6 The archaeology of human-dog relations in Northwest Alaska

Erica Hill

Some 1500 years ago, on a gravel spit extending into the Chukchi Sea, people living at the site of Ipiutak buried several members of their community. They excavated a shallow pit in the gravel and laid out a human adult, likely a woman. She was positioned on her back with her legs extended. An infant was placed at her right shoulder and she was provided with a stone knife and two chisels. Next, a dog was lowered into the grave. The dog's body was positioned along the woman's right leg; its head rested on her thigh, while the hindquarters covered her feet.

Burial 132 at Ipiutak (Larsen and Rainey 1948: 250), described here, provides a glimpse of an unusual practice in Alaska prehistory—the burial of a human and a dog together (Figure 6.1). Such burials demonstrate that the lives of dogs and humans have been entangled for nearly two thousand years along the coast of Alaska, where they cohabited until around AD 1000, when their relationship intensified and became one of codependency. Together humans and dogs developed the technologies and practices of the Thule lifeway, which enabled them to hunt and travel quickly and efficiently as they colonized the North American Arctic.

Thule people and their dogs probably descended from occupants of western Beringia in the Late Pleistocene (Raghavan et al. 2014; Tackney et al. 2016; on the genetics of dogs, see Brown, Darwent, and Sacks 2013; Germonpré et al. 2017). By the Early Holocene, humans and dogs had explored Zhokhov Island in the East Siberian Sea (Pitul'ko and Kasparov 2016). They were also cohabiting along the coast in Kamchatka, at the Ushki 1 site. There the remains of dogs and children were interred in similar ways (Dikov 1996). As Losey et al. (this volume) observe, the interment of a dog in the floor of an Ushki dwelling suggests the animal was "literally domesticated." By 5000 years ago, dogs had established themselves in human societies across Siberia; their treatment in death at Ushki and in Cis-Baikal (e.g., Losey et al. 2011; Losey et al. 2013) demonstrates that their relations with humans had already become complex, diverse, and ritualized.

Across Bering Strait in Alaska, the evidence for dogs in the Late Pleistocene and Early Holocene is scarce. Dog bones appear in midden and burial contexts at sites in Kachemak Bay and the Kodiak Archipelago in southern Alaska (de

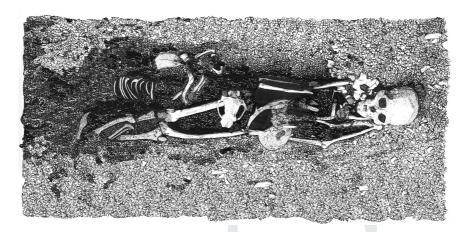


Figure 6.1 Illustration of Ipiutak Burial 132 (after Larsen and Rainey 1948: pl. 100.3) showing remains of a dog interred with an adult human and infant. Illustration by Mark Luttrell.

Laguna 1956; Lantis 1980). In Northwest Alaska, evidence of dogs is negligible in the first centuries AD; their presence is known from a small number of disarticulated skeletal elements (e.g., Darwent 2006) prior to AD 500, a pattern similar to that described for Paleoeskimo sites in the Eastern Arctic (Morey and Aaris-Sørensen 2002).

Around AD 500, dogs become more archaeologically visible, appearing in burials at the site of Ipiutak on the Chukchi Sea coast. From the Ipiutak period onwards, zooarchaeological and artifactual evidence for dogs in the region increases. Their remains occur in small numbers at sites along the coasts of Chukotka and Alaska in house and midden contexts. At cemetery sites, like Ipiutak, dog elements occur in human graves, suggesting they had some cosmological significance.

Sometime between AD 700 and 1000, relations between humans and dogs in Northwest Alaska began to intensify. Dogs took on new roles in travel and transportation by providing traction. This development, part of the Thule phenomenon, fundamentally altered the way humans and dogs lived together. Dog traction enabled humans to travel farther and faster, and to colonize the High Arctic. But the labor of dogs required constant provisioning, compelling human hunters to adjust their subsistence practices to meet the demands of both human and canine dependents.

Though dog traction was a critical component of Thule and early historic Eskimo lifeways in Northwest Alaska, it represents only one facet of a complex set of human-animal relations manifest in technology, subsistence, and cosmology. This chapter identifies multiple lines of evidence for human-dog relations at sites in Northwest Alaska, on the islands in the Bering Sea,

and along the coast of Chukotka. Artifactual evidence of dog traction and harnessing complements the osteological evidence of dogs in middens and houses. Burial evidence hints that dogs and their body parts had ritual significance as early as the Ipiutak period, AD 500. They cohabited with humans for several hundred years until intensification during the Thule period (AD 1000–1450) fundamentally changed the ways humans and dogs related.

Dogs in Ipiutak and Old Bering Sea contexts

Dated to AD 500–900, roughly contemporaneous with the Old Bering Sea culture, Ipiutak occupations (Figure 6.2) are known from several sites along the northwest coast of Alaska and the Seward Peninsula (Hilton et al. 2014; Mason 1998, 2014, 2016a). Evidence for dogs has been identified at a handful of sites dating to this time period: the Ipiutak component at Cape Krusenstern yielded zooarchaeological evidence for two or three dogs, albeit not in burial contexts (Giddings and Anderson 1986: 154). At Deering, on the Seward Peninsula, the skulls of two adult dogs and a nearly complete skeleton of a pup were found within an Ipiutak structure identified as a *qargi*, or ceremonial house (Saleeby et al. 2009: 197). Dog feces were found in the anteroom (Bowers 2009: 92; Larsen 2001: 22). A small number of dog bones were also identified in the faunal component from another house at the same site (Saleeby et al. 2009: 196). In Old Bering Sea contexts (AD 400–800) at sites on St. Lawrence and the Punuk Islands, dog remains roughly contemporary to Ipiutak have been found (Collins 1937: 249; 1940: 551).

