## AN EMBARRASSMENT OF RICHES: THE ONTOLOGICAL ASPECT OF MEAT AND FAT HARVESTING AMONG SUBARCTIC **HUNTERS**

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#### **ABSTRACT**

If we hypothesize that Pleistocene hunters understood animals to be self-aware other-than-human persons, as contemporary hunter-gatherers tend to do, what evidence of this kind of relationship might appear the material record? While the "turn to ontology" within anthropology has mainly used, as evidence, a group's consciously held ideas, part of a people's assumptions about reality are unconscious, and revealed only in behavior. The chapter examines the potential of the ethnographic analogy, using the example of some contemporary North American subarctic hunters. In particular, I look at how their ontological assumptions are reflected in their material culture, such as in their treatment of animal bones, their pictographs and other decorations, their veneration of particular rocks, and the significance they attach to certain colors.

#### 1.1 INTRODUCTION

Can contemporary Canadian subarctic hunters give us clues to the kind of relations that Pleistocene hunters may have had with the large animals they hunted, such as elephants? While modern northern hunters do not have access to game with as much meat and fat as these megafauna, they have legends about monster versions of present-day game animals, and some of their ancestors hunted mastodons and other very large game. Even today, large quantities of meat and fat periodically arrive in their camps, which trigger activities like butchering, storing, cooking, feasting and sharing. These hunters have detailed knowledge, embodied skills and empirical experience of the habits of each of the animals they harvest, on the basis of which they employ optimal foraging strategies (Winterhalder, 1983). However, as part of this process of food procurement hunters engage seamlessly in

animist practices, including communicating with and making presentations to game animals. The logic behind these practices is more challenging for anthropology, as they conjure up a world with unfamiliar forms of determinism.

Hunter-gatherers, like all humans, work at understanding, predicting and controlling those factors that affect their own wellbeing, especially, in this case, their hunting success. To this end they make use of their detailed knowledge and experience of each animal species' habits. Even so, encounters with animals in the wild involve a degree of unpredictability and mystery. It is probable that, like their modern counterparts, hunters of the deep past had techniques to penetrate this mystery.

There are obvious difficulties with projecting back the practices of recent hunter-gatherer onto earlier peoples. In the first place, there is no single hunter-gatherer way of life. Yet it can be useful to examine some of the general principles underlying hunter-gatherer practices in general. One such feature that seems to be common, at least among contemporary and historic hunter-gatherers, is animism. This is the perception that certain animals, and even certain plants, material objects and meteorological phenomena, have person-like qualities, such as agency and memory. They also share with humans a moral sensibility, such as the principle of reciprocity.

In their attempt to illuminate the logic underlying animist ideas and practices, many authors have framed the issue in terms of diverse ontologies. That is, attention is being drawn to how different human groups apparently experience and make sense of reality in distinctive ways. Various kinds of ethnographic and archaeological material are being used to demonstrate the alterity of a group's ontology, drawing, as evidence, on stories, myths, ceremonies, cosmologies, and artistic expressions (Hallowell, 1964; Ingold, 2000; Viveiros de Castro, 2012). Describing an ontology on the basis of these kinds of sources suggest the attribution of some degree of self-awareness by peoples of their own ontologies. Blaser (2013: p. 552), for

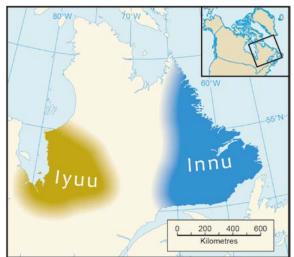
example, suggests that the stories a people tell are close to a synonym for their ontology. However, it is important to also acknowledge the unconscious aspect of ontology. Many of the assumptions a people hold about the nature of reality are largely "taken for granted". As Evans-Prichard (1965: p. 6) noted "much of the thought of primitive peoples is difficult, sometimes almost impossible, for us to understand, in that we cannot follow their lines of reasoning because the underlying assumptions on which they are based, while taken for granted by them, are totally alien to us".

Moreover, in their day-to-day lives most speakers are unaware of how the conceptual logic of the own language they use shapes how they see the world. Folk taxonomy studies indicates the existence of cognitive categories that are implicit, and thus hardly conscious to those that hold them (Berlin et al., 1968). According to Viveiros de Castro (2012: p. 65) "[...] People do not act out [...] cosmologies [...]. The peoples of the world live through practice, in practice, and for practice".

I am not arguing that some ontological assumptions about reality are in principle unconscious. However, outside the context in which two groups with diverse ontologies find themselves in conflict over what is real (Blaser, 2014), most people do not spend much time contemplating their ontological assumptions; instead they are simply unquestioningly taken as given. There are other reasons why we must look beyond what ethnographers can infer from local knowledge. Some shamanistic knowledge is purposefully kept secret. However, we can infer aspects of a group's ontology that are not spoken about by paying attention to their practices. And if it is the case that actions speak louder than words, then it is archaeology which pays attention to this louder voice, finding the evidence of the practices of archaic peoples, even without direct evidence of the group's explicit ideas about their own ontological assumptions.

In this chapter, I will first outline some cautions and opportunities in the use of ethnographic analogy. I will then outline the way of life, practices and philosophical ideas of two culturally-related

northern Canadian Algonquian hunter-gatherer groups, the Iyuu and the Innu of the Quebec-Labrador peninsula (Fig. 1.1). I will look in particular at their techniques and skills for acquiring and handling large quantities of meat and fat, as well as how their distinct ontological perceptions influence these practices. These two groups live in slightly different environments, and have a somewhat different range of game animals, as a result of which they have different forms of land tenure. Yet they have very similar ontological attitudes towards external reality, particularly towards the animals and the environmental phenomena they encounter every day. I examine their animist practices in relation to certain material substances like fat, stone, bone and animal hide. I then point to material evidence for these practices as these relate to their animist ontology. Finally, I draw some conclusions about how such ethnographic observations of modern and recent hunter-gatherers may inform the interpretation of the traces left by early humans.



**Figure 1.1:** Approximate locations of the Iyuu and the Innu of Quebec-Labrador. Courtesy of David Mercer, Map Room, Queen Elizabeth Library, Memorial University.

#### 1.2 THE ETHNOGRAPHIC ANALOGY

Some have questioned whether the concept of hunter-gatherers is in any way meaningful as a social category, let alone as a model for the analysis of cases from the deep past, given the wide diversity among peoples who depend on harvesting wild animals and plants (e.g., Johnson, 2014; Finlayson and Warren, 2017). This literature draws attention to such features as diverse settlement patterns and differences in social organization among different hunter-gatherers groups. While contemporary examples are generally found in environments unsuited to agriculture, these cover the range all the way from tropical to arctic. In contrast to Pleistocene hunter-gatherers most modern hunter-gatherers have some economic relations with their agricultural or pastoralist neighbors, or with market-oriented systems (Bird-David, 1992). For some groups gathering wild plants is as important to them nutritionally as is hunting, while others depend for food almost exclusively on hunting and fishing. While kinship is generally a central social organizing principle among hunter-gatherers, some have matrilineal, some patrilineal and some bilateral systems (Arcand, 1988).

Despite this variety, there are also certain commonalities. Most hunter-gatherer groups are organized around a self-provisioning economy, that is, they directly provide for most of their own food and shelter, as well as for luxuries, ritual observances and leisure, and are thus only secondarily oriented towards trade or wage labor. While both the Iyuu and Innu, cases I will refer to in more detail below, have engaged with the fur trade for many years, and others sometimes engage in wage work (Tanner, 1968), I have argued elsewhere that they still maintained a self-provisioning economic orientation (Tanner, 2014: pp. 124-129). A group with a self-provisioning economic orientation is primarily motivated to produce, whether for their own use, for trade, or for wages, in order to satisfy the known needs of their own residential family group. Harvesting or other forms of production generally end when they had enough for present and foreseeable future needs, with participants opting instead for activities like ceremonial or leisure.

