
Animals as Agents: Hunting Ritual and Relational Ontologies in Prehistoric Alaska and Chukotka

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In this article, I discuss the ways in which animals act as ontological subjects — as other-than-human persons and as agents in myth and ritual. First I outline how humans conceive of and behave with animals and their remains in indigenous cosmologies using ethnographic and ethnohistoric examples from the Arctic, Subarctic and Amazonia. I then explore the archaeological evidence for indigenous ontologies along the coasts of Chukotka and Alaska, arguing that prehistoric hunters interacted with animals as agential persons, engaging in social practices intended to facilitate hunting success and avoid offending prey. Two forms of ritual activities are discussed: the use of hunting amulets and the caching of animal bones and antlers. I conclude that focusing on shamanism in the study of hunter-gatherer belief obscures the roles of hunters and their wives. Their thoughts and actions established and maintained relationships with prey animals and may be more productively conceptualized as dynamic social behaviours embedded within the context of daily life than as privileged ritual acts.

In a now-classic essay, Irving Hallowell (1960) described belief in what he called ‘other-than-human persons’ among the Subarctic Ojibwa of Canada. He was referring to the personhood of animals, as well as to what many would consider ‘inanimate’ objects. ‘Other-than-human persons’ were considered by the Ojibwa to be capable of acting as agents; that is, they had the ability to think and behave in ways that resembled or mirrored the ways that humans thought and behaved. This sort of ontology, or set of beliefs about the nature of being and existence, privileged certain animals with agency, intentionality and sentience, abilities usually reserved for humans in Western thought. In other words, Ojibwa society, in common with other societies of the Arctic, Subarctic and Amazonia, treated animals as subjects, capable of acting with forethought and of affecting human health and well-being. Such a view of human–animal dynamics transcends the boundaries of the social as generally understood in the West (Hallowell 1958, 64).

In this article, I explore the idea that prehistoric Eskimo inhabitants of the North Pacific coasts of

Alaska and Chukotka related to certain prey animals in intersubjective terms. That is, prey animals, especially marine mammals and caribou or reindeer, were conceived of as agents, as other-than-human persons capable of making decisions about when, where and how they interacted with humans. As with other circumpolar societies both past and present, shamans were critical mediators between humans and animals as other-than-human persons. However hunters and their wives, acting as individuals and in small groups, were responsible for maintaining good relations with prey animals on a daily basis.¹ Hunters used a variety of practices to communicate with, understand and recognize animals as agents and other-than-human persons in their attempts to demonstrate their respect, hunt successfully and avoid illness. Some of these behaviours appear to have significant time depth along the Bering Sea coast. Below, I use the term ‘animal’ to refer to those kinds of animals that are perceived of as other-than-human persons. Not all animals were so perceived, and not all individuals within a certain kind of animal group — caribou, for example — are persons. But some of them are.

Relational ontologies: animals as other-than-human persons

In many indigenous societies of the Arctic (Nuttall 2000; Pedersen 2001; Willerslev 2007; Helander-Renvall 2010), Subarctic (Tanner 1979; R.K. Nelson 1983; Brightman 1993) and Amazonia (Århem 1996; Viveiros de Castro 1998; Fausto 2007), personhood is attributed to certain animals. That is, animals are perceived to have agency, culture and society. They are capable of speaking, influencing others (both human and other-than-human) and acting intentionally (Morrison 2000). Their interactions with humans are relational, interpersonal and intersubjective; i.e. animals as other-than-human persons relate to humans as conscious subjects. Indigenous ontologies that conceive of animals as persons contrast with many aspects of Western belief systems, which often conceptualize animals in utilitarian terms, as objects to manipulate, use and consume. Most animals in agricultural and industrial societies are considered to be instinctual, lacking consciousness, speech and intentionality (Ingold 2000a; Hill forthcoming; but see Hobgood-Oster 2007 for exceptions).

Key to understanding the role of animals in indigenous ontologies is relational thinking. Ingold (2006, 14) has described the relational features of Arctic and Amazonian ontologies as a 'domain of entanglement', an unstable, dynamic field of becoming in which animals and humans are perpetually constituting themselves and others. Humans and other-than-human persons are who they are because of how they behave, how they perceive each other, what they eat and who they marry. Not all animals are other-than-human persons; they, like humans, must display the capacity to 'be with others, share a place with them, and responsibly engage with them' (Bird-David 2006, 43). These social acts define an animate being as a person, for whom life is an 'ongoing creation' (Ingold 2000b, 11; see also 2006) or an 'unfolding dialogue' (Jordan 2001, 101). Humans and other-than-human persons thus have no prediscursive existence; rather, they become themselves through experience, interaction and discourse. Identity and self are therefore constructs and must be perpetually constituted through social action. A human hunter is who he is because he uses a skin boat, wields a harpoon and treats walrus as prey. Humanness, like beariness, must be performed, constantly reasserted, lest the boundaries between types of persons become blurry and permeable. In part due to the volatile, composite nature of the body, the condition of being human — or of being a bear, for that matter — is neither assured nor necessarily permanent. Becoming an

other-than-human person is a dangerous possibility for human babies and those who are ill (Vilaça 2002), as they exist in liminal spaces where their humanness is poorly defined. Likewise a hunter, in taking the perspective of his prey, may 'lose sight of his original species identity' (Willerslev 2004, 629).

In traditional Eskimo cosmology, the body — whether it be human or other-than-human — comprises potentialities. It is negotiable space where 'the lines between species and classes, even between man and animal, are lines of fusion, not fission, and nothing has a single, invariable shape' (Carpenter 1973, 283–4; Sabo & Sabo 1985). For prehistoric Eskimo of Alaska and Chukotka, the materiality of the body — of matter itself — was inherently unstable, containing a range of possibilities that could be expressed under certain conditions or when proper procedures were followed. In McNiven's (2010, 18) terms, 'humans and [prey] animals cognitively, somatically and spiritually overlap to the point that the human–animal divide is seen as fluid, permeable and mutually intelligible'. This concept of the 'volatile' body (*sensu* Borić 2005) is clearly illustrated in a story collected in Alaska by Knud Rasmussen in the 1920s, which describes the possibilities inherent in an open skin boat that a father built for his daughter:

So he built an umiaq for her and drew amulets on it: along the sides a bird, and under the bottom a salmon, saying to her: 'When you go travelling in this boat and wish for speed, the umiaq will become a bird by the force of its amulets and raise itself over the water'. On the back of the bird she would be taken forward at high speed.

But if she became anxious about the speed, if she merely wished for slower speed, the umiaq would turn into a salmon and swim with her on the surface of the water. ... The girl rowed away to look for a husband, sometimes flying like a bird, sometimes swimming like a salmon (Ostermann 1952, 262).

In the circumpolar north, neither personhood nor the embodied potentiality of the body was limited to humans and animals. Certain objects tended to be animate, especially hunting gear and watercraft. Losey (2010, 20–21) describes an analogous situation on the Northwest Coast of North America, where fishing technologies such as nets and halibut hooks were considered persons, capable of interacting on social terms with the fish they were meant to attract. Fienup-Riordan uses the term 'awareness' (Central Yup'ik *ella*) to describe the Yup'ik belief that objects are sensible and agential. Driftwood, for example, might become tired of lying on one side on the beach whilst fish bones could express irritation at being stepped on. The thoughtful person who turned over the wood

or swept up the bones would enjoy gratitude, future favour and continued good relations with the living world (Fienup-Riordan 2009, 228–30).

Absent in relational ontologies such as those described above is a hierarchical system in which humans dominate all other beings by virtue of their arguably exclusive cognitive and linguistic abilities and spiritual attributes (Morrison 2000, 26; Argent 2010). In traditional Eskimo and Subarctic ontologies, prey species and those animals considered especially powerful, dangerous or similar to humans in key respects, such as bears in circumpolar societies (Hallowell 1926; Paulson 1968; Zachrisson & Iregren 1974; Ingold 1987; Hultkrantz 1994; Saladin d'Anglure 1994; Shepherd 1995; Kwon 1999; Ingold 2000b; Jordan 2001, 100; Helander-Renvall 2010; see also Dowson 2009 for a European Palaeolithic example) occupied a privileged ontological position as other-than-human persons. Such animals could be considered kinfolk and behaved in ways that paralleled human society — living in houses, organizing themselves in social groups and engaging in exchange relationships (Bogoras 1925, 211; Petrov 1989; Morrison 2000, 28; Losey 2010).