The exception to this pattern of few bones in multiple contexts is the Ipiutak type site at Point Hope, where several dogs occur articulated in burials and as disarticulated elements in house contexts (Larsen and Rainey 1948: 186). To date, Ipiutak has yielded the only conclusive evidence for the burial of dogs by Eskimo of Alaska and Chukotka.¹ The rare occurrence of dog burials in Arctic Alaska and Canada contrasts with the high frequency of these features elsewhere in North America (Morey 2006) and in other northern regions, such as Scandinavia (Gräslund 2004; Larsson 1989; Mannermaa, Ukkonen, and Viranta 2014; Viranta and Mannermaa, this volume) and Siberia, where the burial of canids appears to have been a diverse and widespread practice (e.g., Dikov 1996; Losey et al. 2011; Losey et al. 2013). The rarity of dog burial in Northwest Alaska and the adjacent coast of Chukotka makes the finds at mortuary sites such as Ipiutak, where dogs and dog elements were found in multiple contexts, particularly noteworthy.

Following the typology suggested by Perri (2017), the features involving dogs at Ipiutak include one true dog burial (Burial 109), three "associated" depositions in which one or two dogs accompanied human burials (Burial nos. 131, 132, 137), and one elemental deposition comprised of two dog skulls (Burial 90) (Larsen and Rainey 1948).

Burial 109 contained a complete dog skeleton interred in a "tomb-like log structure with the head toward the west, exactly as in the human burials"



Figure 6.2 Map showing sites discussed in the chapter. Map created by Erica Hill.

(Larsen and Rainey 1948: 121). There was no human skeleton in the tomb, nor were any artifacts found (Larsen and Rainey 1948: 248). Elsewhere in the cemetery, humans were buried in similar tombs, both with and without grave goods. Several archaeologists (e.g., Hill 2013; Losey et al. 2011; Morey 2006; Perri 2017) have interpreted the parallel treatment of humans and non-human animals in death as evidence that the species held similar ontological positions. Without additional evidence from other Ipiutak sites, such an interpretation must remain conjectural. However the treatment of the dog in Burial 109 was clearly distinct from that of conspecifics, indicating the animal held some significance deserving of unusual expenditures of time, energy, and resources.

Three other burials at Ipiutak contained humans and a total of four associated dogs. Burial 131 contained an articulated dog lying along the left hip of the human decedent. An arrow point was found within the dog's skeleton, though it is unclear whether this was the product of an earlier injury, taphonomic processes, or the dispatch of the animal prior to burial. Burial 132, containing an adult, an infant, and a dog in immediate physical proximity, has already been mentioned. Burial 137 contained a single adult human flanked by two dogs—one on each side (Larsen and Rainey 1948: 250).

The third type of dog-related deposition at the Ipiutak cemetery was elemental—the inclusion of individual canid skeletal elements in the burial of a human. Elemental depositions are common worldwide, and most often include dog skulls, mandibles (jawbones), and teeth (Perri 2017). Several examples exist at coastal sites in Alaska and Chukotka: Burial 90 at Ipiutak contained a young woman in a log coffin accompanied by two dog skulls (Larsen and Rainey 1948: 60, 243). In Chukotka at the site of Ekven and dating to generally the same time period as Ipiutak, a 14- to 15-year-old individual was buried with a dog mandible (Arutiunov and Sergeev 2006b: 11). At nearby Uelen cemetery, a dog skull was recovered from a human burial in an Old Bering Sea context (Arutiunov and Sergeev 2006a: 53).

Depositions of dog skeletal elements may be part of a broader pattern linking coastal peoples on both sides of Bering Strait. Based on descriptive information from early twentieth-century excavations, skulls and mandibles of dogs appear to be overrepresented in the archaeological record. For example, at Miyowagh on St. Lawrence Island, Collins (1930) recovered at least 26 right mandibles that he classified as domestic dog. At Kukulik to the east and at a later date, "several dozen" dog skulls were recovered (Geist and Rainey 1936: 62). One possible explanation for this pattern is excavation bias; in the absence of screens, only large and easily identifiable bones were collected and reported. A second possibility is that dogs were consumed and that mandibles and skulls, which contained little marrow and bone grease, were discarded rather than processed. Third, skulls and mandibles may have been preferentially curated following the death of the animal.

Archaeological features involving the skulls of bears (Hallowell 1926; Larsen 1969–1970), seals (Giddings and Anderson 1986: 130–131), walrus (Harritt 2004; Hill 2011), and beluga (Hill 2012, 2013) have been documented along the coast of Alaska. Dog skulls, too, may have been curated for multiple purposes, one of which was deposition in human burials. The evidence for unusual treatment of dogs at Ipiutak and the apparent pattern of elemental deposition in burials and qargi, as at Deering, suggest that at least some dogs (or their parts) were highly valued and some dog bones held ritual significance. What dogs signified in the first millennium AD remains unclear—they do not appear prominently in the spectacular ivory art of Old Bering Sea or Ipiutak, which features bears (Larsen 1969-1970) and anthropomorphic masks. Nor is there clear evidence for the consumption of dogs during this time period. Without systematic collection and analysis of additional faunal assemblages,

understanding of human-dog relations in Ipiutak and Old Bering Sea societies will remain incomplete. Late in the first millennium AD, however, major shifts in subsistence, transport, and technology radically altered the lives of humans and dogs in Alaska.

Traction, food, and raw materials

The Birnirk culture (AD 700–1000) is known from several sites along the coast of Northwest Alaska, the Seward Peninsula, and Chukotka (Alix et al. 2015; Mason 1998) and overlaps temporally with some Ipiutak occupations along the coast (Gerlach and Mason 1992). Birnirk sites have yielded evidence for innovation in sledge transport and watercraft (e.g., Ford 1959; Stanford 1976: 151–156), perhaps among the earliest indicators that dogs were undergoing a radical transformation from commensal species to cultural keystone.

During the Thule period (AD 1000–1450), humans and dogs developed and refined the skills, technologies, and cultural norms that enabled them to rapidly colonize the North American Arctic. Thule culture was first identified by Mathiassen (1927: 6) in Central Canada on the basis of a distinctive set of hunting and transport technologies ideally adapted for Arctic life. The dog sled was one component of a sophisticated material culture that included watercraft, specialized hunting and fishing implements, and tools specific to life amid ice and snow, such as goggles and snow knives. While many of these tools and technologies were in use during the first millennium AD, Thule people refined their forms and adapted them to local conditions (Jensen 2016).