The practice of sharing within local groups,

rather than barter or trade, is the most common form of distribution among hunter-gatherers (Bird-David, 1992; Ichikawa, this volume; Lewis, this volume; Yasuoka, this volume), as, it has been argued, was the case with particular Pleistocene hunters (Barkai, 2019). With some famous exceptions like the North American sedentary Northwest Coast fishers, most hunter-gatherers are equalitarian, at least in terms of individual access to material benefits (McCall and Wilderquist, 2015). Hunter-gatherers tend to have forms of social organization that allow for flexibility in residential group size. The family is the fundamental unit of both procurement and consumption, with a gender and age-based division of labor. Through their butchering practices, hunters have a sophisticated understanding of the physiology of each game species. Hunters tend to have uses for every part of the animals they harvest. In such groups fat is particularly important nutritionally, due to their limited access to carbohydrates, and their very high protein diet.

The above features are not all unique to hunter-gatherers, some being shared with pastoralists and simple horticulturalists. But in general hunter-gatherers have a special kind of holistic and intimate relationship with their environments, by contrast with the more selective focus that is found with other forms of production. Most of them regularly cover large areas of land, usually on foot, constantly updating their knowledge while also on the lookout for new harvesting opportunities (Tanner, in press). While hunters may have played a role in the extinction of some megafauna, they have generally had a much smaller impact on their environment than has been the case with agricultural or industrial societies. As a result, some hunter-gatherers have been able to maintain over long time periods a sustainable relationship to the lands and waters that they occupy. And, most importantly, all hunter-gatherers have the regular, yet always mysterious, experience of close encounters with wild animals. These general features almost certainly also existed among hunter-gatherers of the deep past.

#### 1.3 ANIMIST ONTOLOGY

Many if not all hunter-gatherers have an animist perception of the environment, and of animals in particular (Ingold, 1996, 2000; Bird-David, 1999). One implication of this is that such groups perceive no fundamental nature-culture opposition, and thus no radical separation between the worlds of humans and that of the animals, plants and environmental phenomena. Humans and game animals belong to the same social world, and as such are mutually bound by some of the same moral principles. Game animals, or the whole environment, is often characterized as having generally friendly, sharing relationship with hunters.

There has been much recent interest in hunter-gatherers' ontology—that is, in their basic assumptions and perceptions as to the nature of external reality and of existence (e.g., Viveiros de Castro, 1998, 2004; Blaser, 2013, 2014; Descola, 2013). This approach is also being used by some archaeologists (e.g., Hill, 2011; Comba, 2013; Hussain and Floss, 2015). While this topic is approached by different scholars from different starting places, "all share a focus on the question of whether agents perceive and experience the same reality in different ways or whether they experience and exist in different realities" (Oman-Reagan, 2015).

The issue of multiple ontologies can be approached from the solipsist observation that humans can never completely know the external world. With our fixed set of sensory organs we cannot fully perceive and engage with all aspects of reality at any one time. Human perception and understanding of reality is thus a social construct. While all people have the same set of sensory organs, not all groups arrive at the same understanding as to the nature of the external world.

For one thing, different human groups arrive at different assumptions as to the basic primary colors (Berlin and Kay, 1969; Saunders, 1992). For example, the language of the Iyuu and Innu, hunter-gatherers who will be discussed in detail below, has a single term that covers the part of the spectrum that, for English speakers, includes both

green and blue (Tanner, 2014: p. 217). Moreover, different peoples attach different interpretations to colors (e.g., Dixon, 1899; Zawadzka, 2011), an issue that has also been pursued in archaeology (e.g., Jones and MacGregor, 2002). Some peoples classify phenomena in their external world, such as all living things, according to different principles than do others (Berlin et al., 1973). Attempts to understand such different ways of thinking has a long history in anthropology, much of it focussed on language. The issue was addressed by the Whorf-Sapir hypothesis (Whorf, 1956), which proposes that the diverse ways different languages are structured influence a speaker's world view. However, in addition to language, we can also gain some access to assumptions people make about the nature of external reality by observing their non-linguistic forms of behavior, including practices taking place in the standardized context of rituals and ceremonies.

Given that not all humans make the same ontological assumptions about external reality, Oman-Reagan (2015) has suggested that the best that a Western anthropologist can do is to document the way by which others see the world, especially in ways that do not conform to their own ontological assumptions about reality. However, they can only do so from their own perspective.

"[An ethnographer] is eventually forced [...] through the process of writing about his experience, observations, and analysis, to refer back to signifiers from his own group. He must do this translation using signs with meaning, signs with iterability, signs that make some sense to his audience" (Oman-Reagan, 2015: p. 4)¹.

How do we escape from this dilemma? Anthropologists might follow the procedure used by the physical sciences to arrive at their understandings of newly discovered phenomena that do not happen fit within their existing models. They change what Kuhn (1962) calls their scientific paradigm, that is, the prevailing "grand theory" of their branch of science, such that they are able to

make accommodation for the newly discovered phenomenon. Scholars who are addressing the issue of multiple ontologies need to adopt the perspective of a meta-ontology by which such comparative ontological studies may proceed. I am not suggesting science currently provides such a readymade meta-ontology. However, for scholars to study multiple ontologies comparatively they need to undertake the difficult task of setting aside the assumptions of their own "native" world view.

The fact that some of the shared ontological assumptions may be normally held unconsciously is not a barrier to their investigation. The unconscious may reveal itself in behavioral practice. There are actually certain advantages to giving priority to human practice over the accounts that a group may give about their own perception of reality. For example, my own preferred ethnographic research method is "participant observation"; before asking questions a researcher pays attention to the practices of the people being studied. In my case, after living with and observing an Iyuu hunting group for some months I had acquired a basic idea of how people normally behave under various specific circumstances, including in the context of ceremonies and rituals. It was only then that I began to inquire as to people's conscious awareness of, and rationale for, these behaviors, particularly for those practices without a self-evident rationale.

In terms of theory, Bourdieu's concept of habitas is intended, among other things, to deal with the role of the unconscious in the production of knowledge, and with the ability in human thought to overcome contradictions (Bourdieu, 1990). I confronted what I experienced as contradictions while living with the Iyuu/Innu. Even though animals give themselves to worthy hunters, at the same time these hunters regularly observe that, when approached, many animals will try to flee. Hunters may also acknowledge that some of their encounters with animals can involve a battle of whits, sometimes ending with the successful hunter obtaining the game animal by means of trickery. According to the Iyuu/Innu animist ontology such outward manifestations are misleading, hiding

On this question, see also Willeslev (2016).

what is really going on, and particularly what the animal really wants.

As noted, modern hunter-gatherers are generally animists. This contrasts with "theism", according to which the external world is perceived as having been created and managed by one or more powerful entities or gods. But there is no single form of animism. Evidence of artifacts made by early hunters depicting game animals, like the cave drawings, carvings or amulets, have been interpreted by some scholars that their makers related to these animals as fellow persons (Hill, 2011; Betts et al., 2015; Jones, 2017; Qu, 2017; Demay et al., this volume). How might such a person-to-person relationship to the animals be reflected in other aspects of the archaeological record, such as how the animal corpses were treated? The material conditions of hunting and the ontological perceptions and motivations of hunters bear equally on this question. In what follows I will focus on how two related groups of subarctic hunter-gathers balance their food needs with their ontological perceptions of the needs of their prey.

#### 1.4 SUBARCTIC HUNTERS

For the modern and historic northern North American small-group, nomadic hunter-gatherers, each kill was in essence a gift from the animal, an other-than-human person who feels sympathy towards needy humans. Hunters interacted with game animals so as to remain on good terms, treating them with respect, and paying attention to any communication from them. I noticed that hunting group members were careful to monitor and share their dreams, and elders sang and drummed to the animals in preparation for a hunt. While hunters worked to maintain a relationship of friendship and mutual respect with game animals, they were also aware of other less friendly entities—creatures that have evil power and an antagonistic relationship with humans (for the Iyuu/Innu classification of animals with evil powers, see Bouchard and Mailhot, 1973: pp. 44-55).

