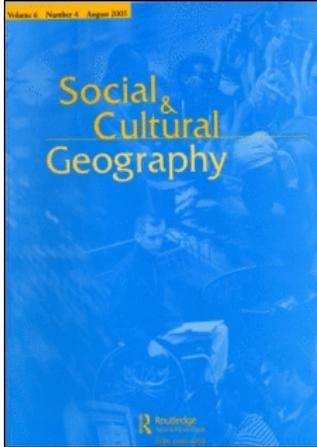


This article was downloaded by:[University of Minnesota]
On: 31 March 2008
Access Details: [subscription number 788828859]
Publisher: Routledge
Informa Ltd Registered in England and Wales Registered Number: 1072954
Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Social & Cultural Geography

Publication details, including instructions for authors and subscription information:
<http://www.informaworld.com/smpp/title~content=t713708888>

They're **here** - I can **feel** them: the epistemic spaces of Indigenous and Western Knowledges

Annette Watson ^a; Orville H. Huntington ^b

^a Department of Geography, University of Alaska-Fairbanks, Fairbanks, AK, USA

^b Huslia Tribal Member, Huslia, AK, USA

Online Publication Date: 01 January 2008

To cite this Article: Watson, Annette and Huntington, Orville H. (2008) 'They're **here** - I can **feel** them: the epistemic spaces of Indigenous and Western Knowledges', *Social & Cultural Geography*, 9:3, 257 - 281

To link to this article: DOI: 10.1080/14649360801990488

URL: <http://dx.doi.org/10.1080/14649360801990488>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.informaworld.com/terms-and-conditions-of-access.pdf>

This article maybe used for research, teaching and private study purposes. Any substantial or systematic reproduction, re-distribution, re-selling, loan or sub-licensing, systematic supply or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

They're *here*—I can *feel* them: the epistemic spaces of Indigenous and Western Knowledges

Annette Watson¹ & Orville H. Huntington²

¹Department of Geography, University of Alaska-Fairbanks, P.O. Box 750565, Fairbanks, AK 99775, USA, a.watson@uaf.edu; ²Huslia Tribal Member, P.O. Box 107, Huslia, AK 99746, USA, orville_h_huntington@hotmail.com

Indigenous Knowledges (IK) are continually contrasted with Western positivist sciences. Yet the usual conception of IK—as a translatable knowledge about things—renders incomprehensible its discussion as a spiritual or ethical practice. A practice taking place within what we call an epistemic space. A moose hunting event can demonstrate how IK is produced through the epistemic spaces within which hunting is performed. Part of the performance is becoming-animal; as practiced by Koyukon Athabascans, a moose hunt reproduces the social relations between hunter and prey, spiritual relations that demonstrate an ontology and ethics seemingly distinct from those of the Western wildlife sciences founded upon Enlightenment humanism. Yet such 'Western-Indigenous' dichotomies falsely indicate entirely separable spaces within which to produce accounts of reality. Instead, this account of a moose hunt demonstrates an assemblage of actors within one space, who together become more than the authors' individual positions and selves, and becomes an event. We additionally argue that more faithfully representing this assemblage requires changing the form of the usual academic paper. Thus tacking between a narrative and theoretical approach that switches from each of our first-person points of view, we aim to depict how knowledge of one hunting event becomes assembled.

Key words: Indigenous Knowledges, Western science, posthumanism, relational ontologies, assemblage, representation.

Prologue: posthumanism and a posthumanist narrative

In this paper we describe the practices of Indigenous Knowledges (IK). Because we treat IK as equal to that of Western sciences, we describe the practices of Koyukon hunting not in contrast to non-Native hunters, but in contrast to wildlife biologists and ecologists. As we will show, hunting is the practice of an

ethical relationship with the nonhuman—and the effect of a posthumanist ontology seen within an epistemic space.

But first, Annette wants to frame this paper from the academic perspective of critical human geography: Until the 'cultural turn' experienced in recent decades by many social science disciplines, academics and the governments informed by them assumed that knowledge represented 'facts' or 'truths,' while

various cultures and special-interest groups promoted subjective ‘values.’ Assuming the existence of value-free knowledge allowed Euro-American governments the power to perpetuate innumerable physical and epistemic violences against indigenous societies deemed primitive or even inhuman (Tuhiwai Smith 1999).

For Enlightenment humanism produced a version of human nature by tethering to human-ness the requirement of rationality. Derived from the phrase Descartes made famous, ‘I think, therefore I am,’ the Cartesian Subject relied upon rationality to assert that the only certain truth is human existence. Humanists therefore argued for a separation of humans from other animals, and argued that what most distinguished ‘Man’ from animal was the ability to talk and to reason (Agamben 2004). ‘Human nature’ was now understood to have a historical dimension, to have ‘progressed.’ That is, reasoning was an activity that characterized an ‘adult’ stage of humanity, and was (conveniently) limited to the Euro-American educated leisure classes; it became a political problem because it justified colonial and imperial power/knowledge (Foucault 1980), as well as gendered power relations. Enlightenment humanism provided a foundation upon which to exclude other ‘irrational’ beings from the category of human—including the humanity, knowledges, and traditions of indigenous peoples (Tuhiwai Smith 1999).

Recent critiques of Enlightenment humanism have led critical human geographers to engage with new theories of ‘posthumanism.’ The ‘posthuman’ does not imply a historical era, but an interrogation of humanists’ static boundaries between humans and nonhumans, culture and nature (Braun 2004a, 2004b; Castree and Nash 2006; Whatmore 2004). At stake in developing articulations of such

hybrid natures (Whatmore 2002) and otherwise re-imagining new relational ontologies are what Latour (1993) calls ‘amodern politics.’ Where those that subscribe to ‘modern’ politics police distinct separations between the realms of humans and nature, those that advocate developing ‘amodern’ politics refuse to engage in dualistic thinking that separates nature and society. Castree writes that geographers need ‘to properly flesh out what an amodern politics of socionatural hybridity is all about’ (Castree 2003: 209).

To these ends, many examples articulate emergent biotechnologies (e.g. Coyle 2006). These discussions frequently take place in medical contexts, when nanoscience or virus research complicates the boundaries between humans and nonhumans at scales smaller than the body, the relation often described as infection. This focus also implies that the only relevant intellectual traditions to engage are concerned with the changes that ‘modern’ science and technology brings, and thus primarily concerned with those whose work produce and control such technological hybrids. Is much of the posthumanist literature in thrall to ‘modern’ science and technology, privileging only certain human–nonhuman assemblages? If so, what this does is to further marginalize the voices of those not deemed significant in debates over technologies, Western medicine, or whose interest in posthumanism might lie elsewhere, and at other scales.