Thule culture likely originated north of Bering Strait on the Chukchi Sea coasts of Alaska or Chukotka around AD 1000 (Mason 2016b). Expert sea mammal hunters, Thule people migrated rapidly across the North American Arctic between about AD 1200 and 1400 (Friesen and Arnold 2008), finally reaching Greenland where they settled along the coast. Their rapid transcontinental migration was made possible by dog traction. Typical Thule artifacts associated with traction include sled parts and gear, such as harness buckles, swivels, whip handles and ferrules, most of which have precedents in Old Bering Sea, Ipiutak, Punuk (e.g., Collins 1937: 242), and Birnirk (e.g., Stanford 1976: 44) material culture. Burials at the Ipiutak site, for example, yielded dozens of swivels that were interpreted as ceremonial (Larsen and Rainey 1948: 129–130), in the absence of other evidence for traction. Ivory swivels were also used for kayak and umiak (large skin boat) lines and attached to floats, harpoons, and seal drags. Like swivels, ivory buckles and ferrule-like objects of antler or ivory had alternative uses or could be modified and repurposed, making their presence in archaeological assemblages difficult to interpret.

Sled parts, too, present interpretive challenges, as a kind of low, ladder-like sled with bone or ivory runners (Murdoch 1892: 354–355) was apparently in use for over a millennium on St. Lawrence and the Punuk Islands (Collins 1937: 338–341; Rainey 1941: 546), well before dog traction became common.

Remains of such sleds have also been identified on the coast of Chukotka at Cape Baranov, Kivak, and Sireniki (Bychkov et al. 2002: 109–111; Okladnikov and Beregovaya [1971] 2008: 82). These sleds were probably pulled by hand and used to transport meat, blubber, and watercraft across sea ice.

In contrast, Thule-era dog traction is generally associated with the "built up" or "railed" sled, which—based on ethnohistoric examples—tended to be longer and higher off the ground than the smaller, unrailed sleds. The railed sled used in northern Alaska and documented in nineteenth-century accounts dates to at least the mid-1500s, based on Giddings' finds of shoes, runners, and pegs at Kotzebue. Many of the artifacts were found in the men's house (House 7), where they may have been under construction or repair (Giddings 1952: 20, 61). Earlier Thule sleds were presumably similar, based on Eastern Arctic finds. However, use of sleds in Alaska appears to have been less uniform than in the Canadian Arctic. For example, Collins (1940: 340) believed the built-up sled on St. Lawrence was a recent introduction, likely in the mid-1700s, while on Nunivak Island, dog traction may never have been particularly important (Lantis 1980: 11).

The disparate use pattern evident in Alaska is likely related to local geography, as well as to personal circumstances. Team size was influenced by factors such as season, hunting and fishing success, ice conditions, family size, load size, distance traveled, and wealth. Teams during the Thule and early historic periods appear to have been comprised of only three to five dogs (Giddings 1952: 59; Ostermann and Holtved 1952: 121). Nelson (1899: 206) observed teams of five to nine dogs in use with heavily loaded railed sleds, while Murdoch (1892: 358) in Northwest Alaska reported that ten dogs would be considered a large team, and few Inupiat had that many. The travel and transportation benefits provided by dogs—hauling sleds in the winter, pulling boats upriver after spring breakup, and serving as pack animals on inland treks (Rainey 1947: 266)—were always offset by the time and energy expended in their care and provisioning.

Working dogs required six to seven pounds (2.7–3.2 kg) of fish or walrus each day (Spencer 1959: 468); they also reportedly ate the crushed bone of caribou (Murdoch 1892: 96), but not whale meat, "this being hateful to the whale" (Spencer 1959: 467). While dogs were fed in the winter when their traction was most needed, they generally ran loose in the summer to fend for themselves. Late nineteenth- and twentieth-century Inupiat participation in trapping, which required greater mobility, made larger teams necessary (Anderson et al. 1998: 22), while firearms made acquiring dog food much easier. Therefore, relations between humans and dogs in Arctic Alaska changed once again with the growth of Euro-American trade in the second half of the nineteenth century.

Use of dog traction accompanied changes in sled technology, as well as new forms of material culture, such as whips. Nelson (1899: 209–210) described both long- and short-handled whips with ivory ferrules and reported their widespread use on both sides of Bering Strait and on St. Lawrence Island.

Handles and ferrules—both more likely to survive than the whip lashes, have been identified from sites dating to the Thule and protohistoric periods, including two ferrules and a wooden whip handle from Kukulik on St. Lawrence Island (Geist and Rainey 1936: 106, 110, 142), a ferrule at Ambler Island on the Kobuk River (Giddings 1952: 62–63), and a handle at Utqiagʻvik (Barrow) (Ford 1959: 152).

The use of whips by Thule people has implications for understanding relations between humans and dogs. Morey (2010: 148) has expressed doubt that Thule people established social bonds with their dogs, citing the "frankly harsh discipline" many dogs endured. Dog whips were in regular use on St. Lawrence and several other islands in the Bering Sea at contact (Nelson 1899: 209), and archaeological evidence supports their use during the Thule period. Dog treatment, however, appears to have varied by region and by time period. In the 1880s, an American naturalist in northern Alaska commented that "[t]he dog whip so universally employed by the eastern Eskimo, is not used [here] ... " (Murdoch 1892: 359). Instead, adults ran alongside dog teams "reproving," "coaxing and encouraging" each dog by name (Murdoch 1892: 357–358; see also Ray 1892: xcvii).

That the situation differed elsewhere in the Arctic is clear from work by Morey (2010: 127–128) and Losey et al. (2014), who observed lesions in the frontal bones that they attributed to trauma in nearly 30% of the dogs they studied from Arctic Canada and Siberia. Losey's study supports earlier findings by Park (1987) of facial trauma in dogs from the Canadian High Arctic. Similar studies have yet to be conducted in Alaska; however, dog remains from Miyowagh on St. Lawrence Island reportedly displayed healed rib fractures (Collins 1930), suggesting the animals were kicked. Blunt force trauma resulting in fractures and cranial lesions has been documented elsewhere among domestic dogs, suggesting that cohabiting with humans sometimes had dire implications (e.g., Bartelle et al. 2010; Binois et al. 2013), including use of dogs as food items.

