationship with animals, one that set the course of history for the circumpolar area. I end with a quotation by Odner (2010:244): 'Circumpolar societies are egalitarian of nature. The reason for this is the animistic worldview they share'.

Acknowledgements

I would like to thank Rebecca Lowen for proofreading the article, and Sofie Scheen Jansen for digitizing Table 1 and for other technical assistance.

References

Bergsvik, K.A. 2002. Task Groups and Social Inequality in Early Neolithic Western Norway. *Norwegian Archaeological Review*. Vol. 35(1) pp. 1–28.

Bergsvik, K.A. 2006. *Ethnic Boundaries in Neolithic Norway*. BAR International Series 1554. Oxford: Archaeopress.

Bergsvik, K.A. 2009. The Importance of Landscape: Perceptions to In-group and between-group Relations among Hunter-Fishers of Neolithic Western Norway. In: Glørstad, H.

& Prescott, C. (eds). *Neolithisation as if History Mattered: Processes of Neolithisation in North-Western Europe*, pp. 105–134. Lindome, Sweden: Bricoleur Press.

Binford, L.R. 1980. Willow Smoke and Dogs' Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation. *American Antiquity*. Vol. 45(1) pp. 4–20.

Bjørklund, I. 2013. Domestication, Reindeer Husbandry and the Development of Sámi Pastoralism. *Acta Borealia*. Vol. 13(2) pp. 174–189.

Blehr, O. 1990. Communal Hunting as a Prerequisite for Caribou (Wild Reindeer) as a Human Resource. In: Davies, L.B. & Reeves B.O.K. (eds). *Hunters of the Recent Past*, pp. 304–326. London: Unwin Hyman.

Braudel, F. 1982. *On History*. Chicago: The University of Chicago Press.

Burov, G.M. 1989. Some Mesolithic Wooden Artifacts from the Site of Vis 1 in the European North East of the USSR. In: Bonsall, C. (ed.). *The Mesolithic in Europe*, pp. 391–401. Edinburgh: John Donald Publishers Ltd.

Descola, P. 2013. *Beyond Nature and Culture*. London and Chicago: The University of Chicago Press.

Durkheim, É. 2001[1912]. *The Elementary Forms of Religious Life*. Oxford: Oxford University Press.

Fuglestvedt, I. 2009. *Phenomenology and the Pioneer Settlement on the Scandinavian Peninsula*. Lindome, Sweden: Bricoleur Press.

Fuglestvedt, I. 2018. *Rock Art and the Wild Mind: Visual Imagery in Mesolithic Northern Europe*. London: Routledge.

Gjerde, J.M. 2010. *Rock Art and Landscapes: Studies of Stone Age Rock Art from Northern Fennoscandia*. PhD thesis. Tromsø: University of Tromsø / Department of Archaeology and Social Anthropology.

Gjessing, G. 1944. *Circumpolar Stone Age*. Acta Arctica Fasc. II. København: Munksgaard.

Glørstad, H. 2010. *The Structure and History of the Late Mesolithic Societies in the Oslo Fjord Area 6300–3800 BC*. Lindome, Sweden: Bricoleur Press.

Gordon, B.C. 1990. World Rangifer Communal Hunting. In: Davies, L.B. & Reeves B.O.K. (eds). *Hunters of the Recent Past*, pp. 27–303. London: Unwin Hyman.

Hagen, A. 1976. *Bergkunst: Jegerfolkets helleristninger og malinger i norsk steinalder*. Oslo: Cappelen.

Hansen, L.I. & Olsen, B. 2004. *Samenes historie fram til 1750*. Oslo: Cappelen Akademisk forlag.

Hayden, B. 2014. *The Power of Feasts: From Prehistory to the Present*. Cambridge: Cambridge University Press.

Helskog, K. 1983. Helleristningene i Alta i et tidsperspektiv: En geologisk og multivariable analyse. In: Sandnes, J., Kjelland, A. & Østerlie, I. (eds). *Folk og ressurser i nord*, pp. 47–60. Trondheim: Tapir.

Helskog, K. 1988. *Helleristningene i Alta: Spor etter ritualer og dagligliv i Finnmarks forhistorie*. Alta: Alta Museum.

Helskog. K. 1989. Naturalisme og skjematisme i nord-norske helleristninger. In: Bertelsen, R., Reymert, P.K. & Utne, A. (eds). *Framskritt for fortida i nord: I Polv Simonsens fotefar*. Tromsø Museums Skrifter XXII, pp. 87–103. Tromsø: Tromsø Museum.

Helskog, K. 1999. The Shore Connection: Cognitive Landscape and Communication with Rock Carvings in Northernmost Europe. *Norwegian Archaeological Review*. Vol. 32(2) pp. 73–94.

Helskog, K. 2000. Changing Rock Carvings – Changing Societies: A Case from Arctic Norway. *Adoranten. Scandinavian Society for Prehistoric Art*. Vol. 2000 pp. 5–16.

Helskog, K. 2011. Reindeer corrals 4700–4200BC: Myth or reality? *Quaternary International*. Vol. 238 pp. 25–34.

Helskog, K. 2012a. *Samtaler med maktene: En historie om verdensarven i Alta*. Tromsø Museums Skrifter XXXIII. Tromsø: University og Tromsø.

Helskog, K. 2012b. Bears and Meanings among Hunter-fisher-gatherers in Northern Fennoscandia. *Cambridge Archaeological Journal*. Vol. 22(2) pp. 209–236.