In a fascinating study of Swedish Neolithic and Bronze Age rock art, Bolin (2000) suggested that elk (*Alces alces*; North American 'moose'), a key prey animal, were understood as human ancestors, mythic kin with whom humans maintained special relationships (see also Zvelebil 1993; Shepherd 1995). Similar beliefs about the ancestral kinship of humans and other-than-human persons pervade relational ontologies in the form of myth, in which bears often figure prominently (Ostermann 1952, 37; Vasilevich 1963, 68; Petrov 1989). Stories from the Arctic and Subarctic are replete with references to humans assisted by animals, marrying animals or becoming animals (Ostermann 1952, 159–64; R.K. Nelson 1983; Petrov 1989; Anderson 2005; Fienup-Riordan & Kaplan 2007).

Ideally, human–animal dynamics in societies that understand animals as persons are based on mutual respect and the principles of reciprocity (Fienup-Riordan 1988; 1994, 58–9; Ingold 2000a; Jordan 2008, 236–9). Humans and animals have obligations to each other and failure to honour those obligations can be dangerous. Prey animals such as caribou, for example, are obliged to allow themselves to be taken by human hunters. They are willing to give or sacrifice themselves to those who behave properly by treating their bones with respect, facilitating the departure and journey of the prey animal's spirit, observing taboos and avoiding boasting, which animals consider offensive (Fienup-Riordan 1988, 258). Even after an animal was taken by a hunter, a latent sentience enabled it

to continue to observe and experience for hours or even days after 'death'. An animal remained aware of the placement of its body, the treatment of its skin or hide, and the way it was butchered. Animals generally disliked being stepped on, laid upon bare floors or spoken of in disrespectful terms. Seals, in particular, were disgusted by filth and slovenly behaviour (Søby 1969/1970). Most animals considered being chewed on by dogs to be an especially insulting and grievous offence.

For Pálsson (1996), relations with animals who are other-than-human persons are generally cooperative, rather than antagonistic. However, the Ojibwa credited certain animals with the ability to bring hunger, illness and social disorder (Morrison 2000, 26). In some cases, animals were responsible for what could be termed 'counter predation' — they caused a hunter to suffer from illness or accident in response to the violation of a taboo or to the improper treatment of a prey animal's remains (R.K. Nelson 1983, 171–2; Sabo & Sabo 1985; Laugrand & Oosten 2008, 99). Culture-specific illnesses, to which hunters were especially susceptible, have been documented in societies that recognize other-than-human persons (see e.g. Rea 1998; Vilaça 2002, 29–31). Like illness, 'accidents' were neither random nor meaningless. Attack by an animal could be punishment for some transgression (Ostermann 1952, 37) and the wise hunter — if he survived — identified the problem and remedied it as soon as possible. Should songs, offerings and propitiation fail, a shaman might be consulted.

While counter predation by prey animals was a very real risk in societies that recognized other-than-human persons, having bad 'luck' was a more likely outcome of antagonizing prey. As sentient agents, animals observed, remembered and reported offences they had suffered, causing fellow members of their species to avoid or hide from the hunter when they next encountered him. In some cases, it was the master or mistress of animals who was responsible for a hunter's bad 'luck' (Tein 1994). Such beliefs are found across Siberia (Paulson 1964; 1968; Ingold 1987) and throughout Arctic Alaska and Canada. Among the Inupiat and some Canadian Inuit, a 'caribou mother' managed the herds and ensured their proper treatment by humans (Ellanna & Sherrod 2004, 161–2). In the eastern Canadian Arctic, Sedna, mistress of sea mammals, was believed to be responsible for hunting success. When distressed by violations of hunting taboos or by the suffering of her charges — usually seals and walrus — Sedna responded by keeping the animals with her rather than releasing them to hunters; she might also send sickness, bad weather and starvation (Sabo & Sabo 1985; Laugrand & Oosten

2008). Among Siberian Eskimo, Sedna was known as Samna or Sana. Serov (1988, 243) suggests that, in addition to their own master of animals, called Keretkun, the Chukchi of Chukotka 'borrowed' Samna from their coastal neighbours and converted her into the tundra-dwelling mistress of reindeer.

Societies that conceive of animals as other-than-human persons are attributing to them what the philosophy of mind terms 'phenomenal consciousness' — the ability to experience the world in qualitative, subjective and experiential ways. It is to consider that there is 'something like' being a particular sort of animal (Nagel 1974). Philosophers of mind consider phenomenal consciousness in non-human animals to be the subject of debate (Dennett 1995; Cartmill 2000; Griffin 2001; Carruthers 2005; Shriver & Allen 2005), whilst indigenous societies of the circumpolar north and Amazonia have traditionally considered the consciousness of prey animals to be self-evident, *contra* Nagel's (1974) implication that humans cannot know or experience the world as animals. In societies such as that of the Yukaghir of the Sakha Republic (Yakutia), the hunter may take on the perspective of his prey. In other words, humans are able to see and experience the world as caribou, elk (Willerslev 2007, 97–100), seals (Fienup-Riordan 1990) or bears (Tanner 1979, 136–7). Willerslev (2007) describes this phenomenon in terms of mimicry; Ingold (2000b) links it to the use of masks among the Yupiit and Inupiat of Alaska which, he suggests, enables the wearer to see as an animal.

The term 'perspectivist' has been applied to Amazonian ontologies in which prey animals perceive themselves as human and humans as animals. That is, animals understand themselves as subjects and see themselves as persons (Viveiros de Castro 1998). Pedersen (2001) has argued that the ontologies of many north Asian societies can be considered perspectivist. Like the Amazonian societies described by Viveiros de Castro, many circumpolar societies view human and animal forms as mere coverings or envelopes that confer the powers and abilities associated with a specific bodily form. Conneller (2004) has suggested that the famous red deer antler frontlet from Star Carr facilitated the human experience of both the body and perspective of red deer when worn. During collective rituals, masks may be an integral form of material culture in perspectivist societies (Ingold 2000b) and likely functioned in the past in ways that parallel Conneller's reconstruction. Individual hunters, however, cultivated their own relationships with animals; to that end, hunters communicated with prey through song and speech and engaged in ritual practices that left discernable patterns in the archaeological record.

By 'ritual', I mean behaviours that are repetitive, prescribed and involve an element of communication with non-human entities. In Arctic and Subarctic societies, hunting ritual is, above all, *social* (*contra* Oma 2010, 177). As I suggest below, archaeologists are well-advised to treat some actions, such as the patterned deposition of bones, not as ritual acts intended for a supernatural purpose but rather as part of daily social discourse with other (than human) persons, an approach that Herva (2009; Herva & Ylimaunu 2009) has advocated in the study of post-medieval Finnish folk beliefs. As an inherently social act, hunting by Eskimos involves seeking information about prey through observation or divination, movement across an animated landscape, taking the prey animal once it has offered itself, butchering and conveying the sentient animal back to the camp or village in a respectful manner and disposing of its remains in such a way that the animal may return to offer itself again. As Jordan (2001) has observed, 'ritual' behaviours involving other-than-human persons intimately involve the hunter, who interacts with, speaks to, and observes taboos regarding animals on a daily basis (Ostermann 1952, 35–7; Watanabe 1994; Nuttall 2000; Jordan 2008), developing and maintaining intersubjective relationships by treating bones and hides properly and thinking appropriate thoughts.

Women, particularly the wives of hunters, had their own sets of taboos to observe, often during the hunt itself. Their thoughts and chants could attract animals, whilst menstrual blood and impurities associated with pregnancy and parturition could drive them away (Søby 1969/1970, 47). Women were also responsible for the proper treatment of the animal once it was brought home. Their actions could have as much effect on the availability of prey animals as those of the hunter himself (Bogoras 1925, 208; Ostermann 1952, 36–7; Chaussonnet 1988; Fienup-Riordan 1988, 262–3; 1994, 95–8; Petrov 1989; Bodenhorn 1990; Pelly 2001). If a woman consumes a tabooed piece of meat, animals may be offended and refuse to come to the hunter the next time he goes out (R.K. Nelson 1983; Brightman 1993). Similarly, if the process of butchery is done improperly, the animal in its reincarnated form will avoid the hunter and communicate knowledge of its poor treatment to fellow creatures (R.K. Nelson 1983). Animals therefore determine whether a family will have enough food by observing and responding to human behaviour and choosing the time, place and conditions under which they offer themselves as prey.

Several scholars (e.g. Gifford-Gonzalez 1992; Jarvenpa & Brumbach 2006; Brumbach & Jarvenpa 2007) have shown how women's roles in hunting have largely been ignored by archaeologists. Yet the

Eskimo evidence suggests that the behaviour of a woman before, during and after a hunt could affect a hunter's success. Women were intimately involved in the secondary transport, processing and cooking of many prey animals, though they do not appear to have participated in pursuit, dispatch or primary transport activities. Women also observed taboos regarding their thoughts and actions. Among the Inupiat of Alaska, for example, the wives of whaling captains must move slowly, think peaceful thoughts and behave with generosity. Prey animals are especially sensitive to how women share meat and will return to a hunter whose wife is open-handed (Bodenhorn 1990). While such activities are not generally considered 'hunting', a narrow focus on the action of taking prey simplifies a complex social process involving men, women and animal persons.