Osteological evidence for the possible consumption of dogs has been identified at Thule sites in Greenland and Canada (Morey 2010: 136–142; Morey and Aaris-Sørensen 2002; Park 1987). Dogs were reportedly consumed as famine food on St. Lawrence Island in the late 1800s (Crowell and Oozevaseuk 2006; Mudar and Speaker 2003; Nelson 1899: 269), by inland Alaska Eskimo (Spencer 1959: 374), and by Canadian Inuit in Nunavut (Laugrand and Oosten 2007: 356; 2015: 154). While ethnohistoric evidence for the practice in the 1800s is relatively clear, osteological evidence for the consumption of dogs during the Thule period in Alaska is only now beginning to accrue, after decades of speculation. Based on damage to the skulls recovered at Walakpa, in northern Alaska, Stanford (1976: 86) suggested that dogs were consumed. Butchered dog bones have also been reported from a Thule house at Deering, on Seward Peninsula (Saleeby et al. 2009: 193). More recently, a site in Southwest Alaska has yielded osteological evidence for consumption of dogs (McManus-Fry et al. 2016) in the protohistoric period.

On St. Lawrence Island, biologist Olaus Murie observed parietal lesions in dog skulls from Kukulik, which he attributed to extraction of the brain. His conclusions were influenced by reports that dogs were still being consumed on St. Lawrence in the 1930s and that it had been "common practice in early times" (Murie 1936: 356–357). Collins, describing Bering Sea prehistory more generally, suggested that dogs comprised a major food source since at least the Old Bering Sea period, well before their use for traction (Collins 1937: 249; 1940: 551). By contrast, no evidence of parietal lesions was reported on the dogs from Ipiutak, which Murie also analyzed (Murie 1948).

While dog traction and consumption are perennial issues in North American Arctic archaeology, dogs also served as sources of raw materials. Throughout the 1800s, Inupiat in Northwest Alaska used dog fur for ruffs, hide for mittens, and canine teeth for pendants and amulets (Lantis 1980: 10). Dog tails were apparently worn to decorate clothing, though a late nineteenthcentury observer reported that wolverine tails were much more "fashionable" (Murdoch 1892: 729).

The Birnirk and Thule predecessors of the Inupiat likely made similarly intensive use of dog hide and fur, though the archaeological evidence is limited (but see Morey 2010: 128-136). At Birnirk, Ford (1959: 220) excavated pieces of dog skin that he interpreted as the remnants of clothing. More common are modified dog bones and teeth, including pairs of mandibles made into tiny sleds (Morey 2010: 142-144). Pendants made of dog teeth have been used in the region since Old Bering Sea times; they have been recovered as personal ornaments in human burials at sites such as Ekven (Arutiunov and Sergeev 2006b: 64), and occur in Birnirk and Thule contexts in Alaska (e.g., Ford 1959: 67; Stanford 1976: 60). While walrus ivory and bird and caribou bone were the most common raw materials for implements in Northwest Alaska, dog bone was occasionally used instead. At Cape Krusenstern, a dog ulna was used to make an awl or pin (Giddings and Anderson 1986: 183, pl. 105b). Three dog humeri were used to make pot hooks at the site of Kukulik, St. Lawrence Island (Geist and Rainey 1936: 107, 266) in the early historic period.

In sum, the role of dogs changed radically in Alaska with the advent of Thule and the spread of dog traction. Dogs appear to be more numerous at sites after AD 1000, when they became integral to the life of many Alaskan Thule and their Inupiaq Eskimo descendants. Use of dog traction was uneven, however, likely due to local conditions. The zooarchaeological evidence indicates that dogs were sources of meat, fur, and bone implement during the Thule and early historic periods. At some sites they formed part of the regular diet, while elsewhere, they constituted famine food. The uses to which dogs were put and the types of treatment considered acceptable are related to the ontological status assigned to dogs by their human cohabitants. Indicators of their status may be found not just in the burial evidence, as at Ipiutak, but also in ethnohistoric accounts of their association with illness, healing, and death.

The ontological status of dogs

In northern and western Alaska, as in Arctic Canada, dogs appear to have occupied an ambiguous ontological position during the protohistoric and early historic periods. Dogs were certainly not considered persons like "real people," that is, Inupiat or Yupiit. Nor were they persons in the sense that many sea mammals were. Nineteenth- and twentieth-century accounts indicate that dogs were inherited and owned by their human handlers. Under certain circumstances, dogs could be killed with impunity (Spencer 1959: 467). On the other hand, dogs reportedly had personal names, were given amulets, like humans, and possessed *inuat* (Inupiaq, sing. *inua*, "its person"). Further, there is considerable ethnohistoric evidence that dogs served as ritual substitutes for humans in case of illness.

The apparent inconsistencies in human attitudes toward and treatment of dogs in Alaska reflect their ambivalent status, a phenomenon also observed in Arctic Canada (Laugrand and Oosten 2002, 2015). This ambivalence is most marked in the realms of illness and death, and in the use of dogs as scapegoats, a practice well-documented among Canadian Inuit (i.e., Laugrand and Oosten 2002, 2015; Taylor 1993). Anecdotal accounts are scattered throughout the Alaska literature, suggesting that an association among dogs, illness, healing, and death was widespread in the North American Arctic at contact. This association—and dogs' reputation as unclean, indiscriminate consumers—may derive in part from their consumption of offal and human waste, and their role as disposers of both human and canine corpses (e.g., Nelson 1899: 321).

Several contact-era accounts describe a scenario involving some act of "brushing" illness onto a dog and then either abandoning or killing the animal to secure recovery. This procedure, which appears to vary by region, was intended to transfer a human illness to the dog. The dog was then killed—or died from the transfer—and the illness was cured or some sort of misfortune averted. A 1930 account from St. Lawrence Island describes the ritual that followed the killing of a dog:

[its] intestines were pulled out. The family then walks thru the loop formed by the intestines thereby forestalling sickness. Also if a person is very sick he may be laid across a dog. A few pieces of baby seal hair dyed red is then sewed in the dog's ear and when the person recovers the dog is killed, the red hair or tip of ear is cut off or burned in an open fire and the person walks thru the loop of the dog's intestines, followed by others. If the person dies the dog is also killed ... If [the] person recovers from illness, the skin of the sacrificed dog is kept and used for parka trimmings, but not used if [the] person dies.