Hesjedal, A., Damm, C., Olsen, B. & Storli, I. 1996. *Arkeologi på Slettnes: Dokumentasjon av 11000 års bosetning*. Tromsø Museums Skrifter XXVI. Tromsø: Tromsø Museum.

Ingold, T. 2000. Totemism, Animism and the Depiction of Animals. In: Ingold, T (ed.). *The Perception of the Environment: Essays in Dwelling, Livelihood and Skill*, pp. 111–131. London: Routledge.

Jørgensen, E.K. 2018. The Palaeodemographic and Environmental Dynamics of Prehistoric Arctic Norway: An Overview of Human-Climate Covariation. *Quarternary International*. Vol 549 pp. 36–51, https://doi.org/10.1016/j.quaint.2018.05.014.

Kelly, R.L. 2013. *The Lifeways of Hunter-Gatherers: The Foraging Spectrum*. Cambridge: Cambridge University Press.

Lahelma, A. 2007. 'On the Back of a Blue Elk': Recent Ethnohistorical Sources of and 'Ambiguous' Stone Age Rock Art at Pyhänpää, Finland. *Norwegian Archaeological Review*. Vol. 40(2) pp. 113–137.

Lévi-Strauss, C. 1966. *The Savage Mind*. Chicago: The University of Chicago Press.

Lévi-Strauss, C. 1969. *The Raw and the Cooked: Mythologiques Volume One*. Chicago: The University of Chicago Press.

Mulk, I.M. 1994. *Sirkas: Ett samiskt fångstsamhälle i förändring Kr.F.–1600 e.Kr.* Studia Archaeologica Universitatis Umensis 6. Umeå: Department of Archaeology, University of Umeå.

Niemi, A.R., Oppvang, J. & Kjellman, E. 2015. *Bergkunst på Gamnes, Sør-Varanger k: Avklaring av omfang (Trinn 1). Id. 214096*. Arkeologiske rapporter 2015. Tromsø: Tromsø Museum – Universitetsmuseet.

Nyland, A.J. 2016. *Humans in Motion and Places of Essence: Variations in Rock Procurement Practices in the Stone, Bronze and Early Iron Ages in southern Norway*. PhD-thesis. Department of Archaeology, Conservation and History, University of Oslo.

Odner, K. 2010. Archaeology as Social Anthropology. In: Westerdahl, C. (ed.). *A Circumpolar Reappraisal: The Legacy of Gutorm Gjessing (1906–1979)*. BAR International Series 2154, pp. 241–251. Oxford: Archaeopress.

Olsen, B. 1994. *Bosetning og samfunn i Finnmarks forhistorie*. Oslo: Universitetsforlaget.

Røed, K.H., Flagstad, Ø., Nieminen, M., Holand, Ø., Dwyer, M.J., Røv, N. & Vilà, C. 2008. Genetic Analyses Reveal Independent Domestication Origins of Eurasian Reindeer. *Proceedings of the Royal Society B*. Vol. 275 pp. 1849–1855.

Sanday, P.R. 1981. *Female Power and Male Dominance: On the Origins of Sexual Inequality*. Cambridge: Cambridge University Press.

Sahlins, M. 1972. *Stone Age Economics*. New York: Aldine de Gruyter.

Salmi, A.-K. & Heino, M.T. 2019. Tangled Worlds: The Swedish, the Sámi, and the Reindeer. *Journal of Historical Archaeology*. Vol. 23 pp. 260–282.

Simonsen, P. 1963. *Varangerfunnene III: Fund og udgravninger i Pasvikdalen og ved den østllige fjordstrand*. Tromsø Museums Skrifter, Vol. VII, Hef. III. Tromsø: Tromsø Museum.

Skandfer, M. 2005. Early, Northern Comb Ware in Finnmark: The Concept of Säräisniemi 1 Reconsidered. *Fennoscandia Archaeologica*. Vol. XXII pp. 3–27.

Skandfer, M. 2009. History as if Neolithisation mattered: The Transition to Late Stone Age in Northern Fennoscandia. In: Glørstad, H. & Prescott, C. (eds). *Neolithisation as if history Mattered: Processes of Neolithisation in North-Western Europe*, pp. 9–21. Lindome: Bricoleur Press.

Sommerseth, I. 2011. Archaeology and the Debate on the Transition from Reindeer Hunting to Pastoralism. *Rangifer*. Vol. 31 pp. 111–127.

Storli, I. 1996. On the Historiography of Sami Reindeer Pastoralism. *Acta Borealia*. Vol. 13(1) pp. 81–115.

Tanner, V. 1929. Antropogeografiska studier inom Petsamo-området. *Fennia*. Vol. 49(4).

Turi, J. 1910. *Muittalus samid birra: En bog om lappernes liv*. Stockholm: Nordiska Bokhandeln.

Vorren, Ø. 1958. Samisk villreinfangst i eldre tid. *Ottar*. Vol. 17(2).

Vorren, Ø. 1998. *Villreinfangst i Varanger fram til 1600–1700-årene*. Tromsø Museums Skrifter XXVIII. Tromsø: Tromsø Museum.

Westerdahl, C. 2010. Why a Circumpolar Reappraisal? In: Westerdahl, C. (ed.). *A Circumpolar Reappraisal: The Legacy of Gutorm Gjessing (1906–1979)*. BAR International Series 2154, åp. 1–8. Oxford: Archaeopress.

Willerslev, R. 2007. *Soul Hunters: Hunting, Animism and Personhood among the Siberian Yukaghirs*. London: University of California Press.