Indigenous intellectual traditions exhibit philosophies that discuss human–nonhuman assemblages in ways that can also productively contribute to discussions of the ethical and political implications of posthumanism. These traditions too can productively shape the discourse of posthumanism(s) in ways that do not necessarily glorify ‘modern’ science and

technology. So this paper narrates a single moose hunting event as another human–nonhuman (posthumanist) assemblage: the acceptance of a moose’s body and its spirit by the hunter. Not just about the practice of hunting moose, but about the spaces that inform such practice, the epistemic spaces that constitute contemporary IK.

But Annette, academic geographer who grew up in suburban New Jersey, needs to explain the genesis of this paper: after two years of participant-observation, as I began to write, I realized one person contributed most to the way I had come to think about IK, the Athabascan hunter and gatherer Orville Huntington. And as stated by Whatmore (2004), to be properly posthumanist the ‘humanist methods that rely on generating talk and text [should be supplemented by] actively redistributing expertise beyond engaging with other disciplines or research fields to engaging knowledge practices and vernaculars beyond the academy’ (Whatmore 2004: 1362). So to recognize not only Orville Huntington’s contribution, but his *authority* on indigenous ways of knowing, I asked him whether the very enfolding of the narrative should reflect his co-authorship as well as the way our ideas co-evolved. As a result, this paper is permeated by theoretical arguments derived from the academy, as well as arguments grounded in an indigenous spiritual discourse.

This paper is experimental in both content and form: this is not a study by Annette of Orville and his cultural milieu in the typical ethnographic positing of Annette as knowing Subject and Orville as object. To better ‘situate’ our knowledges, we do not want to describe a ‘discovery’ but a ‘conversation’ (Haraway 1999). So we take a feminist geographical approach to study the ‘betweenness’ of our worlds (England 1994;

Nast 1994). We suggest this is akin to Deleuze and Guattari’s description of assemblages from the perspective of the ‘middle,’ as a way of disrupting the subject–object dichotomy in the production of knowledge (Deleuze and Guattari 1998: 23). Yet through the subjectivity characteristic of an autobiographical method¹ we are going to narrate this assemblage as the story of one hunting event and the conversations we had in the context of that hunt.² This narrative style serves to recognize the authorship not normally accepted as legitimate expertise unless the ‘consultant’ is cited as evidence.

The style will therefore switch often and abruptly from Annette’s first-person point-of-view to that of Orville’s.³ Yet by experimenting with our co-authorship we reveal that we do not so much ‘co-produce’ knowledge—as if completely divisible into ‘Western’ or ‘Indigenous’ positions. Such ‘Western–Indigenous’ dichotomies falsely indicate entirely separable spaces within which to produce accounts of reality. The assemblage produced through our desired collaboration is an assemblage of ‘multiplicities of multiplicities’ (Deleuze and Guattari 1998: 34).⁴ This account of a moose hunt demonstrates an assemblage of actors within one space, who together become more than the authors’ individual positions and selves, in becoming an event. This account affirms the necessity of changing the form of the academic argument to allow more posthumanist narratives to proliferate.

In the next part of the paper, we articulate Koyukon ethics of hunting, which, because hunters perform a similar identity to their prey, demonstrate a posthumanist ontology. Then we describe how stories, places, and ancestors are also assembled during a hunt. In the final part of the paper, we describe what constitutes an epistemic space, and argue

that how knowers conceptualize space help constitute their epistemologies.

Becoming-animal on 26 August

We left after five the evening before the legal moose (*Alces alces*) subsistence season, to hunt on our return the next day. Huslia resident Ross Sam sat on the bow of the boat, in front of the drum of gasoline, in his new camouflage jacket and overalls to stay warm. Annette sat in the boat cabin with Orville as he drove; we left the front window open for better communication, and the breeze felt cold.

On our way up the river the sun would not set before ten. Just south of the Arctic Circle, it was only starting to get dark at night, even in late August. We began our trip on the Koyukuk River, spanning 554 miles from its headwaters near the Brooks Range to its confluence with the Yukon River. Along this river highway live communities of Koyukon, the Northwestern-most tribe of Athabascan Indians.

We were quiet. On an earlier trip to his fish net, Orville had instructed that people do not talk during a hunt, either during or before—because the moose will hear. He had even spoken about how his new four-stroke motor ran silently, making his boat sound like the wind of an arrow—that is, when he pushed the throttle forward enough to power the boat ‘on step,’ meaning the wooden flat-bottomed boat hull would ride just on the surface of the water, without plowing into and crashing through waves.

Orville Huntington is 51, raised on the Koyukuk and Yukon rivers hunting, fishing, gathering, and trapping with his brothers and his father, Jimmy Huntington. Jimmy authored a book about this boreal landscape where he and his children grew up. ‘The

country was wild enough,’ he narrated, and for readers who might never see the Koyukuk he called his book *On the Edge of Nowhere* (Huntington 2002 [1966]: 11). Indeed, that is what it seemed at first to Annette. Where I grew up, in suburban New Jersey, I saw hundreds of miles along Interstate-95 with houses on less than half-acre plots. The only open green areas seemed to be cemeteries in the Middle Atlantic States. Not here. About 1000 people are distributed throughout 26,000 square miles of Northwestern Interior Alaska. There are no paved roads going to or leaving the village of Huslia, population fewer than 300 people; the roads are the rivers, sloughs, and lakes in summer, or the snow machine⁵ trails over ice and snow in winter.

Going up river we passed the slough where Orville had a fish net. That was where Annette remembered him speaking about how big trophy bulls taken in late fall don’t taste as good—that Native hunters preferred a medium size or smaller bull, whose meat is tender, fat and juicy, with high nutritional value. Orville now began talking about different places along the river—such as whose camps we saw. The names of sloughs and tributaries. Stories of past hunts when we passed the places they occurred.

I spoke quietly, ‘we’re not really hunting yet—we’re just scouting.’ I then explained how to spot an animal from so far away: you have to look for a very black spot, blacker than its surroundings, and one that moves against its background. Annette practiced on stumps I picked out in the distance until they were close.

At the confluence of the Koyukuk and Huslia Rivers, I steered the boat left, up the mouth of the Huslia River. We had been traveling for about an hour, and as the boat made a left around a bend, suddenly there appeared a big bull looming on the bank, its

antlers spread wide across his body. It saw us—but didn't move. Ross stood, picked up his gun and began to take aim.