Henry B. Collins Collections, National Anthropological Archives box 55, notebook A, pp. 20–21² Some twenty years later, a similar practice was still in effect in Northwest Alaska: illness was "brushed" onto a dog and the dog was then killed (Hughes 1960: 264). Possibly related is the belief that if a person was bitten by a dog, the human's life became dependent upon that of the dog (Spencer 1959: 467). Similarly, if several children died one after another, the surviving child might be given a dog's name to break the cycle (Spencer 1959: 466). Finally, the use of dog parts as amulets conferred specific dog characteristics onto the wearer, especially their ability to eat anything without adverse effect (Rainey 1947: 273).

Among Yup'ik Eskimo on the southwest coast of Alaska, dog behavior was used to predict outbreaks of illness—of specific concern was when dogs appeared to "communicate with each other like people" (Himmelheber 2000: 158). A dog crying like a human child indicated death was imminent. But if the dog was killed, the disaster could be averted (Fienup-Riordan 1994: 240). The apparent ritual substitution of the life of a dog for that of a person is consistent with a nineteenth-century Yup'ik Eskimo belief that dogs represented the spirits of the dead. The recently deceased might visit a village of "dog shades" where the dogs tormented those who had mistreated them in life (Fienup-Riordan 1994: 276). According to one account, the purpose was to enable people to "see how the living dogs feel when beaten by people" (Nelson 1899: 488).

Like humans, dogs in Northwest Alaska had personal names (Murdoch 1892: 357-358; Spencer 1959: 465), wore amulets, and according to some sources, possessed inuat, soul-like interior persons (Lantis 1990: 183; Nelson 1899: 435). In some cases, when a family had no children, a dog might be given the name of a deceased relative, taken indoors, and fed better than other dogs (Spencer 1959: 466). Like children, puppies were sometimes carried by girls and women in parka hoods (Murdoch 1892: 357–358; Ray 1892: xcvii; Spencer 1959: 467) and were sometimes allowed within the house, usually a forbidden space to dogs.

While dogs were not persons in Inupiaq and Yup'ik societies in the same way that humans were, they possessed names and *inuat*, like humans. They cohabited with Inupiat and Yupiit in ways that prey animals did not. Unlike prey animals, dogs were not a preferred food source. In the liminal realm of illness, the lives of dogs took on a ritual equivalency to those of humans; dogs could serve as scapegoats and even as replacements for human lives.

Conclusions

Artifactual and osteological evidence from Alaska, Chukotka, and the islands of the Bering Sea, in tandem with ethnohistoric accounts, indicate that dogs played multiple roles in prehistoric Eskimo societies: as cohabitants, providers of traction, food items, and ritual substitutes. In contrast to a worldwide pattern of dog burial, the interments of dogs and the occasional dog element in a human grave appear to be the exception, rather than the rule in Alaska. Other than at Ipiutak, no complete and articulated non-human animal has been identified in a human burial context in northern Alaska. In general, dog remains appear to have received no special treatment in death. This lack of elaboration may be due in part to the perception—known from nineteenth-century ethnohistoric accounts—that dogs were unclean and therefore offensive to sea mammals (Nelson 1899: 438), key subsistence resources. At Barrow, for example, no dogs were permitted on the ice during the whaling season, lest they offend the whale (Spencer 1959: 336). Such behaviors may reflect earlier, Thule attitudes as well. However, for at least a short time in Alaska prehistory, around AD 500, some dogs at Ipiutak held an ontological status analogous to that of humans.

The Ipiutak example highlights the fact that the temporal and spatial specifics of human-animal relations matter (Jennbert 2014; Watson and Warkentin 2013). In other words, relations between humans and animals have a history. Certain humans and certain animals were valued in vastly different ways from their fellows. There was something extraordinary about the dogs at Ipiutak, but the relationship between one particular dog and one particular person in Burial 132 is unique in prehistory. An example like this, an exception to the "no dogs" rule in Eskimo burials, tells us about the potentials inherent in human-animal relations, even amidst apparently contrary social norms.

Between AD 700 and 1000, the onset of the Thule era in Alaska, humandog relations intensified, shifting from cohabitation to codependency. Though these lifeways are often elided in the literature, the distinction between cohabitation and codependency is a useful one. Dogs have cohabited with humans for tens of thousands of years; only in a handful of societies, however, has that cohabitation intensified to the point of codependency, as in the Arctic. Cohabitation includes a variety of activities that bring humans and animals into physical proximity, often benefitting both. For example, dogs may provide advance notice of strangers and dispose of waste while supplementing their diets with scraps from human meals. They may live in human structures and participate in the daily lives of humans, or they may simply stay near human camps and settlements, without establishing closer bonds. Cohabitation therefore covers a range of practices with varying benefits for humans and dogs. Most, perhaps all, human societies from prehistory to the present have cohabited with dogs.

In contrast, codependency evolves in circumstances in which dog and human cooperation significantly enhances the likelihood of mutual survival, or makes possible the habitation of certain environments. Perri (2016), for example, has argued that Jōmon exploitation of forests was made possible by hunting dogs, without which humans could not have taken certain prey. Dogs were also arguably instrumental in the survival of the Yanomami, who depended upon them for hunting, as trade goods, and as sentries (Cummins

2013). In the North American Arctic, Thule people and their dogs appear to have developed a codependent relationship based upon provisioning in exchange for traction.

A hallmark of the Thule lifeway, dog traction facilitated the spread of Thule people eastward, along with a sophisticated toolkit and innovations in watercraft. While artifactual evidence for dog traction in Alaska is negligible prior to the Thule period, the practice likely developed during the preceding Birnirk period. Objects such as swivels, buckles, and ferrules had multiple uses, making their presence at archaeological sites inconclusive evidence of traction. Ethnohistoric accounts provide analogs for prehistoric Thule human-dog relations and indicate that there were both regional and individual differences in technologies and in the ways that dog teams were managed.

Dogs appear to have been a regular food source during the Thule period in Alaska, as they were in Canada and Greenland. On St. Lawrence Island, their consumption may go back to an earlier date. That dogs were eaten during famine is supported by multiple sources (Crowell and Oozevaseuk 2006; Nelson 1899: 325), though some of these same sources describe villages where both humans and dogs were dying for lack of food (Nelson 1899: 354–355). Whether dogs were considered non-famine food apparently varied by community, region, and even by individual. One possible explanation for this apparent inconsistency is differing attitudes toward the ontological status of dogs.