The importance of the behaviour and rituals conducted by hunters and their wives does not negate the role of shamans, who routinely treated illnesses caused by taboo violations and who were needed to speak directly to the master or mistress of animals. Shamans were called upon to deal with a range of illnesses and situations in which an individual hunter's precautions failed, when the hunter was unaware of having broken a taboo, or when he attempted to hide his misdeeds and therefore brought misfortune upon others, as well as himself. If hunting is poor, a ritual specialist may determine what caused offence to the animals and prescribe behaviours to mollify them (Jolles 2002). Shamans thus tended to deal with 'spiritual emergencies' (Jordan 2001, 102), situations that are beyond the knowledge or abilities of an individual hunter.

Yet, shamanism represents only one way in which social relations with other-than-human persons were constituted and maintained. Dowson (2009) has recently critiqued interpretations of rock art that privilege the trance experiences and beliefs of shamans in foraging societies. He notes that 'humans and non-human animals, shamans, hunters and gatherers, mothers and fathers, and their children, were all sentient beings' who were intimately involved with constituting and reproducing the world in which they lived (Dowson 2009, 385). Whilst shamans often played key roles in these processes, part of the definition of a 'real person' in the Arctic involved behaving properly in one's relationships with other-than-human beings — observing taboos, speaking respectfully and remaining conscious of the fact that every thought and action had relational implications. Jordan (2008) emphasizes daily ritual acts and enculturation of the landscape through structured deposits and modification of natural features in his thoughtful recommenda-

tions for an 'archaeology of hunter-gatherer belief'. He notes that a 'web of relationships cuts across social and species lines' (Jordan 2008, 236), obligating and implicating *every* member of society.

The ethnographic and ethnohistoric literature on circumpolar shamanism is rich and illuminating; both our Arctic prehistories (Bolin 2000; Jordan 2001; Sutherland 2001; Broadbent 2006) and our reconstructions of forager cosmologies (Oliva 2000; Dowson & Porr 2001; Lewis-Williams 2002; Lahelma 2005; 2007; Cannon 2011) have benefited from the relatively recent pursuit of an 'archaeology of shamanism'. The argument advanced here — that the reconstruction of hunter-gatherer ontologies must involve consideration of the roles of non-ritual specialists — is not intended to dismiss or discount the role of shamans. However, non-shamans could and did interact with other-than-human persons and experience 'non-empirical' phenomena.

In Alaska, ethnohistorians have documented incidents involving human encounters with all manner of non-human creatures including, for example, *inuqullit* (little people), 'wild' babies, 'mermaids' and giant birds, fish and shrews (Burch 1971, 62–87; Pratt 1993; Fienup-Riordan 1994). Knowledge of proper behaviour and dangerous places on the landscape enabled people to avoid or escape these incidents unscathed. While hunters and their wives might engage most frequently in interactions with other-than-human persons as prey animals, they, as well as everyone else in Eskimo society, might see, hear or encounter similar nonempirical phenomena in the course of daily life. My point here is that we should not relegate interacting and communicating with other-than-human persons to the realm of the religious or the supernatural. Rather, such encounters are part of life for Eskimo of Alaska and Chukotka and often did not require either the presence or mediation of ritual specialists. As Jordan (2001, 91) has observed with regard to the Siberian Khanty, many ritual activities, including festivals and sacrifices, were conducted without the oversight of a shaman. There is no reason to think that the Khanty are unique in the involvement of both hunters and their families in ritual and exchange relationships with other-than-human persons or to think that only shamans dealt with sentient non-human entities. An archaeology that focuses exclusively upon shamanism when reconstructing prehistoric ritual and belief misses a great deal of what was going on in the past and masks the complexity of social life among Arctic foragers (Janik 2007; McCall 2007; Dowson 2009).

As outlined above, broad similarities exist in perceptions and practices related to prey animals

in circumpolar Arctic and Subarctic societies. These beliefs reflect relational ontologies in which prey animals are treated as subjects, causal agents and other-than-human persons. The ethnographic and ethnohistoric evidence demonstrates that hunters engaged with animals on a daily basis through speech, thought and action. Material culture and depositional patterns of animal remains reflect the ways in which humans perceive the animal persons with whom they share the tundra, boreal forest or Arctic coast. Amulets or ‘charms’ associated with health, well-being and hunting success are one form of material culture documented among many societies of the circumpolar and boreal forest regions. Such items generally belonged to individuals and either adorned hunting gear or were sewn or attached to the clothing of the hunter. These objects appear to have been invested with the spiritual power of the animal they represent and were used to either summon specific prey or invoke within the hunter certain traits of the animal represented by the amulet.

In addition to amulet use, hunting ethnographies have demonstrated that hunters and their families communicate with and demonstrate their respect for prey animals through proper treatment of their bodies and remains. While many of these behaviours are inaccessible archaeologically — the practice of covering up bloodied snow or providing a recently taken seal with a drink of water, for example — rituals related to bone deposition leave observable patterns. Several ways of disposing of bone have been documented (Søby 1969/1970, 67–9), including burying (Paulson 1968; Petrov 1989; Fienup-Riordan 1990), burning (Spencer 1959, 272; R.K. Nelson 1983, 172, 180), hanging in trees (Pentikäinen 1996; Jordan 2001, 170) or placement on platforms (Paulson 1968), pushing them through cracks in sea ice (Ray [1892] 1988, xcii), or sinking them at the edge of the ice floe where butchery occurred (Ostermann 1952, 123).

Below, I discuss archaeological data from Eskimo sites along the coasts of Chukotka and Alaska that suggest that relational ontologies pertaining to prey animals as other-than-human persons have been in place for at least a millennium. I focus on two lines of evidence: 1) special objects or amulets recovered from funerary contexts; and 2) patterned disposal of selected elements of prey animals, including walrus, whale, and caribou or reindeer. I argue that we should consider the role of individual hunters and their wives, as well as shamans, when we reconstruct ritual behaviour in the past and, further, such behaviours are more social than religious in nature.

The archaeology of ontology

David (2006) has recently advocated an ‘archaeology of ontology’ — the exploration of indigenous ways of experiencing the world in the past. He suggests that ontologies can be apprehended by viewing past landscapes as products of human engagement with the material world, as unceasingly constituted and materialized through symbolic representation, ritual activity and *habitus* (Jordan 2001; 2003; David *et al.* 2005; David 2006, 50; David & Badulgal 2006; Jordan 2008). Animals as other-than-human-persons are part of these landscapes, and ritual activity is one way in which this triangular relationship between humans, non-humans and the world was constituted and materialized. In this sense, ritual is ontology embodied and performed. Archaeological evidence of past ritual behaviour, then, represents the material remains of ontologically informed behaviour. This materialist perspective on ontology is analogous to the way in which DeMarrais *et al.* (1996) have conceptualized ideology.

Personal ornaments, or amulets, are one way in which Arctic hunters of Alaska and Chukotka expressed and performed their intersubjective relationships with other-than-human persons. Hunters also created archaeological features in the form of bone caches that contained selected elements of prey animals. Through these forms of material culture, hunters negotiated and maintained their relationships with animals.

Amulets

The ethnographic and ethnohistoric literature on Alaska and northeast Asia makes frequent reference to personal objects identified as ‘amulets’ (Murdoch [1892] 1988, 434–9; E.W. Nelson [1899] 1983, 436–9; Lantis 1938, 441–2; Ostermann 1952, 129; Søby 1969/1970, 48–9; Fitzhugh & Kaplan 1982, 149; Burch 2006; see also McNiven 2010 for an example from Torres Strait). These items are usually either in the form of an animal (e.g. whale or walrus) or of animal origin (e.g. bone or tusk) and are generally part of an individual’s personal property, although some amulets were associated with weapons or boats. Lantis’s list (1938) of items used as amulets includes bird skins, canid skulls, a dried raven, stones and beads. Additional examples include the teeth of seal or Arctic fox, and the phalanges and partial skins of seals among the Canadian Inuit (Pelly 2001, 43). During the late 1800s, whale amulets of flaked stone or glass (Fig. 1) were commonly worn around the neck by men and boys at Barrow (Jordan 1980; Murdoch [1892] 1988, 435), reflecting the importance of whaling to both subsistence and social organization.