Hallowell, who initiated the study of ontology within anthropology on the basis of his research with the Anishinabe (Ojibway), a close relative of the Iyuu/Innu, avoided Western concepts like "spirits", coining instead the phrase "other-than-human persons" (Hallowell, 1964). In this article, I use the term ahchaakw, which in the Iyuu language refers to the various normally invisible but powerful entities, some of which are associated with game animals with whom the Innu communicate. One way that many Iyuu know about these entities is from having attended a "shaking tent" (kusaapahchikan) ceremony, a public event in which a shaman enters a small barrel-shaped open-topped tent, which then begins to shake violently after an ahchaakw enters (Feit, 1994, 1997)<sup>2</sup>. By contrast to Siberian shamans, who leave their bodies to travel to the world of the "other-than-human" persons, Iyuu/ Innu shamans bring the ahchaakw to them. There is a host ahchaakw in the kusaapahchikan performance, called mistapeu, who introduces and translates for the other ahchaakw who enter the tent. There is an ahchaakw for each of the four cardinal winds, one for each the animal masters (referred to below), as well as for certain unusual animals, such the one whose name means "under-water panther", and another whose name means "flying dog". By means of drumming and singing, undertaking divination rituals, or paying attention to their dreams, any adult can communicate with animals and their associated ahchaakw, but only a shaman (miteuu) has the power to be able to perform the shaking tent. This ceremony is a public demonstration and affirmation of some of the fundamental entities of Iyuu/Innu ontology.

While detailed practical knowledge and skills are essential for hunting success, when an animal was killed the hunters themselves did not credit success to their own skill, but instead to the positive state of the relationship between the hunter

<sup>2</sup> There is an online video source in which Feit is interviewed about a filmed shaking tent performance that he witnessed (Maamuitau n.d. Shaking Tent; https://gem.cbc.ca/media/maa-muitaau/season-33/episode-9/38e815a-009e58f54e7; last accessed April 26, 2020).



Figure 1.2: Bear skulls. Photograph by Adrian Tanner.



**Figure 1.4:** Elevated platform to protect animal bones. Photograph by Adrian Tanner.



**Figure 1.3:** Display of antlers and beaver skulls. Photograph by Adrian Tanner.

and the species in question. Neither was the killing of wild animals seen as a matter of luck. Rather, it entailed the hunter being in a situation, both physically and mentally, to receive animal gifts. Like the BaYaka (Lewis, this volume), the Iyuu/Innu attribute hunting success to ritual, although in their case the rituals are presided over by elders, most of whom are men, rather than by women. Moreover, elders to whom such power is attributed may find themselves suspected of using it to harm others (cf. Ichikawa, this volume).

Showing respect to game animals includes treating the corpse as a sacred substance that should never be wasted. As with the BaYaka (Lewis, this volume), among the Iyuu/Innu it is improper to laugh at an animal carcass. Hunters generally avoided killing anything for which they did not have the need. Most meat and fat that was not consumed at a communal feast was shared and preserved by each family group for its future use. Some hunters engage in an "Eat-all" feast, held after a hunting group has acquired large amounts of food (Brightman, 1993: pp. 213-217). At these feasts, any nearby hunting groups were invited, under the injunction that the meal could only end when all the food had been eaten. This feast acknowledged, symbolically, that humans are collectively under the obligation to consume whatever gifts the animals provide.

Dealing with large quantities of meat poses practical and intellectual challenges. Like human gift-givers, the animals want hunters to show their appreciation. While individual animals have agency, whole species, or groups of species, have a named "master" ahchaakw who can exercise control over their animals. To neglect the rules for how an animal should be treated can result in the "master" ahchaakw of a species withdrawing these animals, such that for a period an offending hunter, or in the most serious cases all hunters, may be unable to kill any of the species in question. Bones, antlers and whatever else is not used should be preserved, and not treated as garbage for scavengers to consume. The skulls were generally hung in the trees around the camp (Figs. 1.2, 1.3), or on a specially erected pole, while the other bones of land animals were put on an elevated platform (Fig. 1.4), and those of the fish and other water animals, as well as some land animals, were deposited under water. Any unusual part of an animal, such a bone found to have an unusual lump, was treated as having divinatory significance. Certain animal parts, such as the scapular bone, are used in divinatory rituals, while others are used in games. Some hunters kept a decorated animal part, such as the hide and fur from the chins of bears, or the dried heads of geese.

A successful hunt was followed by a time of celebration, but it also meant a lot of work for ev-



**Figure 1.5:** Cache platform for food storage. Photograph by Adrian Tapper

ery member of the hunting group, especially for the women, to transport the meat to the camp, to butcher the carcasses, to organize and prepare a communal feast, to distribute food gifts outside the producing group, and to store the remaining meat and fat. In winter, storage merely involved putting the partially butchered carcass outside to freeze, on a cache platform (Fig. 1.5), inside a wooden enclosure or under a pile of rocks (Rankin, 2008).

In many ways the winter was, for the Iyuu/ Innu, the time of plenty. Walking on snowshoes, hunters had unlimited access to all part of their hunting lands and frozen waters, while fresh animal tracks were easily discernible in the snow, and meat and fat could be stored with ease by freezing. The fat was rendered and stored in containers, and meat could also be smoked or sun-dried and powdered (Fig. 1.6). Today the large harvests of geese and fish are preserved in freezers in the settlement, but in the past they were smoked and dried.



**Figure 1.6:** Drying and powdering moose meat. Photograph by Adrian Tanner.

#### 1.5 HUNTING AMONG THE IYUU

Two closely related hunting peoples who inhabit different parts of the Quebec-Labrador Peninsula are the Iyuu (aka East Cree), who live on the western side of the peninsula, and the Labrador Innu (aka Montagnais-Naskapi) living on the eastern side. Although both groups are now settled in permanent villages, until recently they passed the

eight or nine month winter season in scattered nomadic camps inhabited by groups of two or more families. The following observation are from fifty years ago, which is why I use the past tense, even though many of these practices continue to be followed today.

In the eastern Quebec-Labrador region where the Iyuu reside (Tanner, 2014), their food animals happen to be relatively sedentary, particularly moose and black bear. Although not big game, the highly sedentary beaver was another dependable source of food. Fishing was conducted year-round at known productive lakes and rivers, in winter through the ice. Flocks of migratory geese arrived each spring and fall at predictable locations, providing large and dependable quantities of meat and fat. Woodland caribou were not sedentary, but were killed opportunistically. Women tended to harvest close to the camp, bringing in ptarmigan, grouse, rabbits (arctic hare), large quantities of fire wood, boughs for flooring, as well as lake fish, and berries in summer. The Iyuu and Innu both had a "broad spectrum diet" (Blasco and Fernández Peris, this volume). The associations proposed by Ben-Dor and Barkei (this volume) of women with small game; men to large game, as well there being more ritual associated with large game, is generally the case with the Iyuu/Innu, with some important exceptions.

Given these ecological conditions, the Iyuu have developed a system whereby each hunting group returned annually to a particular delimited territory, within which they moved camp every few weeks. The Iyuu do not think of this arrangement as land 'ownership' in the Western, real estate sense; some hunters told me "the animals own the land". Other Iyuu hunters were permitted to harvest while travelling through one of these territories, but they needed the group's permission to reside there over the winter season. By means of this land tenure system hunters were able to have a sustained relationship with the animals, including leaving some animals behind to maintain the population for subsequent years. These territories also ensured that resources were shared evenly.