The Western Arctic record suggests that, during the contact era, relations with dogs were characterized by ambiguity, findings that broadly parallel data from the Eastern Arctic (e.g., Laugrand and Oosten 2015). Dogs were essential to trade, travel, and transportation; their provisioning required intensified subsistence practices, and they often suffered abuse and death at the hands of their human cohabitants. Yet dogs were also treated as surrogates for humans in cases of illness and disease, had names, wore amulets, and were believed by some to have interior selves, all of which are indicative of personhood. Together, archaeological and ethnohistoric evidence suggests that a dynamic tension existed in the Western Arctic between humans and dogs, reflecting both the symbolic potentiality inherent in dog behavior and the ambivalence and fluidity of dog-human relations through time.

Acknowledgements

I thank Blaine Maley and Chuck Hilton for providing me with sex determinations for several human skeletons from the Ipiutak cemetery excavated by Larsen and Rainey (1948). Several scholars, including Rob Losey and Angela Perri, kindly shared their work with me prior to publication. I thank the volume editors for their many suggestions, which have greatly improved this chapter.

Notes

- 1 A possible Ipiutak dog burial was encountered in a trench excavation at the site of Deering on the Seward Peninsula, but was not excavated (Bowers 2009: 115).
- 2 Paul Silook of St. Lawrence Island, writing around 1917, describes a very similar procedure (Paul Silook journal vol. XII, pp. 50–51, Daniel S. Neuman Papers MS 162, folder 11, Alaska State Library Historical Collections).

Bibliography

- Alix, C., O.K. Mason, N.H. Bigelow, S.L. Anderson, and J. Rasic. 2015. "Archéologie du cap Espenberg ou la question du Birnirk et de l'origine du Thulé dans le nordouest de l'Alaska." *Les Nouvelles de l'Archéologie* 141 (September):13–19.
- Anderson, D.D., W. Anderson, R. Bane, R.K. Nelson, and N.S. Towarak. 1998. Kuuvaymiut Subsistence: Traditional Eskimo Life in the Latter Twentieth Century. Washington, D.C.: National Park Service.
- Arutiunov, S.A. and D.A. Sergeev. 2006a. *Ancient Cultures of the Asiatic Eskimos: The Uelen Cemetery*. Translated by Richard L. Bland. Anchorage, AK: Shared Beringian Heritage Program, National Park Service.
- Arutiunov, S.A. and D.A. Sergeev. 2006b. *Problems of Ethnic History in the Bering Sea: The Ekven Cemetery*. Translated by Richard L. Bland. Anchorage: Shared Beringian Heritage Program, National Park Service.
- Bartelle, B.G., R.L. Vellanoweth, E.S. Netherton, N.W. Poister, W.E. Kendig, et al. 2010. "Trauma and Pathology of a Buried Dog from San Nicolas Island, California, U.S.A." *Journal of Archaeological Science* 37 (11):2721–2734.
- Binois, A., C. Wardius, P. Rio, A. Bridault, and C. Petit. 2013. "A Dog's Life: Multiple Trauma and Potential Abuse in a Medieval Dog from Guimps (Charente, France)." *International Journal of Paleopathology* 3 (1):39–47.
- Bowers, P.M. (ed.). 2009. The Archaeology of Deering, Alaska: Final Report on the Deering Village Safe Water Archaeological Program. Fairbanks: Northern Land Use Research.
- Brown, S.K., C.M. Darwent, and B.N. Sacks. 2013. "Ancient DNA Evidence for Genetic Continuity in Arctic Dogs." *Journal of Archaeological Science* 40 (2):1279–1288.
- Bychkov, V.V., I.A. Zagrebin, T.M. Zagrebin, E.V. Tagrina, and V.V. Zhurakov. 2002. Catalog of Objects of Material and Spiritual Culture of Chukchi and Eskimos of the Chukchi Peninsula in the Provideniya Museum Collections. Translated by Richard L. Bland. Anchorage: Shared Beringian Heritage Program, National Park Service.
- Collins, H.B., Jr 1930. "Natural History Collection—Mammal Bones, Molluscs & Barnacles," box 55, Henry B. Collins Collection, National Anthropological Archives, Smithsonian Institution, Washington, D.C.
- Collins, H.B, Jr. 1937. *Archeology of St. Lawrence Island* Washington, D.C.: Smithsonian Institution.
- Collins, H.B., Jr. 1940. *Outline of Eskimo Prehistory*. Vol. 100. Washington, D.C.: Smithsonian Institution.
- Crowell, A.L. and E. Oozevaseuk. 2006. "The St. Lawrence Island Famine and Epidemic, 1878–80: A Yupik Narrative in Cultural and Historical Context." *Arctic Anthropology* 43 (1):1–19.
- Cummins, B. 2013. *Our Debt to the Dog: How the Domestic Dog Helped Shape Human Societies*. Durham, NC: Carolina Academic Press.