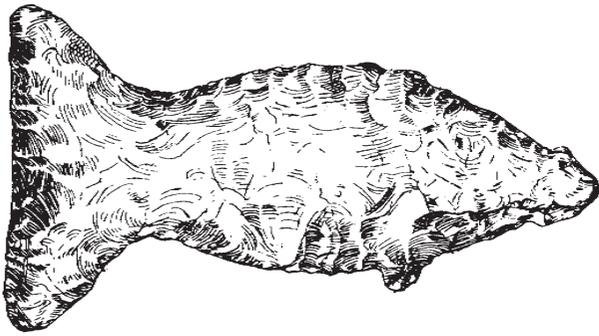


Figure 1. An amulet in the shape of a whale made from flaked glass. Late 1800s, Barrow, Alaska (from Murdoch [1892] 1988, 435).

The use of amulets along the coasts of Alaska and Chukotka appears to have significant time depth, judging from materials recovered from burial contexts. Three major cemeteries have yielded information on the funerary treatment of ancient sea-mammal hunters: Ipiutak, on the northwest coast of Alaska, and Ekven and Uelen, both on the coast of northeast Chukotka.

Ipiutak (Fig. 2) is located at Point Hope, Alaska (Larsen & Rainey 1948). The name of the Ipiutak culture (AD 400–750) is taken from the type-site, which yielded structures, an enormous number of artefacts and animal bones, and a cemetery containing inhumation burials. Several of the Ipiutak burials contained animal remains, including those of walrus, seal, bearded seal, dog and bird. Of particular interest are the dog skulls, recovered from two burials, and the skull of a loon (*Gavia* spp.), found in a double burial containing an adult and child (Larsen & Rainey 1948, 229–30, 243, 250). These materials are identical to those identified and collected as amulets along the coast of Alaska during the 1800s. The skulls of canids (foxes, dogs and wolves) and birds, especially ravens, raptors, terns and gulls, appear to function by either invoking the spirit of an animal and summoning it to the hunter — an Arctic fox, for example — or by invoking

a characteristic ability or behaviour of an animal, such as the cleverness of a raven, the hunting prowess of an eagle, or the bill of a tern, likened to the use of a spear ‘to plunge down upon the seal with as sure an aim’ as that of a tern (Murdoch [1892] 1988, 437). Loons have historically had a close association with ceremonial clothing in northwest Alaska (Burch 2006, 179, 259) and Arctic Canada (Driscoll-Engelstad 2005). The loon skull in the Ipiutak grave may have invoked similar associations as loon beaks among the Copper Inuit: rebirth (as migrants) or song and dance (courtship displays). Alternatively, it may have embodied the fierceness of the loon behaviourally. An alternative reading of the loon emphasizes its circumpolar role as shamanic helper and liminal being, as well as its ability to hunt with great accuracy underwater (Morrow & Volkman 1975).

Two cemeteries in northeast Chukotka also yielded materials analogous to ethnohistorically documented amulets. Both Ekven (Csonka 2003; Arutiunov & Sergeev 2006b) and Uelen (Arutiunov & Sergeev 2006a) are associated with the Old Bering Sea/Okvik cultures, dated to the fourth through seventh centuries AD. Their occupations overlap with that of Ipiutak. Ekven is a large settlement and cemetery site located on the coast of northeast Chukotka near the narrowest part of Bering Strait. Over three hundred burials have been excavated, many with well-preserved ivory objects. In addition to the ivory harpoon heads, counterweights and snow goggles, dozens of carved ivory animals were recovered. Many of these were identified by the excavators as amulets, such as the two whales made of walrus tusk found with an individual buried in a grave made of whale bone (Burial 183) (Arutiunov & Sergeev 2006b, 80, 140). In addition to whales, bears, walrus (Burial 15) and seabirds or waterfowl (Burials 15, 17, 125, 137) were favoured subjects for ivory amulets (Arutiunov & Sergeev 2006b, figs. 77, 80).

In addition to amulets, an ‘offertory trough’ was recovered from the burial of an Old Bering Sea-period woman at Ekven (Burial 7), which the authors contend was used to provide animals with a drink of water

Table 1. Cultural chronology of North Pacific coastal sites. Data derived from Dumond (2009), Gerlach & Mason (1992) and Mason (1998). Key sites for each cultural period discussed in the text are given in italics. This chronology is undergoing constant revision and is based on dates derived from a number of materials using different methods and correction factors. See Gerlach & Mason (1992) and Kuzmin (2010) for detailed discussions of chronology and calibration in the North Pacific region. See Fitzhugh (2009b) for an overview of each time period.

Northeast Chukotka	St Lawrence Island	Northwest Alaska
Okvik/Old Bering Sea (AD 1?–750) <i>Cape Dezhnev, Cape Vankarem, Seshan, Uelen</i>	Okvik/Old Bering Sea (AD 1?–700) <i>Gambell complex</i>	Ipiutak (AD 400–750) <i>Type-site of Ipiutak (Point Hope)</i>
Birnirk (AD 650–900?) <i>Uelen, Ekven, Nesh'kan</i>	Punuk/Birnirk (AD 650–1200) <i>Ievoghiyoq, Kukulik</i>	Birnirk (AD 650–1100) <i>Kurigitavik (Wales), Utqiagvik (Barrow),</i> Punuk (AD 650–1100)
Punuk (AD 800–1100)	Thule (AD 1000–contact)	Thule (AD 1000–contact) <i>Utqiagvik (Barrow)</i>

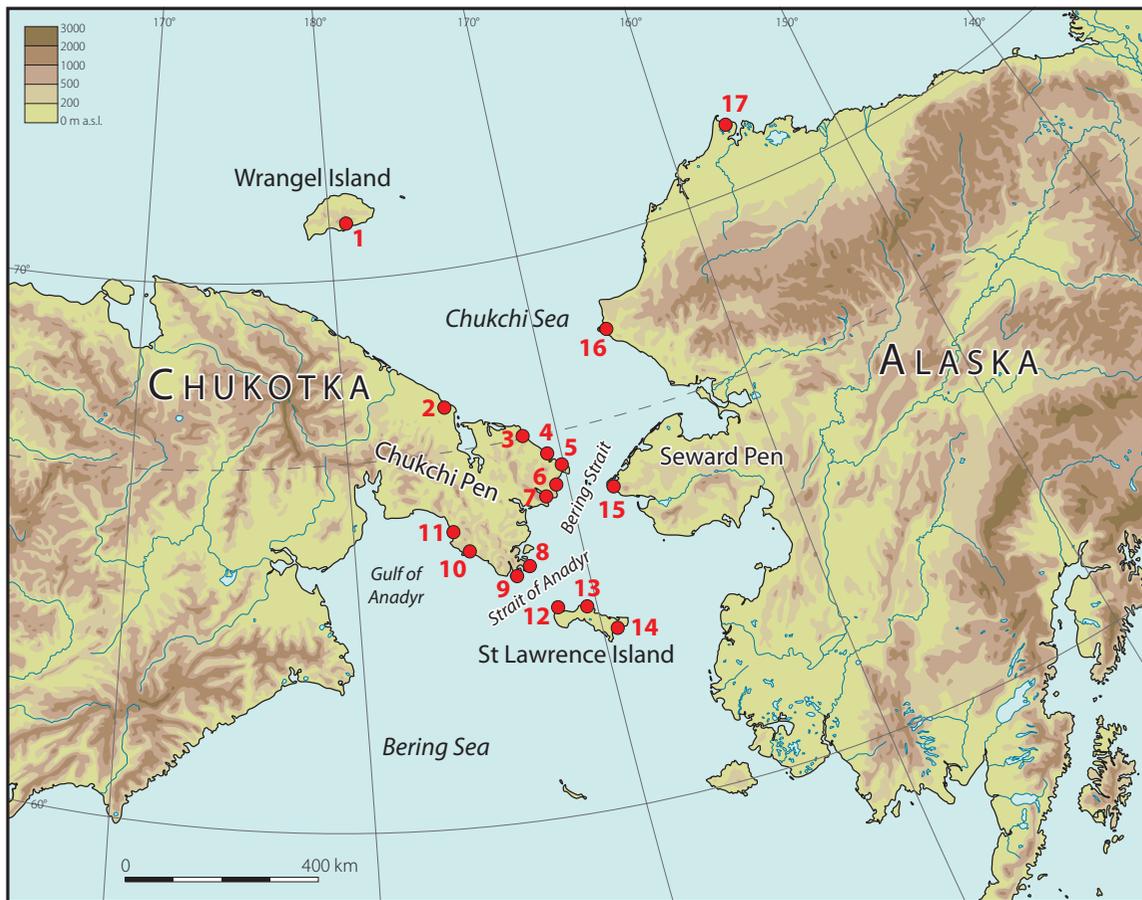


Figure 2. Key coastal archaeological sites. Wrangel Island: 1. Chertov Ovrak (Devil's Gorge). Chukotka: 2. Cape Vankarem; 3. Seshan; 4. Inchouan; 5. Uelen; 6. Ekven; 7. Yandygay; 8. Cape Chaplino; 9. Kivak (Kivak); 10. Sireniki (Sirhenik); 11. Unanan (Nunligran). St Lawrence Island: 12. Gambell site complex (including Ievoghiyoq, Hillside, Miyowagh and Seklowaghyaget); 13. Kukulik; 14. Punut Islands. Alaska mainland: 15. Kurigitavik Mound (Wales); 16. Ipiutak (Point Hope); 17. Utqiagvik (Barrow).

when they were brought home by the hunter (Arutiunov & Sergeev 2006b, 14, 122, 126), an interpretation that has ethnographic support from both Chukotka and Alaska.