**Figure 1.7:** Preliminary butchering at a kill site. Photograph by Adrian Tanner.

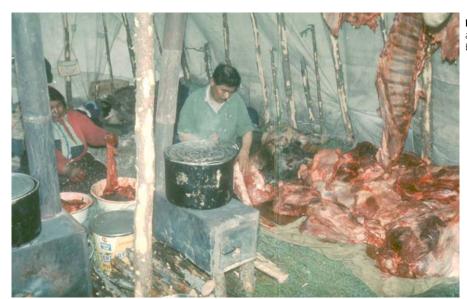


**Figure 1.8:** Some of the 'Tokens' that announce a kill. Photograph by Adrian Tanner.

They allowed hunters to constantly update their knowledge of the local, potentially dynamic, environment, particularly following forest fires. While these practices have certain parallels with Western ideas around "conservation", Scott (2006: p. 63) notes that Iyuu knowledge puts the primary emphasis on "relational sustainability", and not on "system management", which is the preferred approach of modern wildlife managers.

While small game, fish or fur-bearers were harvested on most days, periodically, when conditions were right, a collective hunt was undertaken for larger animals—moose, caribou or bear. During these hunts there was a group leader, but all participants respected each others' autonomy. Each hunter possessed all the wherewithall to be able to survive comfortably—a gun, an axe, a fire lighter, etc.— should by any chance they become separated for extended periods. These hunts usually produced one or two animals. Moose, on average, provide 150 kg of meat and fat, caribou 48 kg and bear 60 kg.

As in the case of the Baka (Ichikawa, this volume), the Iyuu employ non-verbal means to announce their success. Moose and caribou were usually skinned, gutted and buried in the snow at the kill site (Fig. 1.7), and any traces of blood removed from the snow to avoid offending the animals, after which the hunter returned to camp and announced the kill to the rest of the group, by bringing back "tokens" (Fig. 1.8). These tokens may have included the legs, the heart, part of the



**Figure 1.9:** Ritual display after a successful hunt. Photograph by Adrian Tanner.

lower intestines, fat from around the kidneys, and fetuses from any pregnant females. The following day the rest of the animal was transported to camp by all adults, although sometimes a group would choose to move its camp to the kill site. In the month of April hunters harvested particularly large quantities of game meat—in the case of one group I lived with a total of six moose and one caribou were killed over a few weeks, producing over a thousand kg of edible meat and fat. At the time the group knew the locations of more moose they could have killed, but decided to finish hunting, as they judged they had sufficient. This large harvest was planned because the breakup period was about to commence, a time of year when movement becomes difficult due to the melting of snow and ice. Some of that meat was consumed over the several weeks of breakup, while the rest was dried and powdered, to be consumed over the following summer, or given as gifts.

This large harvest was marked by the ritualized display of the corpses inside the hunting groups leader's tent (Fig. 1.9). For about two hours members of the hunting group sat around admiring the meat, after which it was divided up between the two families. On other occasions, a whole animal, such as the first caribou killed in the season, was brought inside the dwelling, for the whole group to admire, before being butchered. One of the

rules for respecting game animals is for a hunter to be humble, to not brag about any hunting success, as this gives offence to the animals [cf. Ichikawa (this volume) on the need of Baka hunters to be humble]. Thus, these meat displays were a muted celebration by the collectivity, without drawing particular attention to one successful hunter.

The Iyuu consider the bear to be an especially important animal, such that its killing sets off much ceremony. The slain animals should be brought to the camp immediately and butchered there, followed by a special feast that involved many rules and taboos. Among these taboos is the designation as certain portions being designated "man's food", also mentioned by Lewis (this volume) for the BaYaka. As noted by Scott (2006: p. 64), for the Iyuu "the bear is the paramount symbol of the imperative for respect". As noted below, bear grease was treated as a sacred substance.

#### 1.6 HUNTING WITH THE INNU

The Labrador Innu on the eastern side of the peninsula had a similar way of life to the Iyuu, although with a particular dependence on caribou. Not only did this animal traditionally supply large part of their material needs, but it was also special to them in terms of the efforts hunters took to re-

main on good terms with the species. The northern Innu region is a taiga environment over which the large George River herd of barren ground caribou roams on its seasonal migration (Henriksen, 1973). During the 19th and early 20th centuries, one local group of Innu adopted a regime of yearround occupancy in the interior, depending largely on this herd. They conducted their main harvest of caribou in late summer, when the herd's migration path crossed the George River. However, first in 1915, and again recently, the herd's population declined drastically, making these large caribou harvests impossible. The Innu attribute this shortage to the caribou "master", known either as Papahasiku or Kanipinikassikueu, taking offence at some wrong-doing of theirs, and withdrawing the caribou beneath a sacred mountain to the north. I will therefore quote an eyewitness account by the explorer, William Brooks Cabot. He writes that in 1906 he encountered a camp of eight men and boys, with wives and children, who "had speared no less than twelve or fifteen hundred deer in a few weeks. From three to five hundred carcasses, skinned and washed out, were hauled up on the gravel beach, drying hard and black in the sun and the cool September wind. There were no flies about them and no smell. [...] The head was always gone—the hunter himself must eat it or forfeit his fortune in the chase; the meat belongs to the group in common. [...] A little fire was made outdoors [...] and a large kettle went on, filled well up with crushed marrow bones. [...] After it had boiled enough Ostinitsu [the group's leader] skimmed the grease [...] off the top [...]. A long windrow of horns, besides the separate pile of very large ones, were close by [...]. It is a matter of necessity that the horns are piled together; if they are left about it is understood that the deer will scatter when they come through the country, and be hard to get" (Cabot, 1912: pp. 239-242).

Cabot returned to the same area in 1910. He found that "The long windrow [...] had disappeared—of course into the lake. This disposal counts as an offering to the powers that rule the chase; without such observances the surviving deer

will be offended and avoid the hunters." (Cabot, 1912: p. 265).

The rendered fat and dried and powdered meat was eaten over the following months. Caribou were also hunted at other times, when the herd was more scattered. These Innu also hunted black bear, porcupine, beaver, and lynx. Like the Iyuu, women and elders harvested close to the camp for lake fish and small game. Caribou supplied most of their needs, and since hunting this migratory species conflicted with the more sedentary requirements of trapping, the Innu had relatively little involvement with the fur trade. A successful caribou hunt called for as particular fat-oriented feast, the makushan, a topic to which I will return.

Also on the east side of the peninsula, but further south, in the more forested areas, Innu hunters had access to a somewhat larger variety of game and fur-bearers, but were also primarily dependent on caribou. In their case it was the woodland variety, caribou that live in small herds with limited ranges, but which are also continually on the move (Tanner, V., 1944; Armitage, 1990; Mailhot, 1997). Given that both these Labrador Innu groups were primarily focused on hunting nomadic caribou, they did not have delimited family hunting territories, despite government efforts to introduce them to the region. Hunters gathered seasonally in larger residential groups, when and where there were adequate quantities of fish and other localized game to support many people, and they scattered in individual hunting groups at other times. In summer, some Innu traveled to the coast to fish migratory species and to hunt water fowl at favored locations like river mouths.

#### 1.7 SHARING

Both the Iyuu and Innu regularly shared meat and fat, either at a communal feast or as gifts. If two men were hunting together and one of them killed a moose or a caribou, the whole animal was immediately given to the second hunter. However, this only meant the recipient could keep the hide,

since upon returning to camp all the meat was divided among the other families in the group. As with the Mbuti (Ichikawa, this volume), a hunter's ownership of a game animal is only nominal. Among the modern Innu who are settled in villages, most caribou hunting is conducted by groups using snowmobiles or chartered aircraft. Yet upon their return to the village the traditional sharing rules and practices continue to be followed. Sharing takes place both at a feast, and as each hunter gives part of the meat and fat of the animals he has killed to his network of relatives and friends (Castro, 2016).