- Darwent, C. 2006. "Reassessing the Old Whaling Locality at Cape Krusenstern, Alaska." In *Dynamics of Northern Societies*, edited by Jette Arneborg and Bjarne Grønnow, 95–101. Copenhagen: National Museum of Denmark.
- de Laguna, F. 1956. Chugach Prehistory: The Archaeology of Prince William Sound, Alaska. Seattle: University of Washington Press.
- Dikov, N.N. 1996. "The Ushki Sites, Kamchatka Peninsula." In *American Beginnings:* The Prehistory and Palaeoecology of Beringia, edited by Frederick H. West, 244–250. Chicago: University of Chicago Press.
- Fienup-Riordan, A. 1994. Boundaries and Passages: Rule and Ritual in Yup'ik Eskimo Oral Tradition. Norman, OK: University of Oklahoma Press.
- Ford, James A. 1959. *Eskimo Prehistory in the Vicinity of Point Barrow, Alaska*. Anthropological Papers of the American Museum of Natural History, 47 (1). New York: American Museum of Natural History.
- Friesen, T.M. and C.D. Arnold. 2008. "The Timing of the Thule Migration: New Dates from the Western Canadian Arctic." *American Antiquity* 73 (3):527–538.
- Geist, O.W. and F.G. Rainey. 1936. *Archaeological Excavations at Kukulik St. Lawrence Island, Alaska*. Washington, D.C.: U.S. Government Printing Office.
- Gerlach, S.C. and O.K. Mason. 1992. "Calibrated Radiocarbon Dates and Cultural Interaction in the Western Arctic." *Arctic Anthropology* 29 (1):54–81.
- Germonpré, M., S. Fedorov, P. Danilov, P. Galeta, E.-L. Jimenez, et al. 2017. "Palaeolithic and Prehistoric Dogs and Pleistocene Wolves from Yakutia: Identification of Isolated Skulls." *Journal of Archaeological Science* 78:1–19.
- Giddings, J.L. 1952. *The Arctic Woodland Culture of the Kobuk River*. Philadelphia: University Museum, University of Pennsylvania.
- Giddings, J.L. and D.D. Anderson. 1986. Beach Ridge Archeology of Cape Krusenstern: Eskimo and Pre-Eskimo Settlements around Kotzebue Sound, Alaska. Washington, D.C.: National Park Service.
- Gräslund, A.-S. 2004. "Dogs in Graves—A Question of Symbolism?" In *Pecus: Man and Animal in Antiquity*, edited by Barbro Santillo Frizell, 167–176. Rome: Swedish Institute.
- Hallowell, A.I. 1926. "Bear Ceremonialism in the Northern Hemisphere." *American Anthropologist* 28 (1):1–175.
- Harritt, R.K. 2004. "A Preliminary Reevaluation of the Punuk–Thule Interface at Wales, Alaska." *Arctic Anthropology* 41 (2):163–176.
- Hill, E. 2011. "Animals as Agents: Hunting Ritual and Relational Ontologies in Prehistoric Alaska and Chukotka." *Cambridge Archaeological Journal* 21 (3):407–426.
- Hill, E. 2012. "The Nonempirical Past: Enculturated Landscapes and Other-than-Human Persons in Southwest Alaska." *Arctic Anthropology* 49 (2):41–57.
- Hill, E. 2013. "Archaeology and Animal Persons: Towards a Prehistory of Human–Animal Relations." *Environment and Society: Advances in Research* 4:117–136.
- Hilton, C., E. Benjamin, M. Auerbach, and L.W. Cowgill (eds.). 2014. *The Foragers of Point Hope: The Biology and Archaeology of Humans on the Edge of the Alaskan Arctic*. Cambridge: Cambridge University Press.
- Himmelheber, H. 2000. Where the Echo Began and Other Oral Traditions from Southwest Alaska. Translated by Kurt Vitt and Ester Vitt. Fairbanks: University of Alaska Press.
- Hughes, C.C. 1960. An Eskimo Village in the Modern World. Ithaca, NY: Cornell University Press.

- Jennbert, K. 2014. "Certain Humans, Certain Animals: Attitudes in the Long Term." In *Exploring the Animal Turn: Human–Animal Relations in Science, Society and Culture*, edited by Erika Andersson Cederholm, Amelie Björck, Kristina Jennbert and Ann-Sofie Lönngren, 183–192. Lund: Pufendorfinstitutet.
- Jensen, A.M. 2016. "Archaeology of the Late Western Thule/Iñupiat in North Alaska (A.D. 1300–1750)." In *The Oxford Handbook of the Prehistoric Arctic*, edited by T. Max Friesen and Owen K. Mason, 513–536. New York: Oxford University Press.
- Lantis, M. 1980. "Changes in the Alaskan Eskimo Relation of Man to Dog and Their Effect on Two Human Diseases." *Arctic Anthropology* 17 (1):1–25.
- Lantis, M. 1990. "The Selection of Symbolic Meaning." *Études/Inuit/Studies* 14 (1–2):169–189.
- Larsen, H. 1969–1970. "Some Examples of Bear Cult among the Eskimo and Other Northern Peoples." Folk: Dansk Etnografisk Tidsskrift 11–12:27–42.
- Larsen, H. 2001. Deering: A Men's House from Seward Peninsula, Alaska. Edited by Martin Appelt. Copenhagen: Department of Ethnography and SILA, National Museum of Denmark.
- Larsen, H. and F.G. Rainey. 1948. *Ipiutak and the Arctic Whale Hunting Culture*. New York: American Museum of Natural History.
- Larsson, L. 1989. "Big Dog and Poor Man: Mortuary Practices in Mesolithic Societies in Southern Sweden." In Approaches to Swedish Prehistory: A Spectrum of Problems and Perspectives in Contemporary Research, edited by Thomas B. Larsson and Hans Lundmark, 211–223. Oxford: British Archaeological Reports.
- Laugrand, F. and J. Oosten. 2002. "Canicide and Healing: The Position of the Dog in the Inuit Cultures of the Canadian Arctic." *Anthropos* 97 (1):89–105.
- Laugrand, F. and J. Oosten. 2007. "Bears and Dogs in Canadian Inuit Cosmology." In *La nature des esprits dans les cosmologies autochtones | Nature of Spirits in Aboriginal Cosmologies*, edited by Frédéric Laugrand and Jarich Oosten, 353–385. Université Laval, QC: Les Presses de l'Université Laval.
- Laugrand, F. and J. Oosten. 2015. *Hunters, Predators and Prey: Inuit Perceptions of Animals*. New York: Berghahn.
- Losey, R.J., V.I. Bazaliiskii, S. Garvie-Lok, M. Germonpré, J.A. Leonard, et al. 2011. "Canids as Persons: Early Neolithic Dog and Wolf Burials, Cis-Baikal, Siberia." *Journal of Anthropological Archaeology* 30 (2):174–189.
- Losey, R.J., S. Garvie-Lok, J.A. Leonard, M.A. Katzenberg, M. Germonpré, et al. 2013. "Burying Dogs in Ancient Cis-Baikal, Siberia: Temporal Trends and Relationships with Human Diet and Subsistence Practices." *PLoS ONE* 8 (5):e63740.
- Losey, R.J., E. Jessup, T. Nomokonova, and M. Sablin. 2014. "Craniomandibular Trauma and Tooth Loss in Northern Dogs and Wolves: Implications for the Archaeological Study of Dog Husbandry and Domestication." *PLoS ONE* 9 (6):e99746.
- Mannermaa, K., P. Ukkonen, and S. Viranta. 2014. "Prehistory and Early History of Dogs in Finland." In *Fennoscandia Archaeologica* XXXI:25–44. Helsinki: Archaeological Society of Finland.
- Mason, O. K. 1998. "The Contest Between the Ipiutak, Old Bering Sea, and Birnirk Polities and the Origin of Whaling during the First Millennium A.D. along Bering Strait." *Journal of Anthropological Archaeology* 17:240–325.
- Mason, O.K. 2014. "The Ipiutak Cult of Shamans and Its Warrior Protectors: An Archaeological Context." In *The Foragers of Point Hope: The Biology and Archaeology of Humans on the Edge of the Alaskan Arctic*, edited by Charles E. Hilton,