The site of Uelen, like Ekven, was a combined settlement and cemetery and contained 26 inhumation burials. Numerous carvings of birds were recovered; all were similar in form to those from Ekven. Bears, whales, and possibly foxes and seals were also depicted (Arutiunov & Sergeev 2006a, figs. 96, 98). With the exception of a possible seal made from flur-spar, all amulets were made of walrus ivory.

A final example comes from the site of Sireniki, Chukotka – roughly dated to the seventh through tenth centuries AD – from which two walrus bone amulets wrapped with baleen were recovered (Fig. 3). One amulet, an unmodified walrus astragalus, is of particular interest given the attribution of magical

properties to this particular bone cross-culturally (Oma 2007, 185–7). Although the context was not recorded, the presence of the baleen supports the excavator's identification of these objects, as well as the drilled tusk of a young walrus, as amulets (Rudenko [1947] 1961, 84).

Personal amulets from Ipiutak, Ekven, Uelen and Sireniki are consistently small (most less than 50 cm) with either drilled holes for suspension or attachment or in shapes that would allow them to be secured around the neck or to clothing. Significantly, the animals represented by amulets are all prey animals. Remains of these same animals have been identified in the zooarchaeological materials from these sites from subsistence contexts (Csonka 2003).

Amulets fall into two general categories, discussed in greater detail below – those that represent animals, and those that are parts of animals. Many

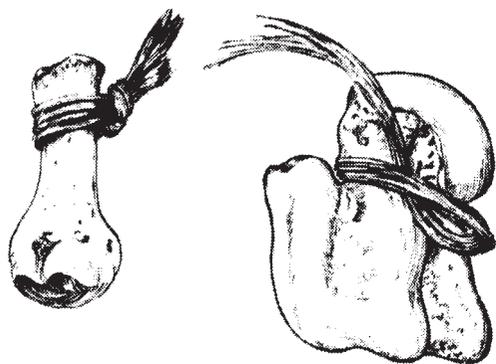


Figure 3. Walrus bone ‘amulets’ from the site of Sireniki (after Rudenko [1947] 1961, pl. 30), associated with the Punuk culture. Left: walrus phalanx. Right: walrus astragalus. Both bones had strips of baleen attached, presumably for suspension. No data on context reported.

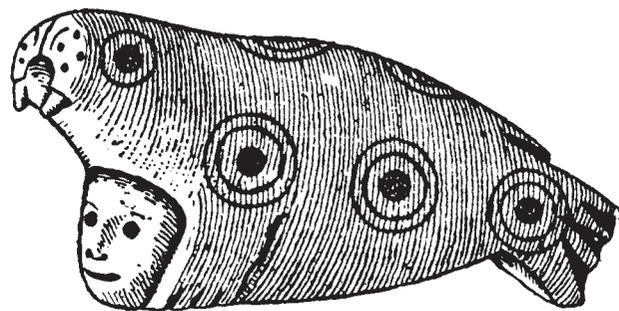


Figure 4. Ivory carving of walrus inua, i.e. spirit or soul (from Nelson [1899] 1983, 448).

of the individual bear and walrus teeth recovered from burials at Ekven and Uelen are likely to be amulets; however, without the presence of some form of attachment, such as the baleen from Sireniki, or secure context, excavators are unable to identify them as such. Although complete sex and age data are not available for the two Chukotkan cemeteries, amulets appear to be associated with adults. The presence in the grave of a hunter’s personal amulets is consistent with the practice of interring the deceased with items associated with hunting, as projectile points, harpoon counterweights, bird spears and bolas are among the most common grave goods at these cemeteries.

Rituals and objects associated with successfully taking prey animals have been documented among many hunting and gathering societies. McNiven and Feldman (2003), in their study of ritual among prehistoric Torres Strait Islanders, identified two sorts of rituals associated with ‘hunting magic’: immobilization rituals, enabling hunters to advance upon and take prey successfully; and allurement rituals, which attract the prey animal to the hunter (McNiven & Feldman 2003; see also Skelly *et al.* 2011). Amulets represent one way of materializing the desired ‘magical’ relationship with prey animals, operating upon the principle of ‘like attracts like’. Amulets made from the bone, skin or tusk of the desired animal provide a material link between hunter and prey (McNiven 2010). Fitzhugh and Kaplan (1982, 78) have noted that hunting technology of Bering Sea Eskimo is characterized by the use of ‘spiritually compatible materials and appropriate imagery’, a point that Fitzhugh (2009a) further develops in his discussion of the decoration of Old Bering Sea harpoon counterweights. The walrus

bone amulets from Sireniki (Fig. 3) drew the person of the walrus to the hunter by attracting it to the material remains of its own kind. Such amulets did not need extensive modification to make them effective. They could simply be perforated or wrapped with a piece of sinew or baleen for attachment or suspension.

Amulets made in the *shape* of the desired animal, such as the bird, walrus and bear carvings from Ekven and Uelen, also invoked and attracted prey. In contrast to amulets of animal origin, these amulets required creation or modification of the source material. Stone, ivory, bone or glass, in the case of the whale amulet (Fig. 1), were all used; quartz crystal may have been especially efficacious (Rousselot *et al.* 1988, 169). The principle was similar to that associated with the use of amulets of walrus bone or seal skin — an object depicting a specific animal would summon the *inua*, or spirit of the other-than-human person (Fitzhugh & Kaplan 1982; Crowell 2009). The *inua* (sing. Inupiaq; = spirit or soul; literally ‘its person’; in Central Yup’ik, sing. *yua*) was conceptualized in anthropomorphic terms and represented as a small face or figure, as in this example (Fig. 4), a carved ivory walrus collected from Alaska in the late 1800s.

A third way that amulets functioned was by invoking a physical characteristic or ability of an animal, rather than the animal *per se*. Thus, a whaling amulet made from a stuffed godwit (*Limosa lapponica*) (Fig. 5) (Murdoch [1892] 1988, 438) would not be used to attract sandpipers, but rather to invoke their highly salient habit of stabbing prey in shallow water with their long and distinctive bills. The striker in a skin boat, or *umiaq* (Siberian Yupik *angyaq*), would ideally replicate, through the use of the amulet, the quick and efficient

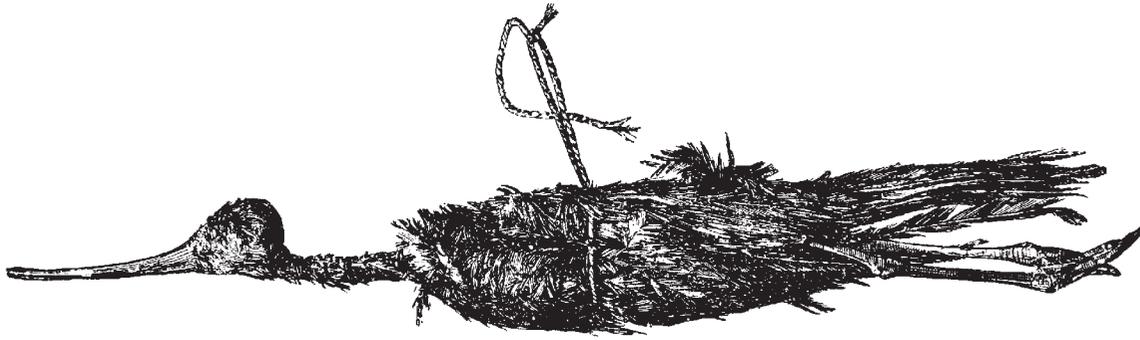


Figure 5. A stuffed godwit, or sandpiper (*Limosa lapponica*), used as a whaling amulet (from Murdoch [1892] 1988, 438).

movement of the godwit, enabling him to successfully harpoon a walrus. A similar ability is required to take seals at breathing holes. The hunter may stand for hours awaiting a single chance to strike his prey. Speed and accuracy are essential to success. The idea that the abilities of an animal may be acquired through the use of an amulet made from its body parts is likely also the reason behind the frequent use of raptor elements (Lantis 1938, 442; Murdoch [1892] 1988, 437), and may explain the skull of a loon found at Ipiutak.