'It's too early!' I stood and yelled out to him from the cab's doorway, pushing Annette aside, yelling above the wind. 'It's too early, we can't get him.' The hunt was not yet legal, and there could be serious repercussions if we were caught, even six hours too early: fines and even the confiscation of the rifles and meat, possibly the boat. Ross hesitated but lowered his gun, and in slow motion, as the boat passed, we all watched the bull watching us in confusion as we drove on up river.

For a moment no one spoke, and then Orville said, 'Wow—he was really trying hard to give himself to us.'

Non-natives most often employ the verb 'to take' to describe hunting; this is the verb employed in Federal subsistence legislation: 'fish and wildlife resources taken for personal or family consumption' (US Fish and Wildlife Service (USFWS) 2006). But the Koyukon believe that hunters do not 'take' anything; instead, animals choose to give themselves to the hunter. The 'gift' is made as a result of the 'luck' of the hunter, and a hunter has luck when he has been respectful (see also Nelson 1986).

Respect is the act of following strict rules that guide one's behavior and actions toward or away from the animal and all other living and non-living things. In the Koyukon language, such taboos are referred to as 'hutlanee.' Communities used to banish people who did not follow the strict rules of Athabascan law, like if one shot a loon in the middle of a lake without the intent of using it, or if one hunted cranes or swans outside times of starvation. It would be *hutlanee* to hunt a calf even if the moose population were so high that biologists and wildlife managers condoned the hunt.

Most significantly, it is *hutlanee* to talk about animals, especially make fun of them, such as calling them 'stupid.' There are very few things people should *do*, and many things that are *hutlanee*. About the only thing a person *does* is to accept them, accept the animal's life and spirit and body when it chooses to give itself. I told Annette that you also accept a moose's past; 'they're like us, they have a story behind them.' For when you accept a bull you can see his past marked upon his body, like antler wounds from fighting during rut, or bullet wounds from past hunts, or it might be one-eyed because it got a stick in it from running from a predator. Respect is also about acknowledging this history of an individual animal.

Thinking about the literature on posthumanism and animal geographies, Annette thought that humans need to be more careful in our 'rankings' of nonhuman animals. For instance, some suggest that companion species like domesticated dogs or cats are the only ones understood to have subjectivities that contest Cartesian humanism. Others of an environmentalist bent suggest that hunted species are primarily 'exploited' for human gain (e.g. Emel 1998; Fox 2006). Yet moose—and all species, according to Koyukon—exhibit a human-like subjectivity. They feel and they think. Many hunters in the Huslia band of Koyukon talk about how moose are learning what the hunting patterns are, changing their responses to the static season dates managers set. Moose 'give themselves' as much as they are killed by a bullet.

Orville noted that while he has spent a large part of his life being a hunter, I only became successful when I began to truly understand all aspects of what respecting an animal meant. Once you've shown animals respect and the honor they deserve, they grow curious, and respectful of you, and then it is just their time.

And when the opportunity arises you must then respectfully accept the animal's life.

Of key importance is that in this concept of hunting, 'animals control the hunt' (Berkes 1999: 80)—the animal has agency in the process of hunting. The Koyukon is not the only tribe to conceptualize equal agency for hunter and prey; anthropologists studying with the Gwich'in and the Cree and some Inuit peoples have also documented the understanding of success in hunting not as an achievement to be proud of, but as a 'gift' to the respectful (Berkes 1999; Brower 2004; Feit 2004; Scott 1996; Wishart 2004). Not accepting such gifts could have serious repercussions to the hunter; if you do not show animals respect, they will not show respect for you. Not accepting such gifts is disrespecting the agency of the animal, and you will not be nearly as successful a hunter, for the animals will be less and less likely to give themselves.

Unfortunately, this bull we saw on the bank of the Huslia River was ready to 'give' itself to these hunters six hours earlier than the hunters could legally 'take' him according to subsistence regulations. Orville and Ross had to weigh the repercussions; Ross reluctantly, slowly, and angrily put down his rifle.

'That is Halfway Slough,' said Orville as we drove by. 'And that is Halfway Island.' Now we passed Nuna Slough, and a well-known cabin,⁶ about 16 miles upriver. Annette felt the need to talk—the need to do her 'work' through posing questions. 'So,' I began, 'academics have been trying to compare Traditional Ecological Knowledges with Western science...'⁷ Many attempt to validate IK by arguing that its methods are distinct, but depicting the same reality: IK as derived through localized subsistence practices, while Science proceeds through methods that rely upon scientific reasoning processes. One is subjective, implicit, unconscious, while

the other is objective, explicit, and consciously rational.

It is a distinction that leads many anthropologists and some geographers and natural scientists to study IK as a system separate from but equal to that of science—as they each process the same empirical observations, the same 'reality.' A virtual cottage industry has thrived from this segregation, especially within the subfields of linguistics and human/cultural ecology, to translate Native empirical observations for a Western audience.⁸ The task has been to 'reconcile' indigenous 'myth' with Western knowledge by collecting, mapping, quantifying, and archiving not the IK, but the local knowledge of soils, fish, glacier locations, or other *objects* of knowledge (Agrawal 1995; Verran 2002; Wright 2005).

Ironically, many of the same social scientists have concluded that the effect of their researches have reproduced a hegemonic dualism between IK and Western science. They lament that IK is never taken upon its own merits—that the attempted 'integration' of the two knowledge systems serves to reify the intellectual dominance of Western positivist science (Agrawal 1995; Ellen and Harris 2000; Nadasdy 1999, 2003). The 'integration' is accomplished at the expense of American Indian and Alaska Native intellectual traditions, despite the attempts of some indigenous scholars to discuss IK as a 'holistic' and dynamic science proceeding from an indigenous value system (Cajete 2000; Salmón 2000).

Over the hum of the motor I said to Orville, 'Academics have been talking about how science is not just about its results—not so much about the facts, but also about how it is practiced.' Science studies scholars re-frame analyses of science as *practiced* to show how it is constituted by values. 'Facts' are not mirrors to nature, but are the result of the kinds of questions, the funding agendas, the

equipment, and the personalities of the scientists and their publics; as Latour has stated, science assembles ‘things and politics and discourse’ (Latour 1993: 5). Similarly, David Turnbull describes how to examine knowledge production is to examine the ‘history of the contingent processes of making assemblages and linkages, of creating spaces in which knowledge is possible’ (Turnbull 1997: 553). Both Turnbull and Latour draw upon Deleuze and Guattari (1998) to show how knowledge is an effect of an assemblage. So to describe ‘practice’ is to describe the making of the assemblage; the very notion of ‘practice’ disrupts the idea of ‘objectivity’—exactly the critique waged at a ‘subjective’ IK.