Sharing meat and fat between families in a winter hunting group occurred without much formality. A hunting group's store of food was not treated as common property open to all; rather each individual family maintained its own larder. I did not observe any demand sharing; rather, each family remained aware of the state of the larders of the other families, and at appropriate times gifts of uncooked food were sent, ahead of any expression of need by the recipients. As in the case of the Baka (Ichikawa, this volume), "sharing is conducted such as to avoid engendering feelings of indebtedness towards the successful hunter". Also as with the Baka, this includes the practice of using children to carry gifts of food to other families. The arrival of visitors was always marked with commensality and other forms of food sharing. At the summer gatherings bush food was bartered outside the extended family. During the pre-contact period when there were extensive Indigenous trade networks it is possible that meat and fat may have been traded. The practice of sharing with strangers was an established tradition—gifts of meat were given to some of the first European explorers who encounter Innu at the coast (Bakker and Martijn, 1991).

Food was also shared with the ahchaakw. Both the Iyuu and the Innu shared morsels of animal meat or fat in the fire with the during meals, particularly at feasts (cf. Ichikawa, this volume). Tobacco offerings were made, for example by placing some in the nasal cavity of a bear's skull that had previously been hung on a tree. Tobacco was also put in the water before shooting a rapid or venturing across a large lake by canoe, a gift for the ahchaakw to ensure a safe passage.

#### 1.8 ANIMAL FAT AND FEASTING

Fat was of special importance to hunters, both now and in the past, given the high protein diet with little access to carbohydrates (cf. Ben-Dor et al., 2011). As is the case with many hunter-gatherers, including the Mbuti (Ichikawa, this volume), fat is the most highly prized part of an animal. As with Inuit words for snow, there is no single Iyuu/Innu term for fat, but terms for each kind from particular parts of an animal. Both moose nose and beaver tail are mainly composed of a fatty substance, somewhat like butter, and are among the most highly prized foods. Sections of the intestine of the moose that have a thick layer of fat are turned inside out, resulting in a fat-stuffed sausage that is smoked before being cooked. Most of the tokens that hunters bring back to camp to announce a large animal kill are especially rich in fat, such as the long bones, and fat from the animal's intestines. As noted, bear fat has a sacred aspect. At the start of the winter hunting season the Iyuu smeared bear fat on their hair, on the door posts of their communal lodge, and on their guns, to ensure success in their hunting during the following season. This relates to their animist ontological understanding that hunters have relationships with the ahchaakw of their guns, doorways and other objects, including, as noted below, with some kinds of stone.

Many northern animals build up fat over the summer and loose much of it over the following winter. One reason beaver is an exceptionally important food animal for the Iyuu/Innu, quite apart from the value of its pelt in trade, is that it maintains its thick layer of fat all winter long. At the other extreme, ptarmigan, grouse and arctic hare have very little fat at any time of the year, such that hunters say a person will starve to death if they try to live exclusively on a diet of these animals.



**Figure 1.10:** Preparing the caribou long bones for a makushan. Photograph by Georg Henriksen.

Among the Innu, there is an especially sacred fat-oriented feast, called the makushan, which is dedicated to caribou, and is focused on the leg bones. In preparation for the feast "the major caribou long bones (humerus, radio-ulna, tibia and femur) [...] must be scraped clean of meat and underlying membranes, until they are almost whitened. The oil bearing nubs (epiphyses) are broken off, crushed into a paste and boiled in water to extract oil (Fig. 1.10). The bone mash fragments are drained and put into the fire. [...], the shafts (diaphyses) between the nubs are cracked open, the marrow removed, cut into small pieces and then mixed with the rendered oil" (Jenkinson and Ashini, 2015: p. 19).

The above photograph illustrates that during the crushing of the bones a screen was used to ensure that no bone fragments were allowed to go astray. One person is assigned the role of ensuring that this preparation is done correctly, and a second individual oversees the serving of the makushan feast. Along with the congealed bone fat and marrow, bone broth from the boiling of the crushed bone ends is served. Elders of both genders are served first, followed by the rest of the people.

In the boreal forest region, most organic material rapidly decays in the acidic soil. Despite this, calcified caribou bone fragments have been found preserved in ancient fireplaces, dated as old as 6000 BP, that is, not long after the ice sheet retreated and humans first entered the region (Jenkinson and Ashini, 2015). This evidence suggests the practice of extracting fat from crushed bones is of great antiquity, while the fact that these remains were put in the fire suggests that, as is the case to-day, this material was considered a substance that should not be disposed of as garbage for scavengers to consume.

# 1.9 ONTOLOGY AND MATERIAL CULTURE

The above example of ancient piles of crushed and burned caribou bones is but one of many material traces of a pre-contact ontological perspective in relation to game animals. Other examples are the pictographs in the region, drawings on exposed rock faces, mainly along canoe routes, and which are found throughout the whole region occupied by northern Algonquians, a language family grouping that includes the Iyuu and the Innu. In the Iyuu area, for example, the Kaapehpeshapis-chinikanuuch site (literally "the place where figures are drawn on the rock") is an important one, as it features many kinds of images including game animals, humans, other kinds of beings and geometric patterns (Vaillancourt, 2008). While we do not fully know the makers' motivations for these drawings, many clearly refer to the Iyuu animist ontology. Moreover, some contemporary Iyuu attribute these drawings to non-human persons. According to two Iyuu elders "the paintings

could have been made by the Memegwashio, the little hairy ones who used to live within the rock outcrops and cliffs, a long time ago" (Arsenault, 1998: p. 13).

These creatures are said to live inside rock cliffs, from which they emerge through doors that magically open, paddling canoes made of rock. At times these creatures are said to steal fish from the nets of the Iyuu.

Many other forms of rock or stone also have ontological significance for the Iyuu/Innu and their ancestors, as they do for many other hunter-gatherers (Boivin, 2004). Among the northern Algonqian peoples in general certain rocks are other-than-human persons. In this language family all nouns are either animate or inanimate. These labels were given by linguists because in this language most items that Western ontology would consider inanimate take the inanimate form. However, there are exceptions, including the term for rock or stone (assini), which takes that animate form. The implication is that for the Algonquian peoples stone, or specific stones, have the potential to be an other-than-human person (Hallowell, 1964: pp. 24-26).

While today the Iyuu and Innu have relatively few instrumental uses for stone compared to the past, they have maintained traditional knowledge of some kinds of stone and their uses. Ayiipsk is a particularly hard black stone that informants recall being shaped so it could be held in the hand and used for pounding and powdering dried meat. In the past stones of this type were also heated in the fire, and added to a pile of fat in a birch bark container so as to render the fat. This and other kinds of stone that have the quality that they do not crack or explode when made red hot would be heated for use in the sweat lodge. It is said that it is these rocks themselves that emit the healing power, rather than just the heat itself (Tanner, 2014: p. 187). Another kind of stone was called mukman sinii (knife stone), a black slate once used for making knives. Sisitchew is a kind of stone that comes in grey, black, red varieties, and which could be carved. This stone could also be called spawaakan

sini (pipe stone), as it was sometimes used to carve pipes for smoking.

An especially noteworthy example of the value that Iyuu and Innu and their ancestors placed on certain kinds of rock involves a class of white quartz, referred to in the literature as either chert or quartzite. There are two particularly well-known pre-contact sites in Quebec-Labrador where this kind of material was obtained. One is at Ramah Bay in northern Labrador, the white chert from which was both used locally and traded widely over millennia (Loring, 2002; Bellavance, 2006), such that it has been found at sites all over Quebec-Labrador, as far south as Maryland and Virginia (Lowery, 2017) and as far west as the Ottawa region (Pilon and Boswell, 2015). At the Ramah quarry site there are also some very dark or "blackish" grades of chert, but it is apparent that the white grade was far more highly valued. The Innu name for Ramah chert is uinnapishkanikan, which translates as "stone that looks like subcutaneous fat". As we have noted above, fat is, for the Iyuu/Innu, an important substance, particularly in the ceremonial context of the makushan feast.