Efficacy of amulets depended upon the volatile, fluid nature of human and animal bodies — upon the multiple potentialities residing within the flesh, blood and bone of the hunter. As suggested in the excerpt from the story collected by Knud Rasmussen, discussed above, amulets invoked and facilitated the physical expression of these potentialities, calling forth speed, flight or accuracy. The concept of ‘embodiment’ is especially applicable here, with material culture functioning as the catalyst and medium through which human bodies manifested the other-than-human natures already contained within them. Physical matter need not be fundamentally converted; nor are these changes transformative or metamorphic in the sense that the presence of one eliminates the other. Rather, as Carpenter (1973, 284) suggests, ‘all relevant forms are always present’. Each person — human and prey animal — contains a multitude of bodily potentials that shift, retreat and emerge depending upon context, the behaviour of the hunter and the material culture he employs. Singing, thinking and wearing — a visor in the shape of a bird beak, for example, or the hide of a caribou — summon from within the person the required trait or kinetic ability. Amulets aided this alteration of form by simply *being* what they were.

The ethnohistoric use of amulets has been documented among Eskimo peoples from northeast Siberia to Greenland since at least the 1700s (e.g. Crantz 1767, 216). Evidence from burial contexts indicates that

prehistoric people of Alaska and Chukotka engaged in similar practices. I have suggested here that the prehistoric use of amulets indicates that hunting success was ontologically linked to animal agency. The use of objects made from animal parts or made in the shape of animals allowed hunters to invoke the *inuut* of their desired prey. Amulets materialized the intersubjective relationship between hunters and animals as other-than-human persons. The use of amulets, like chanting, singing hunting songs and thinking good thoughts, facilitated communication and summoned animal spirits. Such behaviours are consistent with the recognition of the personhood of animals and their ability to behave as agents.

Bone caches

The second line of evidence that supports the idea that Bering Strait hunters engaged with animals as sentient, agential other-than-human persons is the patterned deposition of sea mammal bones and skulls within sites and the widespread distribution of caches of bones and antlers in extramural locations. Curation or deposition of the skulls of prey animals is a common practice across Siberia (Paulson 1968; Jordan 2003) and is also known from Sámi sites in Fennoscandia (Äikäs *et al.* 2009; Olofsson 2010). The selective use of skulls may relate to the head as seat of the major sensory organs — those which mediate the relationship between the hunter and his prey, as McNiven (2010) has suggested for the use of dugong ear bone amulets by Torres Strait Islanders. While I am not suggesting that such widespread practices share similar meanings or represent a common cultural heritage, the structured deposits along the Bering Sea coast do appear to be part of a belief system shared by Eskimo on both sides of the strait. Chukotka and Alaska are separated by less than 100 km and both trade goods and linguistic evidence demonstrate that Alaskan and Siberian Eskimo routinely crossed the strait, either by *umiaq* in the summer or across the sea ice in the winter.

Although there are numerous examples of bone caches or 'shrines' along the Chukchi coast, evidence for such structured deposits in Alaska is limited. This is due in part to the fact that the coast of Chukotka was much more densely settled prehistorically than that of Alaska. Settlement patterns appear to parallel the routes of migratory marine mammals, which follow a mass of nutrient-rich water through Bering Strait. The Anadyr water mass flows along the entire eastern coast of Chukotka, meeting the Alaska mainland only at points and headlands. As a result, sites in Alaska appear to be fewer in number but larger and more aggregated than those on the Siberian side (Mason & Gerlach 1995; Hill 2011).

Two coastal sites in Alaska have yielded evidence for skull features. Kurigitavik Mound, at Wales on the Seward Peninsula, contained one, and possibly two, walrus skull 'rings' associated with deposits dated to AD 810–1260 (Harritt 2004). A second feature — a skull mound in an Ipiutak context at Cape Krusenstern — contained over seven hundred skulls of ringed and bearded seals, as well as polar bear jaw bones (Giddings & Anderson 1986, 130–31). Captain Frederick Beechey (1831, 355) reported seeing 'heaps' of seal skulls at an abandoned village on Eschscholtz Bay. He related the practice to the 'superstitions' of the Greenlanders, who cached skulls so that the souls of the seals 'may not be enraged' (Crantz 1767, 216). The only other Alaska example of a skull cache that I am aware of is that reported by Binford (1978, 413) at an inland Nunamiut Eskimo site called Kollutuk. This 'shrine' was reportedly 'packed' with the skulls of mountain sheep (*Ovis canadensis*). Binford's informants explained that the special treatment of sheep and bear remains ensured that the 'spirits' were properly thanked, which prevented them from becoming 'mad' and causing hunters to starve.

Across the Bering Strait, Russian archaeologists have identified multiple sites with structures containing large numbers of walrus skulls, as well as extramural bone and antler features. Such sites include Nataliia II, with a single sixth-century AD date, where one room of a three-room dwelling contained significant numbers of walrus bones (Orekhov [1987] 1999, 23). The bones appeared to be localized, rather than spread throughout the structure. Unfortunately, the investigator does not report which walrus elements were present. Nataliia II also contained what Orekhov ([1987] 1999, 23) has identified as a 'cult site' or 'shrine' containing walrus skulls and the bones of bear, dog, wolverine, and caribou or reindeer. While Orekhov suggests that the feature was of recent origin — perhaps the 1700s — he suggests that the practice of depositing bones was an ancient practice, an observa-

tion that is clearly supported by data from other sites.

On Cape Rifovyi, a cluster of walrus skulls in an 'oval ritual area' measuring three by five metres was located between two small settlements (Orekhov [1987] 1999, 25). At Opukha Lagoon, north of Cape Rifovyi, four 'shrines', plus a cache of walrus skulls were found near the site of Opukha (seventh–eighth centuries AD), which itself contained shrines with the bones of whales, the skulls of walrus, as well as seal (both bearded and phocid), bear, wolverine, fox and bird bones (Orekhov [1987] 1999, 52). Excavation of the feature yielded 220 bone points and six strata containing evidence for thermal activity, each separated by a layer of sandy loam. In the upper levels of the feature, excavators recovered beads of saphirite, glass and porcelain, suggesting that the deposit was in use through the early historic period. Opukha II contained a walrus skull feature in the centre of the site; nearly one hundred bone points were recovered (Orekhov [1987] 1999, 57–8). A shrine near Anna II was marked with walrus skulls and the mandible of a grey whale. Khatyrka I and Orianda II had similar features.

Etchun II had three ritual loci containing antlers, walrus skulls, and a grey whale mandible. Local informants suggested that the site had been used for ritual activity into the twentieth century (Orekhov [1987] 1999, 88–9). Perhaps the most interesting site is that of Geka I, which comprises approximately fifteen dwellings, most of which are semi-subterranean three-room structures. In what the excavator has called a 'cult pithouse', dozens of walrus skulls and baculi were identified (Fig. 6), including a mounted skull with intact tusks (Orekhov [1987] 1999, 131–4).

According to Orekhov ([1987] 1999, 131), these shrines and semi-subterranean structural features represent ritual practices associated with the death and renewal of prey animals. Although chronological control is poor, it appears that the practice of collecting and caching the skulls of prey, especially walrus, dates to at least the late Old Bering Sea period, and therefore overlaps with the use of amulets at Ipiutak, Ekven and Uelen. At some point, likely at the end of the first millennium AD or the beginning of the second, the pattern seems to shift to extramural locations with emphasis on reindeer skulls and antlers, in addition to the remains of sea mammals. This pattern may represent the arrival of Chukchi people on the coast. The Chukchi, who speak a Chukotko-Kamchatkan language related to Koryak and Itelmen (Kamchadal), are indigenous pastoralists who currently inhabit the area between Bering Strait and the Kolyma river (Arutiunov 1988; Krupnik 1993). Sometime after their as-yet-undated arrival in the region, some Chukchi adopted marine mammal hunting and settled on the