Yet to talk about the practice of IK means that it is not only the purview of elders and archivable through recorded interviews.⁹ I asked Orville, ‘So I was thinking that maybe the practice of Traditional Knowledges is more experimental—’

‘—well,’ said Orville, ‘it’s a lot of intuition—’

‘Oh? Is intuition about feeling the presence of an animal?’

‘Yeah,’ he replied, but Annette thought the response was half-hearted. He did not immediately continue, so I thought I should ask another question, but feared that I would only hear ‘You’ll see.’ It was a phrase I heard often when I asked hunters about their practices. Often in Athabascan culture, direct questions show ignorance, whereas the indirect question showed that you were worthy to be taught (Scollon and Scollon 1980). More specifically, Orville thought direct questions show how much one has not listened to what they had been told, not remembering or more carefully considering the meaning of what had already been said.¹⁰ But Orville is sometimes direct in the way he tries to teach; in fact, he

has a Bachelor of Science in Wildlife Biology and worked for nearly fourteen years with the USFWS—which is why he tolerates direct questions. Yet Annette remained unsure of how to compose the right kind of question to understand the concept of intuition; nor could I think of an indirect question to get at a direct answer, so I let the conversation drop, and watched the muddy bank whiz by.

After a long pause, after thinking about why she was asking this question, Orville said, ‘It’s not just presence.’ I explained that people taught in the old ways can sense the will of animals; with many animals you see, you probably did not sense that they were there, and when you do see them ‘they’re just there for a second and they just go back into the woods.’ Those ones, you usually won’t even feel them mentally or spiritually. ‘But the ones that are going to stand there and look at you,’ you’re most likely going to feel them way before you see them. ‘You don’t know what it is ... but when you come around that bend you just know something is waiting right there, and that that thing is not just going to run into the woods.’ You have intuited the will of the animal, the gift from the Creator. ‘Sometimes you can change it a little by making calls, certain kind of calls to make an animal stop, but it doesn’t always work.’ Because ultimately the animal is in control of the hunt.

Annette found that Orville is not the only member of the Huslia band who talks about his instincts, for while observing or in conversations with other hunters she heard many others talk about ‘feeling’ or ‘knowing’ that they were about to encounter an animal giving itself. This, she thought, is a Subject very different than the one promoted by Enlightenment humanism. As suggested by anthropologists’ divisions between IK and Western science, this Subject is not consciously rational. That is, not necessarily:

Orville said that unlike most he was usually conscious of his intuition—perhaps because, like many of his generation, he had a Western education. Most Koyukon people, he said, do not understand when they use their intuition, ‘they just *know*.’ Yet sometimes the intuition becomes conscious, such as when new technologies are adopted, like changing fish nets. Most of the time these feelings, or hunches, remain inexplicable, like the products and practices of art—but it is not accurate to describe them as always unconscious.

Orville notes that intuition is easily used when you are hunting. You try to feel the point of view of the animal, like where it might hide from predators, or where it might bed down. There are ways you can think as an animal so you can instruct your children what to do if something happens that might endanger them. This is a focused way of using intuition—but also, thought Annette, *thinking as* an animal is performing a similar identity with that animal. It is completely opposite to what Enlightenment rationality allows for human identity: a position whereby humans are deemed superior to the behavior of animal nature.

The low light made the deciduous trees glow more yellow; as we made our way up river, mallard ducks and loons would pick up and fly ahead of us each time we rounded a bend. Orville said, ‘notice all the geese are gone’ since the last time we were here in July—began their migration southward. The bends of the river were getting tighter. We passed an old cutoff slough, and then the Nulitna River confluence, thirty miles from Huslia, where another well-known cabin was up on a hill, invisible to Annette, but Ross and Orville knew—if the weather went bad, that knowledge was essential to their survival.

We had rounded Tom Cook Hill, passed Tom Cook Slough, and Tom Cook Camp, entering Billy Hawk Creek. We briefly stopped

at a traditional Athabascan camp and Native allotment, another camp Annette could not see through the willows. A few more miles, and on the left we saw an old camp and summer garden. Orville and Ross knew that the new camp was close, where we were to stay for the night. We finally came to the landing and walked fifty yards into the woods to the octagonal log cabin. The place was filled with pictures of that trapper’s children, his children’s babies, and two grease-caked snow machines lay in the middle of the ground floor. Dinner was ‘half-dry’ salmon and rice and corn Annette cooked on the fire outside, and Orville made sure to burn some food in the stove and say prayers to the Creator as an offering for their ancestors and the family who built the camp. After dinner, Orville loaded the generator full of siphoned gas and we watched a video: *Almost Heroes*, spoof of the Lewis and Clark expedition. This was neither the sport hunter’s nor backpacker’s wilderness experience expected by Annette. These practices aimed not to find ‘solace’ in a romantic wilderness space (Cronon 1996). Instead, we treasured the comfort this cabin allowed so far from the village, knowing and thankful that we could survive ‘on the edge of nowhere’ (Huntington 2002 [1966]).

The next afternoon we began a much slower pace back toward Huslia. However, fog and very dense smoke from a distant smoldering wildfire oozed across the landscape, and Orville and Ross expressed concern about how this would affect their hunting. We were as silent as we should be; winding back through the narrow turns of Billy Hawk Creek, back past the old camps. This time we entered every slough that met our path, every tiny inlet to a lake. It was getting colder as the late afternoon sun began its descent, prompting Ross to wear his martin hat as he sat watchful in the bow. We entered the middle

Huslia River drainage again, and Orville landed the boat where he had seen others stop, where he felt he should stop even though he'd never stopped there. We climbed up the steep bank and Annette watched Orville walk into the distance, looking, and Ross near her, looking, and with the boat motor shut it was incredibly silent, without even the sound of ducks flapping away. There was no sign of moose at all; we returned to the boat to continue our search.

We pulled into an inlet that led to a group of lakes, and I shut the motor, stood in the doorway of the cab, and listened. Ross listened. We waited.

'Nothing,' whispered Ross. Orville looked intently at the foggy lake to our right.

'They're *here*—I can *feel* them.' Annette heard an urgency in my voice that wasn't there the day before, when the first bull had tried to give itself to us. I said this with emphasis because I wanted the others to try harder, look harder, make a smart decision using past hunting experiences—these few words said much.