- Benjamin M. Auerbach and Libby W. Cowgill, 35-70. Cambridge: Cambridge University Press.
- Mason, O.K. 2016a. "From the Norton Culture to the Ipiutak Cult in Northwest Alaska." In The Oxford Handbook of the Prehistoric Arctic, edited by T. Max Friesen and Owen K. Mason, 443–467. New York: Oxford University Press.
- Mason, O.K. 2016b. "Thule Origins in the Old Bering Sea Culture: The Interrelationship of Punuk and Birnirk Cultures." In The Oxford Handbook of the Prehistoric Arctic, edited by T. Max Friesen and Owen K. Mason, 489-512. New York: Oxford University Press.
- Mathiassen, T. 1927. Archaeology of the Central Eskimos: The Thule Culture and Its Place within the Eskimo Culture. Copenhagen: Gyldendal.
- McManus-Fry, E., R. Knecht, K. Dobney, M.P. Richards, and K. Britton. 2016. "Dog-Human Dietary Relationships in Yup'ik Western Alaska: The Stable Isotope and Zooarchaeological Evidence from Pre-Contact Nunalleq." Journal of Archaeological Science Reports 15:1-9.
- Morey, D.F. 2006. "Burying Key Evidence: The Social Bond between Dogs and People." Journal of Archaeological Science 33:158–175.
- Morey, D.F. 2010. Dogs: Domestication and the Development of a Social Bond. Cambridge: Cambridge University Press.
- Morey, D.F. and A. Aaris-Sørensen. 2002. "Paleoeskimo Dogs of the Eastern Arctic." Arctic 55 (1):44-56.
- Mudar, K. and S. Speaker. 2003. "Natural Catastrophes in Arctic Populations: The 1878–1880 Famine on Saint Lawrence Island, Alaska." Journal of Anthropological Archaeology 22:75–104.
- Murdoch, J. 1892. Ethnological Results of the Point Barrow Expedition. Washington, D.C.: Government Printing Office.
- Murie, O.J. 1936. "Appendix IV: Dog Skulls from St. Lawrence Island, Alaska." In Archaeological Excavations at Kukulik St. Lawrence Island, Alaska, edited by Otto W. Geist and Froelich G. Rainey, 347-357. Washington, D.C.: U.S. Government Printing Office.
- Murie, O.J. 1948. "Appendix 4: Dog Skulls from Ipiutak." In Ipiutak and the Arctic Whale Hunting Culture, 255–259. New York: American Museum of Natural History.
- Nelson, E.W. 1899. The Eskimo about Bering Strait. Washington, D.C.: Government Printing Office.
- Okladnikov, A.P. and N.A. Beregovaya. [1971] 2008. The Early Sites of Cape Baranov. Translated by Richard L. Bland. Anchorage: Shared Beringian Heritage Program, National Park Service.
- Ostermann, H. and E. Holtved. 1952. The Alaskan Eskimos as Described in the Posthumous Notes of Dr. Knud Rasmussen. Translated by W. E. Calvert. Copenhagen: Gyldendal.
- Park, R.W. 1987. "Dog Remains from Devon Island, N.W.T.: Archaeological and Osteological Evidence for Domestic Dog Use in the Thule Culture." Arctic 40 (3):184-190.
- Perri, A.R. 2016. "Hunting Dogs as Environmental Adaptations in Jōmon Japan." Antiquity 90 (353):1166-1180.
- Perri, A.R. 2017. "A Typology of Dog Deposition in Archaeological Contexts." In Economic Zooarchaeology: Studies in Hunting, Herding and Early Agriculture, edited by Peter Rowley-Conwy, Paul Halstead and Dale Serjeantson, 89-99. Oxford: Oxbow Books.

- Pitul'ko, V.V. and A.K. Kasparov. 2016. "Early Holocene Dog Bones from the Zhokhov Site (East Siberian Arctic) and the Question of the Reliability of Identification of Early Canis familiaris from Archaeological Excavations." *Stratum Plus* 1:171–207.
- Raghavan, M., M. DeGiorgio, A. Albrechtsen, I. Moltke, P. Skoglund, et al. 2014. "The Genetic Prehistory of the New World Arctic." *Science* 345 (6200).
- Rainey, F.G. 1941. *Eskimo Prehistory: The Okvik Site on the Punuk Islands*. New York: American Museum of Natural History.
- Rainey, F.G. 1947. The Whale Hunters of Tigara. New York.
- Ray, P.H. 1892. "Ethnographic Sketch of the Natives of Point Barrow." In *Ethnological Results of the Point Barrow Expedition*. Washington, D.C.: Smithsonian Institution Press.
- Saleeby, B., M.L. Moss, J.M. Hays, C. Strathe, and D.L. Laybolt. 2009. "Mammalian Remains from the Ipiutak and Western Thule Houses." In *The Archaeology of Deering, Alaska: Final Report on the Village Safe Water Archaeological Program*, edited by Peter M. Bowers, 189–200. Fairbanks: Northern Land Use Research.
- Spencer, R.F. 1959. *The North Alaskan Eskimo: A Study in Ecology and Society*. Washington, D.C.: U.S. Government Printing Office.
- Stanford, D.J. 1976. The Walakpa Site, Alaska: Its Place in the Birnirk and Thule Cultures. Washington, D.C.: Smithsonian Institution Press.
- Tackney, J., J. Coltrain, J. Raff, and D.H. O'Rourke. 2016. "Ancient DNA and Stable Isotopes: Windows on Arctic Prehistory." In *The Oxford Handbook of the Prehistoric Arctic*, edited by T. Max Friesen and Owen K. Mason, 51–80. Oxford: Oxford University Press.
- Taylor, J.G. 1993. "Canicide in Labrador: Function and Meaning in an Inuit Killing Ritual." *Études/Inuit/Studies* 17 (1):3–13.
- Watson, G.P.L. and T. Warkentin. 2013. "Introduction: Animals, Place and Humans." *Animal Studies Journal* 2 (1):1–7.