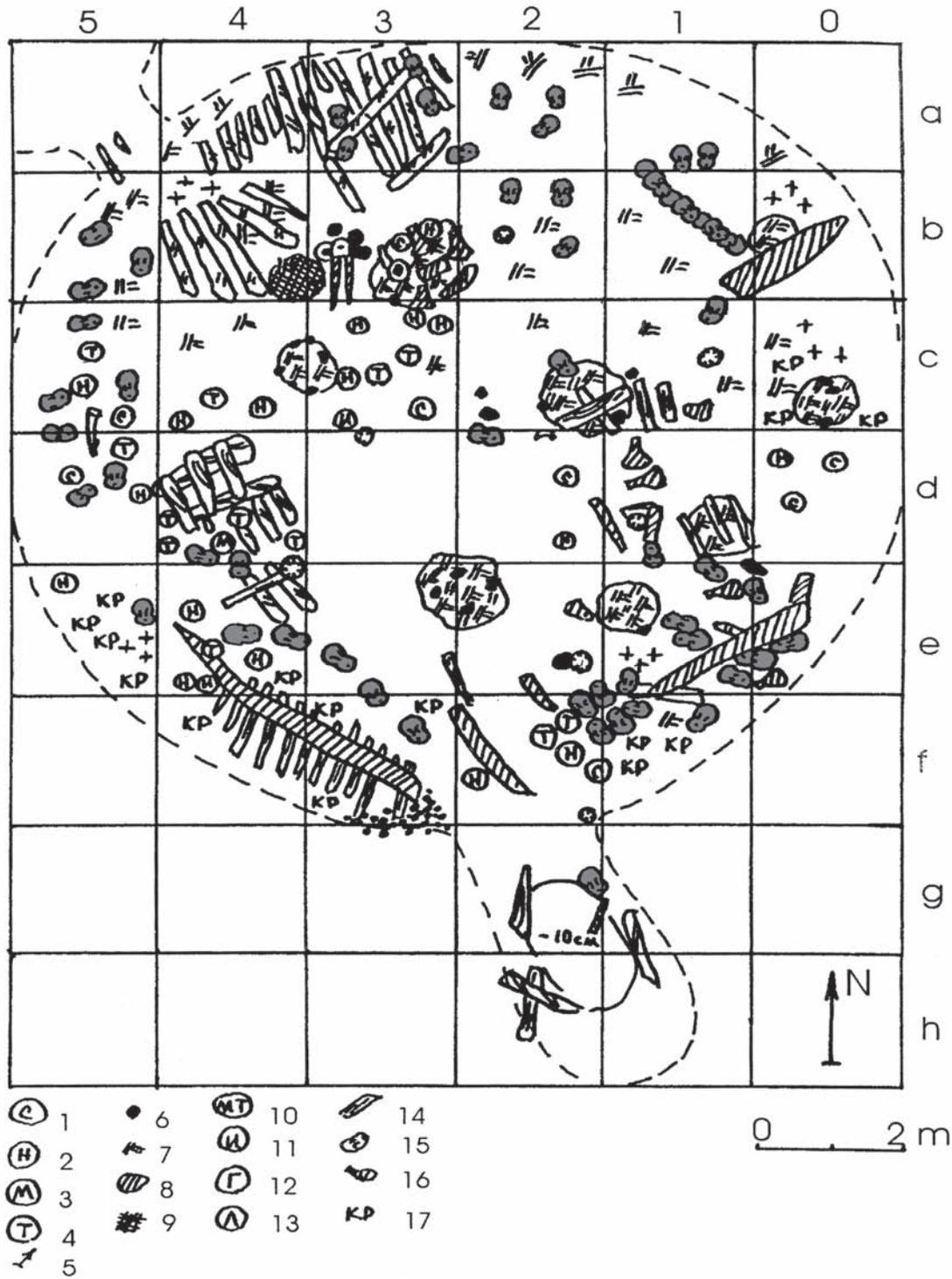


Figure 6. Plan view of one room of a two-room semi-subterranean structure at Geka I (after Orekhov [1987] 1999, 125). The passage to the second, smaller room is visible in the upper left. Item 15 represents walrus skulls, which appear shaded in the house plan.

coast. They became known as ‘Maritime Chukchi’ and historically traded blubber, seal skins and walrus-hide lashings to the inland ‘Reindeer Chukchi’ (Fitzhugh & Crowell 2009, 22). Maritime Chukchi appear to have modelled their hunting strategies and technology upon those of the Siberian Eskimo (Bogoras 1904–9). Trade and intermarriage between Chukchi and Eskimo have produced a ‘dual’ society (Vaté 2005b) with ritual practices that combine elements of Eskimo skull caching with sacrificial rites involving reindeer.

Reindeer sacrifice is a widespread practice and has been documented among the Koryak of northern Kamchatka (Jochelson 1904; Irimoto 2004) and the Khanty of northwest Siberia (Pentikäinen 1996; Wiget & Balalaeva 2001), as well as among the Chukchi. According to Ingold (1987; 2000a), the transition from hunting to herding and subsequent development of sacrifice among pastoralists signals a fundamental shift in the ways humans perceive and relate to animals. Hunting involves the concept of reciprocity, an exchange between equals, whilst pastoralism involves the ritual slaughter of a domesticate. For Ingold (1987) sacrificial animals — he uses reindeer as his example — embody human domination. Hunting, in contrast, requires the hunter to perform the immolation *on behalf of* the master of animals. This animal master, who controls wild herds, mirrors human mastery of domesticates.

Chukchi reindeer sacrifice and Eskimo belief in the personhood and agency of prey animals would appear to be incompatible, even contradictory, in both concept and practice. However, the Chukchi either adopted the ritual curation and caching of bone from their coastal neighbours or fused the existing rite with one of their own, essentially incorporating a new species into pre-existing Eskimo depositional practices and transferring them to extramural contexts. The presence of reindeer skulls and antlers at ‘shrines’ on the coastal tundra is emblematic of these changes. The use of fire, which has long played a role in Eurasian herding ritual (Jordan 2011, 36–7) and remains central to reindeer sacrifice (Jochelson 1904; Ingold 1987; Vaté 2005a), appears to be a Chukchi introduction. The thermal feature documented at Opukha (Orekhov [1987] 1999) may be an early example of the fusion of Chukchi fire-oriented sacrificial ritual with Eskimo curation and caching. The presence of projectile points and beads, used for ritual purposes among the closely related Koryak to the south (Jochelson 1904, 418), may also be a Chukchi innovation. Unfortunately, the poor temporal control at Opukha limits our ability to make more meaningful inferences.

Hunting and herding ontologies have been conceptualized in dichotomous terms in the anthropological literature, reflecting distinct subsistence

systems and incompatible attitudes toward animals (e.g. Ingold 1987; 2000a; Oma 2010). The evidence from Chukotka, however, suggests that syncretic practices developed that combined autochthonous Eskimo curation and caching with the ritual slaughter of reindeer. I suggest that while the ontologies underpinning the treatment of animals and their remains by Chukchi pastoralists and Eskimo marine mammal hunters were dissimilar, the ways in which those beliefs were materialized were not. Early ethnographers working in the Russian Far East contributed to the polarization of economies — and cultures — through ethnonyms such as ‘Maritime’ and ‘Reindeer’ Chukchi or Koryak (e.g. Bogoras 1901; 1904–9; Jochelson [1908] 1975). However, the system in place at Russian contact in the 1600s appears to be much more complex and fluid than the names imply. Krupnik (1993) has argued that large-scale reindeer husbandry developed after contact, sometime in the 1700s. Owing to differential access to resources, however, not all Chukchi pursued pastoralism to the same extent after this innovation occurred. Herd sizes varied, with wealthy herders managing hundreds of animals, whilst poorer ones owned ten or twenty. Prior to the 1700s, Chukchi likely depended upon hunting, fishing and small-scale reindeer herding. This ‘transitional’ mode of subsistence also obtained among the Sámi, Nenets, Nganasan and Yukaghir (Krupnik 1993, 162–3). In other words, the differences between ‘Maritime’ and ‘Reindeer’ Chukchi or Koryak observed by Bogoras and Jochelson appear to have been recent developments.

If ‘proto-Chukchi’, those who first encountered Eskimo on the coast about a millennium ago, were already practising reindeer sacrifice, it was an activity that occurred within a framework that combined hunting and herding. Rather than representing a qualitatively different use of the landscape and the remains of animals, the *activity* of curation and caching and its material expression may have seemed familiar to early Chukchi, who then modified the practice to meet their own needs. The seasonal, organizational and residential flexibility inherent in a mixed subsistence economy permitted the conceptual integration of new ritual practices at the same time social and behavioural integration of marine-mammal hunting was occurring. A parallel example of such a shift has been documented by Wiget and Balalaeva (2001, 95) who have suggested that some Khanty groups found:

in their own inventory of hunting and fishing practices and beliefs, especially rituals associated with hunting animals ...[those] which could be readily transformed so as to accommodate the adoption of reindeer husbandry and domestic reindeer sacrifice.

The reverse could also have occurred, particularly since Siberian pastoralists were known to curate bone and antlers in 'sacrificial piles' at contact (Malandra 1967) and embraced animist beliefs and the concept of a 'master of animals' (Bogoras 1901; 1904–9; Ingold 1987). As Vaté has documented, modern Chukchi still employ the skulls of certain animals, such as wolves, bears and loons, in ritual (Vaté 2005a, 46). While caching and skull curation may not have been part of the proto-Chukchi cultural repertoire, the similarities that exist among Native Siberians in many aspects of shamanism, ritual practice and belief are indicative of a long tradition of migration, interaction and exchange. In Chukotka, the ritual treatment of animal remains rapidly syncretized, albeit using different species and in different contexts.