Suddenly, Orville let a call warble from deep in his gut; it echoed, and he and Ross listened some more. 'It's a challenge call for bulls,' he said, sitting back down. 'We have to think like a moose to hunt them with respect.' You have to become the animal to attract it. Bulls challenged each other as they fought over cows during rut. But it was just a week or two too early for rut—though I thought I would try. Ross and I thought that the smoke had made all the animals bed down, cease all movement. 'But they're here.' I could feel them, so I knew they were there.

Orville explained another hunt he had been on: 'I could feel it *way* before I saw it ... You just *know* it's there. I just don't know *where* it is.' He could intuit the gift; not all hunters had such intuition, and sometimes the intuition is

specific to the observation and the person with the gift.

Annette was still confused about intuition. Subjectivity is most often defined through emotion; it is an experience rendered incomprehensible within a scientific rationality that supposedly rests upon the Cartesian separation between mind and body, subjects and objects. Feminist scholars have critiqued the Cartesian mind–body separation by arguing that the non-visual experience of emotions, arising from an embodied subjectivity, also contributes to knowledge-formation (Bondi et al. 2002; Haraway 1997, 1999). But in the writings of Deleuze and Guattari, they avoid speaking about emotions because it implies a stable identity; instead, they speak of *affects*, what inhibits or promotes what a body can *do* (Deleuze and Guattari 1998). Yet Orville's description of intuition seemed neither a function of affect nor emotional—but definitely not Cartesian rationality.

I wanted to place how IK stood in relation to critical social theory, and I thought it strikingly similar to posthumanism. Intuition could result from an act of becoming: 'becoming-animal' (Deleuze and Guattari 1998). Orville could feel the moose because he had to think as one; not a stable identity, not a literal becoming, but an identity erupting through the performance of the hunter's practice. This is a different interpretation of becoming-animal than others, such as Lorimer (2007), who described it as an encounter, as when 'a natural scientist ... achieve[s] a form of ecological proximity with and corporeal understanding of their target organism' (Lorimer 2007: 925). Unlike this definition, which equates becoming with scientific knowing, our definition equates becoming with performing an identity, the identity being a temporal phenomenon. The Koyukon hunter's performance, too, produces knowledge, but it

is not knowledge produced through the subject–object dichotomy.

Orville turned the boat around and exited back into the Huslia River. It was about the time that animals would normally want water after feeding, though I told Annette that I thought the moose were getting water from upland lakes instead of the river. With the change in the climate over my own lifetime, I can tell the lakes are not freezing as early in fall as they used to, and these are preferred by moose. We went up the Nulitna River until the boat started getting stuck on the sand bars, but we heard and saw nothing. I drove us up another slough, to another group of lakes, because I usually always saw bulls there—I knew from flying moose surveys in years past with the USFWS that there was often a congregation of bulls there, at these lakes—but we saw nothing except old sign.

There was urgency in the silence: urgent for Annette because I felt that so much gasoline had been used and spilled at \$4.50 a gallon for a hunting trip that might yield nothing.¹¹ Or that my presence was somehow like ‘bad luck.’

For Orville, the urgency came from feeling the animal trying to give itself to you, and the questions you pose to yourself: Where? How? Am I doing it right? Do I truly deserve the honor? Mine was urgency in the soul searching to feel whether I was truly worthy.

Soon, I noticed fresh moose tracks in the mud at the water’s edge, and I turned the boat around to land. We walked up the bank and through a thicket of tall willows, where we saw two places where moose had bedded down, crushing the tall grass like two miniature crop circles (Figure 1). As Ross and Orville stood in those circles, they listened intently, and then Orville began to walk further back into the woods. Ross and Annette listened after him; after a few minutes, we heard rifle shots—but from the other direction,

down river, in the distance. Orville returned, saying that we must have just missed the moose as they came down to water and returned to the woods. I saw them moving the willows way back there, over a mile, too far for us to carry the meat. They weren’t giving themselves to us unless we were willing to go a lot farther, and someone shooting downriver meant we needed to hurry, they might need help, or they might have wounded an animal.

We continued down the Huslia River, and Orville attempted to swing the boat wide enough to enter Nuna Slough. But the boat got stuck on a bar, and got stuck bad. He raised the propeller and we got out of the cab, trying to push the hull off the submerged silt bump with oars and the axe handle, grunting and cursing and laughing and huffing and rocking the boat on the mound to shake us loose.

I abandoned trying to enter the slough; the water at the opening was too low this year. I swung the boat downstream, and around the very next bend we saw a bull standing on the far shore. He just stood there and stared at us—he was giving himself to us.

Orville had me take the wheel, as he picked up his SKS automatic. We reached shore, and Ross stood up, aimed through his scope, and fired once. He fired twice. The bull stumbled, but remained standing; Annette was surprised the bull didn’t run away, it just stood there, as if waiting.¹² Ross began to miss, especially when he left the boat, because the scope could not handle the close range.

The bull staggered, but didn’t run back into the willows—yet. Orville said later that we had encountered him before he had gotten to water, so he still wanted to drink. That is why he came out so far, but did not run when he was hit hard on his skull—he was out cold, like a fighter, staggering but too strong to fall. I jumped out of the boat and fired off a few



Figure 1 Ross Sam standing in a moose bed. Photograph by Watson.

shots, and the bull collapsed but kept kicking, and I tied off the boat, while Annette handed me more rounds to load to ensure a quick death (Figure 2).

The image of the dying bull had not been the kind of ‘nature’ or ‘gift’ Annette had been brought up to appreciate. Instead, Annette was educated that Nature was ‘cute’ (Lyng 1992); the anthropomorphizing of animals produced ‘charismatic megafauna’ (Figure 3)—who often horribly suffered through human cruelty and ignorance. I remember formative years of elementary school classrooms with Greenpeace posters of ‘baby’ seals threatened by the clubs of northern hunters, and the news stories of PETA¹³ protestors who threw red paint on the fur coats of affluent New Yorkers, and the resultant rise in the ‘pleather’

economy. Paradoxically, I also learned that the violence of killing could—and should—be erased through creative taxidermy (Figure 4). Like the dioramas in New York’s Natural History Museum, or the prints of birds illustrated by Audubon. The Nature that I had been educated to know could be known at a distance. Not through actual killing. And not through the animal’s act of giving *itself* to you.

Giorgio Agamben writes that animals in Western culture are understood as impoverished. That is, an animal only exhibits behaviors; according to Heidegger, an animal is a non-being that can only *react*. Instincts are merely reactions to stimuli. Animals thus can not act, and so the logic follows that humans cannot have relations with such non-beings



Figure 2 Huntington shooting the bull. Photograph by Watson.