Figure 1.11: Antre de Marbre. Photograph David Denton.

A second source of a white stone was from the quartzite quarry at Colline Blanche (White Hill), just north of Lake Mistassini, in the Iyuu region of Quebec-Labrador. This stone has been found at pre-contact sites as far away as the St Lawrence valley and New England (Denton, 1998). The Iyuu/Innu marked its similarity to Ramah chert by its

name, which in the Iyuu dialect is wiinuwaapisk, meaning "stone that looks like animal fat or lard" (Denton, 1998: p. 18). At this site there is a large cave whose size and white walls so impressed the first French explorers that they called it the "Antre de Marbre" - "The Marble Hall" (Fig. 1.11). These explorers also noted that the cave was used by Iyuu shamans, and as a place of worship. Archaeologists have shown that stone was being quarried at this site as far back as 7000 years ago, that is, soon after the glaciers retreated from the region (Denton, 1998: pp. 20-21). The cave is close to a well-used travel route, and present-day Iyuu elders recall stopping there on their travels and using the cave to hold feasts and dances, as well as for gathering some of the stones for strikea-lites. The Iyuu name for the cave is waapushukamikw, meaning "house of the hare" (Denton, 2017). It is significant that the Iyuu term for the Arctic Hare (waapush) literally means 'the white one' (Zawadzka, 2011: p. 11), so that this name draws attention to the importance for the Iyuu of the white color of the rock that was obtained there. As will be noted below, there is an explicit association for the Iyuu/Innu between the color white and the ahchaakw.

Beyond their symbolic association with animal fat, both these kinds of white stone had aesthetic value for the Iyuu/Innu, in addition to their utility for tool making. Tools made from Ramah chert have been found in pre-contact graves, indicating that the material was highly valued. At the Maritime Archaic site at Port au Choix piles of white pebbles were buried next to human remains, which Tuck hypothesized were grave offerings (Tuck, 1976). It may be of relevance that the Ramah Bay quarry is in the same general vicinity as the "caribou mountain", the place to which, according to the Innu, the caribou withdraw themselves when they have been offended by some infraction of the rules of respect.

Apart from the connection between white stone and its fat-like appearance, the colour white has other associations within Iyuu/Innu ontology. In this language, colors are expressed as verbs, and the *waap* verbal element signifies "white". This element is found in the term for dawn, *waapan*, which could be translated as "it whitens, gets light". As one scholar has noted "White in Algonquian thought is often associated with daylight, the rising sun and the dawn spirit and thus east" (Zawadzka, 2011: p. 13).



Figure 1.12: Shaman's Cloak, attributed to Kowkachish (Manakanet), wife of Mestawapeo (Sam Rich). National Museum of the American Indian, Smithsonian Institution (Catalogue # 17/6575).

Where possible, Iyuu and Innu hunting camp dwellings tend to have their doorways facing the rising sun, hunters saying that it is propitious when they step out of their dwellings at dawn towards the east, as this is where the helpful ahchaakw come from. For this reason offerings are generally displayed towards the east.

Other kinds of rock or stone were also valued by the Iyuu/Innu. Ochre was used in some sacred contexts. There are several places, well known to the Iyuu/Innu, where ochre can be found, and in some cases this fact is marked in the indigenous toponyms. For example, the name of the present Iyuu village of Wemindji on the coast of James Bay is derived from the local term for ochre (wiyimin), and was previously known in English as "Paint Hills". On the other side of the peninsula the dialect name for ochre is wunamun, and the name of the present village of La Romain was derived from a local Innu toponym meaning "Ochre River". Quantities of red ochre have been found in Maritime Archaic sites from Labrador to New Brunswick and Maine, particularly in graves, and sometime in association with Ramah chert (Hood, 1993: pp. 164-166). Surovell et al. (this volume) found ochre in associated with Palaeoindian mammoth hunters' domestic artifacts.

The Iyuu/Innu used ochre to make paint, including for the pictographs referred to previously. Until recently certain items of animal hide clothing were painted with colorful designs, using both ochre-based paint and parts of other colours made from different clays or particular plants. The bestknown examples of this Iyuu/Innu painted hide tradition are the famous Naskapi painted coats, approximately a hundred of which are now held in some of the best museums in Europe and North America (Burnham, 1992). These magnificently decorated coats may have been adapted from the shaman's cloak, a decorated caribou hide which the shaman used to attract caribou to approach the waiting hunters (Armitage, 1990: p. 57) (Fig. 1.12).

Some informants recall the method for making these paints. To prepare red paint, powdered

ochre was boiled in water along with either scrapings from the underside of a beaver pelt or with scraping from a caribou leg tendons. The paint was ready for use when it became sticky. Another kind of red paint was made from scraping the bark of the red willow plant, called wiikuspii in the Iyuu language. This was used to paint wooden objects, such as toboggan front boards, snow shovels, and snowshoes. Other colors came from particular colored clays or certain plant material, mixed with binders, like fish eggs, to make paints.

Another Iyuu/Innu artifact painted with ochre, along with other colors, was the "ceremonial hide". Elders recall that it was made from the complete hide of an animal, cleaned until it was white, and on a cloudless early morning painted around the edges with designs to mark the ears, eyes, legs and tail of the original animal, and then exposed for just the time the sun takes to rise above the horizon. As noted above, the rising sun at dawn brings the helpful ahchaakw. These hides were later displayed facing east at the doorway during a feast (Tanner, 1984). The power of the sacred hide that came from exposure to the rising sun lasted one year, after which other sacred hide would be made. Other sacred objects that were painted, many with ochre paint, include drums that were played by hunters as they sung to the animals. Some of the animal skulls or antlers that were hung in the trees were also decorated. These kinds of decorations were intended as offerings to the ahchaakw.

The point to be drawn from the above examples is that there are many aspects of Iyuu/Innu ontology, particularly their animist relationship with game animals that shaped their practices, in some cases leaving behind material traces.

### 1.10 CONCLUSION

Of what relevance is the above ethnographic material to how Pleistocene hunters may have behaved towards megafauna? Let us assume that these hunters lived in egalitarian social groups, and had some form of an animist ontology. These two

features are generally linked. Religious ontologies tend to harmonize with the form of social and political organization of the societies where they are found. Hierarchically organized societies tend to have hierarchically ordered gods and spiritual entities, as well as hierarchically ordered human specialists, such as priests, who act as intermediaries between the laity and the gods. By contrast, an animist ontology is horizontal and egalitarian, both in human interpersonal relations and in relations between hunters and animals. This arrangement harmonizes with a basically egalitarian society, including that of early hunter-gatherers.

We might further speculate that, as animists, the social basis of the relationship that early hunters had with these animals reflected the principle of reciprocity—that is, the attitude of "one good turn deserves another". This seems particularly likely to have been the case in their relations with elephants and mastodons, given that these were herbivores and thus not generally threatening to humans. Moreover, when they were killed, or their corpses found after they had died from other causes, they would have supplied hunting groups with huge quantities of meat and fat, as well as bones as raw material for tools. This would have been an occasion for celebration, for inviting other groups to share in the kill, and for feasting. It is also reasonable to speculate that this would also have been the occasion for symbolic acts of gratitude to the slain animal.