While the ritual acts — and their material residues — are similar, the Eskimo perception of the agency and sentience of prey animals likely bore no resemblance to the early Chukchi attitude toward domesticated reindeer. Ingold's (1987; 2000a) understanding of sacrifice and domestication has been critiqued for its emphasis on domination by Oma (2010), who has argued that, *in contrast to hunting*, domestication represents a trust-based social bond between humans and animals. While Oma's interpretation of domestication is nuanced, her suggestion that hunting 'sentimentalizes brutality' (Oma 2010, 184) and prohibits social bonds between humans and animals is inconsistent with the Eskimo evidence. Whether contact-era Chukchi relationships with reindeer were a sort of social contract, as Oma (2010) argues, or hierarchical, as Ingold suggests, they do not appear to have involved either complex taboos or the idea that reindeer were social equals and sentient subjects. So while early Chukchi may have adopted or syncretized their rites with some Eskimo practices, they did not necessarily adopt the ontology that provided their conceptual foundation.

Conclusions

On the basis of the archaeological data presented above, and in light of the ethnographic data from the Arctic and elsewhere on societies that relate to animals as other-than-human persons, we can draw some tentative inferences about how prehistoric Eskimo of Alaska and Chukotka understood animals. First, prey animals, including bear, walrus and whale, were perceived as agential beings who interacted with humans as persons; they were sentient social equals capable of deciding whether to favour humans by allowing themselves to be taken. Human hunters engaged with prey animals on a regular, perhaps

daily, basis. Hunting ritual and observance of taboos were the responsibility of the individual hunter and his family members, whose duty it was to properly approach, take, butcher and dispose of the animal and its remains.

Two forms of material culture are indicative of this Eskimo–animal relationship: hunting amulets and caches of marine mammal and later, reindeer, remains. Amulets, buried with hunters and recovered from funerary contexts at coastal sites in Alaska and Chukotka, materialized the relationship between hunters and the *inuut* of prey. As personal objects associated with specific individuals, amulets were interred with the deceased, rather than retained by family members after death. Amulets invoked prey animals most frequently through their sculptural representation, usually in ivory. Some evidence also exists for the use of unmodified amulets made of the bones (e.g. Fig. 3), teeth or soft tissues of animals. A single archaeological example, the loon skull from Ipiutak, may represent the invocation of animal traits, rather than an attempt to lure a specific prey animal to the hunter. Both kinds of amulets, either those representing animals or those meant to invoke animal traits, have been extensively documented in the ethnohistoric literature of the region. Sites yielding amulets — Ipiutak, Ekven and Uelen — date to at least 1500 years ago. Amulet efficacy depended upon the perception of human and animal bodies as fluid, unstable and comprised of both physical and cognitive potentialities.

The second line of evidence — caches or 'shrines' of animal remains dated to the fifth through ninth centuries AD and identified on the Seward Peninsula and along the coast of Chukotka — are analogous to the careful deposition of elk (moose) remains by the Eastern Khanty of the Iugan river of western Siberia (Jordan 2003, 100–102, fig. 5.6, 112) or of bear remains by the Koyukon (R.K. Nelson 1983) of interior Alaska. These structured deposits reflect a focus on animal skulls, which were cached and arranged in semi-subterranean locations, which may represent centres of communal ritual activity. These deposits were constructed to accord with hunters' understanding of animals' preferences regarding the treatment of their remains and are indicative of human efforts to honour and maintain good relations with prey.

I have couched this discussion of amulets and animal bone caches in ontological, rather than religious, terms. The distinction between the two has implications far beyond the Bering Sea region. Whilst the category of 'religion' is dependent upon a dichotomy between the known and the unknowable, the natural and the supernatural, the mundane and the numinous, Eskimo understood other-than-human

persons as social actors with whom they shared the world. Relations with these persons involved sets of rules and expectations and were predicated upon mutual respect, just as one's relations with human kin were. Breaches of conduct, misunderstandings and bad manners had negative social implications, just as they did in interactions with one's affines, cousins or trading partners.

Relegating offerings, bone caching and the use of amulets to the category of religious ritual obscures the centrality of such acts to daily life and creates a conceptually distinct set of behaviours that risk fundamentally misrepresenting prehistoric ontologies. In reference to folk ontologies in post-medieval Finland, Herva (2009) had advocated an approach in which archaeologists understand behaviours in terms of *perception*, rather than belief (see also Herva & Ylimaunu 2009; Herva *et al.* 2010). In other words, other-than-human persons were directly apprehended — perceived as part of the everyday world. They were not something to be believed in, any more than one 'believed' in the existence, sentience and agency of one's spouse or child. Animal persons and relationships with them were perceived, experienced and occasionally handled improperly or with poor judgment. Making amends and repairing relations with other-than-human persons involved communication, apology and, in extreme situations, requests for shamanic assistance and intervention.

Relations with what have been termed the 'spirits' or 'souls' of other-than-human persons — what Eskimo understood as *inuut* — constituted no privileged or supernatural class of interactions. Prey animals were members of other-than-human societies that were perceived by hunters and their families in profoundly social terms. Some sorts of material culture — processed animal bones, hunting implements or 'ritual objects', for example — should thus be interpreted as social media, rather than as religious paraphernalia. Shamans could play critical roles in interpreting, mediating and improving relations between human and animal societies. However, hunters who tracked, dispatched and transported prey and women who thought about, processed and shared animals and their remains engaged in daily discourse with other-than-human persons and bore primary responsibility for maintaining these relationships. Focus upon shamans, to the exclusion of other members of society, risks underestimating the extent to which non-ritual specialists engaged in 'ritual' activities.

The 'ontological turn' in the discipline promises to further the 'archaeology of hunter-gatherer belief' that Jordan (2008) has advocated. The study of enculturated landscapes, modified natural features and

structured deposits represent avenues of research that will expand our understanding of the ways in which foragers experienced, thought about and materialized their worlds. Prey animals were actors in those worlds, influencing foragers' beliefs, perceptions and actions. As this article has demonstrated, untangling economy from social and ritual behaviours is neither necessary nor desirable. Eskimo and other hunters and gatherers (e.g. McNiven 2003; McNiven & Feldman 2003; McNiven 2010; Skelly *et al.* 2011) treated animals and their remains in highly structured ways that left discernible patterns in the archaeological record. Archaeologists already collect data on animal species, record which skeletal elements are present and calculate relative frequencies of taxa in assemblages. Combined with attention to context, this information can inform our reconstructions of human–animal dynamics in both subsistence *and* ontological terms.

As highly skilled and perceptive observers, foragers incorporated animal characteristics and behaviours into material culture, myth and social practice. Archaeologists should consider salient characteristics and behaviours of animals in their interpretations. Members of Arctic societies worldwide believe, for example, that bears are 'good to think'. Reasons for this include the strength and power of bears, their ability to stand upright, and their similarity to humans in some anatomical features. These traits may explain, in part, why bears are often considered kin. Following this logic, Sámi bear 'burials' become much more than structured deposits; they may actually represent graves (for examples, see Zachrisson & Iregren 1974; Broadbent 2006; Broadbent & Wennstedt Edvinger 2011). Another example is McNiven's (2010) interpretation of the high frequency of dugong ear bones in Australian bone mounds, which was informed by the perception of local hunters that dugong have excellent hearing — an observation borne out by emerging scientific evidence. He argued that ear bones were selected as amulets in order to manipulate dugong hearing, enabling hunters to approach and take the animals successfully. In both cases, interpretations were informed by knowledge of the prey animal's biology and behaviour.

In conclusion, the archaeology of ontology is a challenging field of research that promises to yield new insight into human perceptions of the natural world. Through material culture, prehistoric Eskimo hunters sought to mediate their relationships with sea mammals, seeking to communicate with, lure, placate and honour prey. They embodied an intersubjective relationship with animals on a daily basis and materialized this relational ontology by wearing amulets, invoking *inuut*, and constructing caches. Recognizing

the ways in which hunters and their families interacted with prey enables archaeologists to construct a more accurate picture of human relationships with the natural world and those other-than-human persons with whom they shared it.

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Notes

1. Throughout this article, I use masculine pronouns to refer to hunters. According to the available ethno-historic and ethnographic sources, until at least 1900, Eskimo men were responsible for pursuing, taking and transporting large prey animals. While women's thoughts, behaviour and labour in secondary transport, processing and cooking were critical to the household economy, they did not, to my knowledge, generally take part in pursuit and dispatch of marine mammal prey.

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