(Agamben 2004: 50, 52–54). Anthropologist Tim Ingold writes that

according to the canons of official science, to attribute feelings to animals is to commit the cardinal sin of anthropomorphism, of treating the animal as if it were human. It is a condition of scientific inquiry that the objective world of nature ... should be closed off from the world of society to which human beings alone are admitted as rational and sentient subjects. (2004: x)

Yet as recent research in animal geographies suggests, animals beneficially occupy the same terrain as human communities, including ‘rats, raccoons, white-tailed deer, and coyotes ... This lends validity to the idea that some animals might have chosen us as we chose them’ (Dawson 1999: 201). Likewise,

Koyukon hunters claim moose rely upon them to trap the wolves closest to the village, thereby providing protection from their worst predators. But believing this requires a more-than-behavioral rationality for nonhuman animals.

Calling these kinds of descriptions of human–nonhuman assemblages as ‘anthropomorphic’ is actually another version of anthropocentrism. Braun writes that what is wrong with anthropocentrism is that it ‘teaches us to imagine that the production of the human—and social life—is something to which only we, as humans, contribute’ (2004a: 272). The Koyukon do not anthropomorphize nonhumans, because they see hunting success as the responsibility of *both* Koyukon and moose. Braun adds that post-humanism



Figure 3 Charismatic moose sold at the Anchorage International Airport. Photograph by Watson.

is another name for *non-anthropocentrism*, for recognizing a 'vital topology' that extends far beyond us, and that is not of our making alone ... it is focused less on 'human becomings' than on 'becoming otherwise', on displacing the hubris of humanism so as to admit others into the calculus of the world. (Braun 2004a: 273)

Examples of 'becoming otherwise' are easily found in Koyukon traditional stories as much as during hunting practices. Catherine Attla, a well-known Koyukon elder,¹⁴ often talks about how all animals were human once. She told Annette, 'they all have four limbs, if you look close. Even frogs. All animals.' This concept of the human/animal identity is exhibited most strikingly in the Koyukon story she narrated, *K'etetaalkkaanee: The One Who Paddled Among the People and Animals* (Attla 1990). In it, the protagonist finds himself among beings who one day might seem human, while the next are seen as animals like chickadees, or boreal owls, or foxes—and the protagonist is also at one point perceived by other men as a marten. Humans

and nonhumans are beings of the same ontological kind.

But such stories of human–animal transformations, common amongst many indigenous societies, are treated as 'myth' rather than ontological assertions. Deleuze and Guattari explain how structural thinking in anthropology allowed such narratives to be understood through Western epistemologies. They wrote,

It is no longer a question of graduating resemblances, ultimately arriving at an identification between Man and Animal at the heart of a mystical participation. It is a question of ordering differences to arrive at a correspondence of relations ... A man can never say: 'I am a bull, a wolf ...' But he can say: 'I am to a woman what the bull is to a cow, I am to another man what the wolf is to the sheep.' Structuralism represents a great revolution; the whole world becomes more rational ... Yet in his study of myths, Levi-Strauss is always encountering these rapid acts by which a human becomes animal at the same time as the animal becomes ... (Becomes what? Human, or something else?). It is always possible to try to explain these



Figure 4 Taxidermy display at the Anchorage International Airport. Photograph by Watson.

blocks of becoming by a correspondence between two relations, but to do so must certainly impoverish the phenomenon under study. (Deleuze and Guattari 1998: 236, 237, original emphasis)

Indeed, a linguist that worked with Catherine Attla ordered the differences between humans and nonhuman animals in her story to interpret the correspondence rather than the becomings. He interpreted the episode when a large human family transforms into chickadees as a myth teaching the ‘fact’ that chickadees produce many young and are social animals (Thompson 1990: 20). The linguist did not subscribe to the reality (or possible *impermanence*) of these becomings.

By contrast, moose and Koyukon are not analogous to each other—the hunter warbles his call as he is becoming-rutting bull. The

differences between humans and nonhuman animals are not fixed; this is not an essentialist ontology. Such becomings inform Koyukon epistemology; IK is a knowledge not about things, not objects, though researchers attempt to extract those things spoken about. Instead, IK is relational, and thus as argued by Rarámuri scholar Enrique Salmón, the ‘natural world ... is not one of wonder, but of familiarity ...’ (Salmón 2000: 1329). Similarly, in describing the Australian Yolngu tribe’s reciprocal relations with the land, Helen Verran also writes in terms of kinship:

This is not a stretching linear, branching family tree of the biological sciences, but a recursive matrix of reciprocal family relations that folds back on itself, implying continual ‘reincarnation’ of a given

set of Yolngu agents—human and non-human. (2002: 753)

Annette witnessed Orville shooting this bull behind the ear. He was aiming behind the ear, but as he jerked in death the velvet on his horns tore from the bullets. He lay there, still kicking the mud, his hot breath heaving from his muzzle. Finally he lay still, and he cut his throat to let him bleed out, and he went to cut a stack of young willows for his bed to shield the meat from the sand of the bank.

This was the first time Annette witnessed any hunt, let alone a successful hunt. I kept thinking about how violent it all seemed, with the blood and the clamor of a semi-automatic echoing across the foggy landscape.¹⁵ Even on a later hunt, I caught myself saying to a dead animal, ‘poor thing’—and stopped myself because the sentiment affirmed the impoverishment of an animal who could not control his need to drink.

As Giorgio Agamben notes,

Perhaps not only theology and philosophy but also politics, ethics, and jurisprudence are drawn and suspended in the difference between man and animal. The cognitive experiment at issue in this difference ultimately concerns the nature of man—or, more precisely, the production and definition of this nature ... (2004: 22)

Thus at stake in this relational, posthumanist ontology is Koyukon politics, one kind of amodern politics. Koyukon spirituality accomplishes a politics whereby humans are no longer assumed to be the lone actor in relation with nonhumans; anthropologist Richard Nelson called this Koyukon environmental ethics (Nelson 1986).¹⁶ Orville adds that there is a spiritual aspect to every part of the environment, the whole valley; the ‘environment’ Nelson speaks of is actually our spiritual world. This conception of the

spirit world as ever-present allows nonhumans tremendous agency—but also inspires greater responsibility by the human animal to care for this space and its kin. Orville told Annette, you respectfully accept an animal and there is a sense of relief, and there is honor and happiness when you are able to respect the spirit, and for the meat for families to share and become a part of the moose, for the rites of passage like the potlatch that accepting the moose allows, and for the things that the valley provided for him in his life.