Iyuu/Inn hunters behave towards particular items associated with the hunt in ways that are designed to cultivate animate power. It seems that what empowers game also empowers certain iconic artifacts associated with the hunt, such as fat, stone, bone, hide and ochre. Hunters who were highly dependant on stone for making tools may well have attributed a special value to stone, as did the pre-contact Iyuu/Innu, including towards particular kinds of stone. As in the Iyuu/Innu case, this value attributed to stone would have been not only instrumental, but also aesthetic and as offerings to the game animals. Some Palaeolithic hunter-gatherers also had this kind of aesthetic relation-

ship with stone, such as collecting pebbles whose value was simply that they were colorful (Assaf, 2018). While animism comes in many forms, the evidence from the Pleistocene, such as cave art and carvings, when put alongside the equivalent kinds of practices of recent hunters, suggests these hunters generally engaged with their game animals as powerful fellow persons. Based on both pre-contact and contemporary forms of expressive art and decoration, those artifacts that were offered as displays to the animist entities, like the painted hides, represents the aesthetic tastes and values of the human group. As stone tool makers, the ancestors of the Iyuu/Innu valued the forms of quartz from which they made tools, but in a way that combines the utilitarian, aesthetic and moral reciprocity with the game animals. They valued this white stone in part as one aspect of the celebration of their relationship with animals, by linking the stone with a substance that was sacred to them, animal fat.

My focus in the chapter has been on a group of hunter-gatherers that, in both time and living conditions, are a long way away from Pleistocene hunters of megafauna. While the former cannot serve as analogs for the latter, they, along with other recent and contemporary hunter-gathers, can act as sources of ideas to stimulate the analysis and understanding of these far more ancient peoples.

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#### REFERENCES

- ARCAND, B., 1988. Il n'y a jamais eu de société de chasseurs-cueilleurs. Anthropologie et Sociétés 12, 39–58.
- ARMITAGE, P., 1990. The Innu (the Montagnais-Naskapi). Chelsea House, New York.
- ARSENAULT, D., 1998. The Ashuunich project. Preliminary study of a pictograph site (rock art site EiGf-2) Nemiscau Lake, Cree territory, done in Sept 1997 and proposals for its detailed archaeological analysis, Final Report. Quebec City, PÉTRARQ, Université Laval.
- ASSAF, E., 2018. Paleolithic aesthetics: Collecting colorful flint pebbles at Middle Pleistocene Qesem Cave, Israel. Journal of Lithic Studies 5, 1–22.
- BAKKER, P., Martijn, C., 1991. An old Dutch booklet about Labrador. Them Days 16, 25–31.
- BARKAI, R., 2019. An elephant to share: rethinking the origins of meat and fat sharing in Palaeolithic societies, in: Lavi, N., Friesem, D. E. (Eds.), Towards a broader view of hunter-gatherer sharing. McDonald Institute Conversations, Cambridge, pp. 153–167.

BELLAVANCE, F., 2006. Le quartzite de Ramah au Mushuau Nipi, Nouveau Québec. Analyse du débitage dans une perspective chronologique et contribution à l'étude des réseaux d'échange. M.A. thesis, département d'anthropologie, Université de Montréal.

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- BEN-DOR, M., Gopher, A., Hershkovitz, I., Barkai, R., 2011. Man the fat hunter: The demise of *Homo erectus* and the emergence of a new hominin lineage in the Middle Pleistocene (ca. 400 kyr) Levant. PLoS ONE 6, e28689.
- BEN-DOR, M., Barkai, R., this volume. Supersize does matter: the importance of large prey in Palaeolithic subsistence and a method for measuring its significance in zooarcheological assemblages.
- BERLIN, B., Kay, P., 1969. Basic color terms: their universality and evolution. Berkeley, University of California Press.
- BERLIN, B., Breedlove, D. E., Raven, P. H., 1968. Covert categories and folk taxonomies. American Anthropologist 70, 290–299.
- Berlin, B., Breedlove, D. E., Raven, P. H., 1973. General principles of classification and nomenclature in folk biology. American Anthropologist, 75, 214–242.
- BETTS, M. W., Hardingberg, M., Stirling, I., 2015. How animals create human history: Relational ecology and the Dorset-polar bear connection. American Antiquity 80, 89–112.
- BIRD-DAVID, N., 1992. Beyond 'The hunting and gathering mode of subsistence': Culture-sensitive observations on the Nayaka and other modern hunter-gatherers. Man 27, 19–44.
- BIRD-DAVID, N., 1999. "Animism" revisited. Personhood, environment, and relational epistemology. Current Anthropology 40(S1), 567–591.
- BLASCO, R., Fernández Peris, J., this volume. From tortoises to elephants: the impact of elephants in the broad spectrum diet at Bolomor Cave (MIS 9–5 Spain).
- BLASER, M., 2013. Ontological conflicts and the stories of peoples in spite of Europe: Toward a conversation on political ontology. Current Anthropology 54, 547–568.

BLASER, M., 2014. Ontology and indigeneity: On the political ontology of heterogeneous assemblages. Cultural Geographies 21, 49–58.

- BOIVIN, N., 2004. From veneration to exploitation. Human engagement with the mineral world, in: Boivin, N., Owoc. M. A. (Eds.), Soils, stones and symbols. Cultural perceptions of the mineral world. London, UCL Press, pp. 1–29.
- BOUCHARD, S., Mailhot, J., 1973. Structure du lexique. Les animaux Indiens. Recherches Amérindiennes au Quebec 3, 39–67.
- BOURDIEU, P., 1990. The logic of practice (Richard Nice, trans.). Stanford University Press, Stanford.
- BRIGHTMAN, R. A., 1993. Grateful prey. Rock Cree human-animal relationships. University of California Press, Berkeley.
- BURNHAM, D., 1992. To please the caribou. Painted caribou-skin coats worn by the Naskapi, Montagnais and Cree hunters of the Quebec-Labrador Peninsula. Royal Ontario Museum, Toronto.
- CABOT, W. B., 1912. In Northern Labrador. The Gotham Press, Boston.
- CASTRO, D., 2016. Meating the social: Sharing atiku-euiash in Sheshatshiu, Labrador. Ph.D. dissertation, Memorial University, St John's.
- COMBA, E., 2013. Amerindian cosmologies and european prehistoric cave art: Reasons for the usefulness of a comparison. Arts 2014, 1–14.
- DEMAY, L., Péan, S., Germonpré, M., Obadă, T., Haynes, G., Khlopachev, G. A., Patou-Mathis, M., this volume. Upper Pleistocene hominins and woolly mammoths in the East European Plain.
- DENTON, D., 1998. From the source to the margins and back. Notes on Missassini quartzite and archaeology in the area of the Collins Blanch, in: Tremblay, R. (Ed.), L'éveilleur et l'ambassadeur. Essays archéologiques et ethnohistoriques en hommage à Charles A. Martijn. Recherches amérindiennes au Québec, Montreal.
- DENTON, D., 2017. Waapushukamikw: Sacred site and lithic quarry in subarctic Quebec. 82nd Annual Meeting of the Society for American Archaeology, Vancouver, Canada.

DESCOLA, P., 2013. Beyond nature and culture (Janet Lloyd, trans.). University of Chicago Press, Chicago and London.

- **DIXON, R. B.,** 1899. The color symbolism of the cardinal points. Journal of American Folklore 12, 10–16.
- EVANS-PRICHARD, E. E., 1965. Foreword, in: Lévi-Bruhl, L. (Ed.), The soul of primitive man (Lilian Brown, trans.). George Allen and Unwin, London.
- FEIT, H. A., 1994. Dreaming of animals: The Waswanipi Cree shaking tent ceremony in relation to environment, hunting and missionzation, in: Irimoto, T., Yamada. T. (Eds.), Circumpolar religion and ecology: An anthropology of the North. University of Tokyo Press, Tokyo, pp. 289–316.
- FEIT, H. A., 1997. Spiritual power and everyday lives: James Bay Cree shaking tent performers and their Audiences, in: Yamada, T., Inmoto, T. (Eds.), Circumpolar shamanism and animism. University of Hokkaido Press, Sapporo, pp. 121–150
- FINLAYSON, B., Warren, G. (Eds.), 2017. The diversity of hunter-gatherer pasts. Oxbow Books, Bamsley.
- HALLOWELL, A. I., 1964. Ojibwa ontology, behaviour and world view, in: Diamond, S. (Ed.), Primitive views of the world. Columbia University Press, New York, pp. 49–82.
- HENRIKSEN, G., 1973. Hunters in the Barrens. The Naskapi on the edge of the white man's world. ISER Books, St John's.
- HILL, E., 2011. Animals as agents: Hunting ritual and relational ontology in prehistoric Alaska and Chukotka. Cambridge Archaeology Journal 21, 407–26.
- Hood, B., 1993. The archaic Indians of Labrador. Investigating prehistoric social organization. Newfoundland Studies 9, 163–184.
- HUSSAIN, S. T., Floss, H., 2015. Regional ontologies in the Early Upper Palaeolithic: the place of mammoth and cave lion in the 'belief world' (Glaubenswelt) of the Swabian Aurignacian, in: Bueno-Ramírez, P., Bahn, P. G. (Eds.), Pre-

historic art as prehistoric culture. Archaeopress, Oxford, pp. 45–57.