As she helped to lay the willow bed and watch Ross and Orville begin to eviscerate the bull, Annette wanted to put into words the intensity of the experience.¹⁷ I tried again to be a ‘good researcher,’ and while Orville ignored my questions, Ross said curtly, ‘you’ll see.’ Orville said later that sometimes you teach only with your actions, and learn by performance.

Ross and I showed Annette how to butcher the bull (Figure 5). Upon a bed of freshly cut willow branches we cut the hide away, and cut the muscles below the ribs to excavate the entrails. Certain parts we immediately saved for elders in Huslia: like the heart, liver, lungs, and the ‘book’ (because its folds look like a thick Bible). These actions we completed with the fewest words possible; I respectfully said nothing, thinking of all of its life, as to not offend the moose’s spirit while it watched over me, to make sure what I did was done with love and respect.

Annette finally stopped asking questions, and began to just listen and do what I was told, my camera and my hands like their hands and knives covered in the blood of the bull (Figure 6); I held the bull’s legs open for them as they cut him open, and then later I cut off his head.

It was getting late, so we covered and stuffed the moose carcass with willow branches and left the bull’s severed head, to be collected on the morrow; the night would be cool enough



Figure 5 Ross Sam (with knife) and Orville Huntington beginning to eviscerate the bull.
Photograph by Watson.

to allow the meat to cure, and it was too fresh for scavengers.

Assemblages of things, places, and stories

During a moose hunt as practiced by Koyukon Athabascans, the social relations between the hunter and prey are re-affirmed by their becomings. A moose is not just an object of knowledge, but an active agent in the world, politically equal with humans; through their encounters and becomings this human–nonhuman assemblage contributes to the knowledge produced about their common world. Yet what we assembled during this moose hunt was more than the moose and the hunter; according to geographer Sarah

Wright, the concept of the assemblage forwarded by Deleuze and Guattari denotes the ‘amalgam of places, bodies, voices, skills, practices, technical devices, theories, social strategies and collective work that together constitute ... knowledge/practices’ (Wright 2005: 908). So Annette thought about what else became enrolled in our assemblage of a moose hunt.

In a later conversation, Orville said that he really didn’t quite understand what made Annette’s project ‘geography.’ She responded that geography wasn’t ‘just maps,’ but about places and spaces, about the relations that happen within spaces. Annette asked him, ‘how important is place to what you know, and how you know?’



Figure 6 Huntington completing the gutting of the three-year-old bull. Photograph by Watson.

I said that while places around Huslia are important, a bit further north, in the Hogatza River area, I feel it even stronger, because that was where my dad and I spent time together hunting and trapping, where my ancestors left this earth for the next place, where their remains share the earth.¹⁸

'If you were to move away from Huslia,' Annette asked, 'would you still be able to practice your knowledge?' Orville began to answer about how the city was different, but she rephrased the question: 'what about another rural area? Would you have knowledge and wisdom there?'

'No, when I lived in another village I couldn't really teach my sons anything, they couldn't learn anything, because people didn't do things in the Native way.' And the area was not physically the same. I needed to get my

sons back to Huslia, closer to Hogatza, 'to teach them the old way of our people.'

'What about if you moved to a different rural place, but where it was physically, biogeographically the same?'

'No way,' he said. Orville was most emphatic about this scenario not being at all appropriate. 'I'm not related to anybody there.' Once I traveled in the Copper River area of Alaska, and it took me a while, but I learned their techniques and knowledges to catch fish, and I was able to teach my sons. I was able to because I had relatives in the area of the same clan, on my mother's side. Where families traditionally hunted and shared stories of past hunts were and are of utmost importance. Such as where Annette was with us when Ross and I shot that moose: that was where my grandmother was from, where the

Second Chief's family was from, those camps around there.

'All these places,' said Orville, 'are just stories.' The anthropologist Keith Basso wrote *Wisdom Sits in Places* for how the Apache named features in their landscapes: to trigger the remembrance of stories that teach ethical conduct (Basso 1996).¹⁹ Similarly, Helen Verran wrote that when the Australian Yolngu tribe overlaid their kinship relations upon the landscape,

the routine doings, including the doing of story, make up Yolngu place. In contrast to science, where collective memory is mobilized as written texts often with tables and graphs, amongst the Yolngu community collective memory is experience of narrative, song, dance and design. (2002: 753)

Likewise, Orville showed that the places for Koyukon triggers both collective and individual memory of stories about experiences that can in turn inform current actions—practical and ethical stories that cannot be mapped through the use of indigenous names. About the place where they shot that moose Orville said, 'It was way more than just a place.'²⁰ You have to pay respect to your elders, to the Second Chief's elders.' An anthropologist who studied with the Koyukon of Huslia wrote that they lived in a 'watchful world' (Nelson 1986); but these were no evil spirits or ghosts. This was a panoptic space as populated as any city, but this space was not a prison. Rather, the Koyukon landscape is a space that inspires respect for the people and animals who grew up there, from the presence of their camps and habitats, from the 'onto-story' (Braun 2004b:1355) associated with the places where the human confronts the opportunity of the animals' gifts.

So we have narrated how one moose hunt became assembled, but we have also narrated how stories are embedded into the places and

practices of hunting—and thus all a part of the assemblage that informs IK. Crucially, this is still one assemblage, one event: Orville notes that not all hunts go exactly like this, especially if an animal is wounded, and that there are many different kinds of hunts that are not encompassed in the story of this hunt on these pages. Our point instead is to show how these assemblages become known within epistemic spaces.

Epistemic spaces: articulating assemblages for posthumanist politics

While many scholars have written about 'epistemic regimes' (e.g. Verran 2002: 731), others argue that there is an inherently spatial dimension to knowledge production (e.g. Wright 2005; Turnbull 1993–94). We argue here that an epistemic space is how these assemblages become recognized; how a knower sees space determines how the assemblage emerges as knowledge.

For example, science studies scholars routinely critique scientists' 'objective vision.' Natural scientists 'black box' their practices to promote the illusion of objectivity, including the place-less-ness, of the scientists' work. Wright (2005) describes how Western sciences are able to simultaneously eradicate place from their accounts while also claiming knowledge over all places through jumping scales, what she claims is demonstrated through Haraway's (1999) description of the 'god-trick'. But Koyukon IK is not scale-jumping, because the relations assembled are not hierarchical but immanent.