- ICHIKAWA, M., this volume. Elephant hunting by the Mbuti hunter-gatherers in the eastern Congo Basin.
- INGOLD, T., 1996. Hunting and gathering as ways of perceiving the environment, in: Ellen, R., Fukui, K. (Eds.), Redefining nature: Ecology, culture and domestication. Berg, Oxford, pp. 117–155.
- INGOLD, T., 2000. The perception of the environment. Essays on dwelling, livelihood and skill. Routledge, London.
- JENKINSON, A., Ashini, J. P., 2015. Tshikapisk archaeological activities at Kamestastin, spring 2014. Provincial Archaeology Office 2014 Archaeology Review 13, 92–103.
- JOHNSON, A. L. 2014. Exploring adaptive variation among hunter-gatherers with Bindford's frame of reference. Journal of Archaeological Research 22, 1–42.
- JONES, A., 2017. Rock art and ontology. Annual Review of Anthropology 2017 46, 167–181.
- JONES, A., MacGregor, G. (Eds.), 2002. Colouring the past. The significance of colour in archaeological research. Berg, Oxford.
- KUHN, T., 1962. The structure of scientific revolutions. The University of Chicago Press, Chicago.
- **LEWIS, J.**, this volume. BaYaka elephant hunting in Congo: the importance of ritual and technique.
- LORING, S., 2002. "And they took away the stones from Ramah": lithic raw material sourcing and eastern Arctic archaeology, in: Fitzhugh, W. W., Loring. S., Odess, D., Honoring our elders: a history of eastern Arctic archaeology. Contributions to Circumpolar Anthropology 2, Arctic Studies Center, National Museum of Natural History, Smithsonian Institution, Washington, D.C., pp. 163–185
- LOWERY, D. L., 2017. Recent studies investigating a short-term pulse of Ramah chert into the Chesapeake Bay region circa 500 AD to 900 AD, in: Curtis, J., Desrosiers, P. M. (Eds.), Ramah chert: A lithic odyssey. Nunavik Publications, Montreal, pp. 151–168.

- MAILHOT, J., 1997. The people of Sheshatshit. ISER Books, St John's.
- McCall, G. S., Widerquist, K., 2015. The evolution of equality: Rethinking variability and egalitarianism among modern forager societies. Ethnoarchaeology 7, 21–44.
- OMAN-REAGAN, M. P., 2015. Writing worldling: Turning to ontology at the dead end of 'Culture'. SocArXiv, Open Science Framework, https://osf.io/preprints/socarxiv/mvaev.
- PILON, J. L., Boswell, R., 2015. Below the falls; an ancient cultural landscape in the centre of (Canada's national capital region) Gatineau. Canadian Journal of Archaeology 39, 257–293.
- Qu, F., 2017. Rethinking the neuropsychological model: Shamanism, prehistoric Eskimo art, and animist ontology, in: Gheorghiu, D., Pásztor, E., Bender, H., Nash, G. (Eds.), Archaeological approaches to shamanism: Mindbody, nature, and culture. Cambridge Scholars Publishing, Newcastle, pp. 42–67.
- RANKIN, L., 2008. Un-caching hunter-gatherer culture in Labrador: from daily life to long-term history. North Atlantic Archaeology 1, 117–156.
- **SAUNDERS, B.**, 1992. The invention of basic colour terms. ISOR, Utrecht.
- **SCOTT, C.,** 2006. Spirit and practical knowledge in the person of the bear among Wemindji Cree hunters. Ethnos 71, 51–66.
- SUROVELL, T. A., Pelton, S. R., Mackie, M. E., Mahan, C. M., O'Brien, M. J., Kelly, R. L., Haynes, C. V., Jr., Frison, G., this volume. The La Prele Mammoth site, Converse County, Wyoming, USA.
- TANNER, A., 1968. Occupation and life style in two minority communities, in: Chance, N. A. (Ed.), Conflict in culture: Problems in developmental change among the Cree. St Paul University, Canadian Research Centre for Anthropology, Ottawa, pp. 47–67.
- TANNER, A., 1984. Notes on the ceremonial hide of the Quebec-Labrador Innuts, in: Cowan, W. (Ed.), Papers of the 15th Algonquian Conference. Carleton University, Ottawa, pp. 91–105.

TANNER, A., 2014. Bringing home animals. Mistissini Hunters of Northern Quebec. ISER Books, St John's.

- TANNER, A., in press. Travelling with subarctic hunter-gatherers, in: Stiebel, G. D., Ben-Ami, D., Gorzalczany, A., Kocj, I. (Eds.), Centrum 1: Motion, movement and mobility. Tel Aviv University and the Israel Antiquities Authority, Tel Aviv, pp. 7–21.
- **TANNER, V.,** 1944. Outlines of the geography, life and customs of Newfoundland-Labrador. Helsingfors, Helsinki.
- Tuck, J. A., 1976. Ancient people of Port au Choix: The excavation of an archaic cemetery in Newfoundland. Memorial University, Institute of Social and Economic Research, St John's.
- VAILLANCOURT, P., 2008. Le site Kaapehpeshapischinikanuuch (EiGf2). Résultats de l'étude d'un site rupestre à tracés digitaux au lac Nemiscau. Recherches amérindiennes au Québec 38, 109–125.
- VIVEIROS DE CASTRO, E., 1998. Cosmological deixis and Amerindian perspectivism. The Journal of the Royal Anthropological Institute 4, 469–488.
- VIVEIROS DE CASTRO, E., 2004. Perspectival anthropology and the method of controlled equivocation. Tipití: Journal of the Society for

- the Anthropology of Lowland South America 2, 3–22.
- VIVEIROS DE CASTRO, E., 2012. Cosmological perspectivism in Amazonia and elsewhere. Masterclass series 1. HAU Network of Ethnographic Theory, Manchester.
- WHORF, B. L., 1956. A linguistic consideration of thinking in primitive communities, in: Whorf, B. L., Lee, P., Levinson, S. C., Carroll, J. B. (Eds.), Language, thought, and reality: selected writings of Benjamin Lee Whorf., volume 2. MIT Press, Cambridge USA, pp. 84–111.
- WILLESLEV, R., 2016. Foreword: The anthropology of ontology meets the writing culture debate Is reconciliation possible? Social Analysis 60, Oxford, pp. v–x.
- WINTERHALDER, B. 1983. Boreal foraging strategies, in: Steegmann, A. T. (Ed.), Boreal forest adaptations: The Algonkians of Northern Ontario. Plenum Press, New York, pp. 201–241.
- YASUOKA, H., this volume. Sharing elephant meat and the ontology of hunting among the Baka hunter-gatherers in the Congo Basin rainforest.
- ZAWADZKA, D., 2011. Spectacles to behold: Colours in Algonquian landscapes. Totem: The University of Western Ontario Journal of Anthropology 19, 6–37.