Thus in understanding the posthuman, scale is less important than space; in this regard, feminist science studies scholars and feminist geographers critique how the 'objectivity' of the 'god trick' assumes that space is transparent

(Haraway 1999; Rose 1997). By contrast, their posthumanist worldview causes Koyukon to conceptualize space as more opaque than transparent. The space we describe in this account is subjectively experienced from an embodied perspective, but also occupying the same plane of immanence as the others assembled during the hunt. Without a 'god's-eye' perspective, space can be as opaque as the fog of the wildfire that literally clouded our view of the landscape. Crucially, this is why intuition becomes prevalent in the making of Koyukon IK: intuition emerges from a space whose hidden dimensions inspire both thought and becomings by the respectful hunter.

We also want to think about space in another way: as the context for the encounters of Indigenous and Western knowers. As stated by Wright, scholars like Turnbull introduce

the concept of knowledge spaces to refer to the space within which different knowledges are conceivable. These are the spaces from which knowledges arise but also spaces that are, in turn, shaped by these knowledges. This provides a mechanism for understanding all knowledges as situated in a particular geo-historical context (whilst going beyond understanding this context as 'local') and also for extending the notion of contextualization to one of co-creation. (Wright 2005: 908)

Space is indeed implied in the way that natural and social scientists have used IK. In conceptualizing the difference between IK and Western sciences, researchers have consistently promoted *cross-cultural* studies of scientific practice. Even science studies scholars often maintain each cultural-scientific practice as a separate epistemological framework, advocating a process of *translation* to comprehend these 'other' systems of knowledge (Maffie 2003; Watson-Verran and Turn-

bull 1995).²¹ Unlike analyses of the influence of gender on scientific practice, or even works that explicitly attempt to accord nonhumans agency, 'cross-cultural' studies promote the understanding of cultures only *through* Western epistemologies, not as agents constituting scientific practice. These researchers have thereby conceived the spaces of these knowledge systems as if they were both separate and distant—in need of bridging.

However, this mischaracterizes the very history of the sciences; as stated by Agrawal, a

classification of knowledge into indigenous and western ... founders [because it] seeks to separate and fix in time and space ... systems that can never be thus separated or so fixed. Such an attempt at separation requires the two forms of knowledge to have totally divorced historical sequences of change. (Agrawal 1995: 421–422)

Indeed, cultures have been in contact, exchanging ideas and goods, for thousands of years—some of these exchanges producing the very 'Western Science' supposed to be uniquely 'Western' (e.g. Bravo and Sörlin 2002; Grove 1995; Wright 2005). This is not to say that there is no benefit to documenting the historic, pre-colonial knowledges of Native societies—in fact that has been necessary in recognizing their validity. But this conception of IK and Western sciences as entirely separate in episteme and space is simply not attending to the history of the sciences.

Yet it is the form of the academic paper that is designed to, as Agrawal stated, 'separate and fix in time and space' the collaborations of IK and Western sciences. Throughout their histories, natural and social sciences have relied upon the local knowledges of informants—they became assembled in the making of knowledge. But it has been through narrating scientific truths that the knowledge

of indigenous collaborators been erased. As sole authors, Western researchers ‘translate,’ interpret, or otherwise ‘integrate’ IK as ‘facts’ about ‘things,’ and this only strengthens the hegemony of Cartesian rationality—while it also mis-represents the assemblage. After all, the narrative with only one author validates only one perspective of the assemblage. What elements become left out of academics’ accounts of these encounters? How these selections are made—which aspects of the assemblages become articulated as ‘fact’—that is crucial to interrogate. For that is when epistemic violences occur: when the actors in the assemblage do not have equal power to have their hybrid natures articulated. IK and the natural and social sciences always already inform each other.

So this is an ethnography about the co-production of knowledge as much as it is an ethnography about Koyukon hunting practices and IK. Thus we explicitly chose a narrative style that underscores the authorship of both the geographer and tribal hunter. Because of our co-authorship, and cooperative control of the narrative, we integrated our theoretical and spiritual discourses so that we did not produce a ‘discovery’ of the Koyukon, but a ‘conversation.’ Annette was not trying to bridge a great divide as much as she desired the assemblage to be narrated by both of our selves, to displace her as sole author and authority. We shared a single epistemic space—and we co-produced a narrative that respects the representation of a fuller assemblage.

The difference between Indigenous and Western Knowledges is borne from how their epistemic spaces recognize assemblages through either humanist or posthumanist philosophies. It is thus telling that natural scientists only ‘integrate’ the ‘things’ that comprise local knowledge into their

researches—this follows their dependence on visible subject–object dichotomies. By contrast, our account of the assemblage includes the spiritual stories that comprise the *beliefs* of Koyukon Indigenous Knowledges. This is why we argue that we more faithfully assemble Koyukon, moose, rifle, boat, river, places, stories, and geographer—an assemblage that requires changing the form of the usual academic narrative.

Yet the intellectual traditions we assemble, ‘Western’ and ‘Indigenous,’ are not entirely separable into our individual selves, who are instead a ‘multiplicity of multiplicities.’ It would be easy to say that Annette’s tradition is exclusively Western and Orville’s is Indigenous. Through this narration we demonstrated Orville’s observations are informed by Koyukon traditions—but also by his education and employment in Western wildlife biology. Similarly, Annette’s observations of these hunting practices are informed by Western science and her upbringing, but more particularly through her studies of critical human geography and social studies of science, which utilize methods and promote epistemologies critical of Cartesianism.

It is a humanist way of categorizing our assemblage if we were to argue that our knowledges are exclusively ‘Indigenous’ or ‘Western,’ ‘local’ or ‘global.’ We did not really ‘co-produce’ this knowledge of a moose hunt as much as we’ve brought our own hybridities into conversation in the assemblage.

Representing multiple perspectives within the assemblage is one way toward a post-humanist politics—and one not often reflected by other depictions of human–nonhuman assemblages. Where in the Prologue Annette critiqued how some of the literature on posthumanism seems in thrall to modern science, here I also want to note that posthumanism is also deployed by environmental

and animal-rights advocates who take a very negative view of the human hunter. This is why our narrative expressed the spiritual discourse proffered by Orville in explanation of the 'Koyukon version' of amodern politics: because this politics diverges from the amodern politics being developed by many post-humanist scholars. Thus our commitment to representing multiple perspectives means that the discourses of academia must reflect their assemblages more fully, not only to avoid epistemic violences, but to express the myriad possibilities of amodern politics.

We argued here, through both the content and the form of this paper, that the way to proliferate perspectives—as Donna Haraway (1999) put it, to 'situate' knowledge—is not to translate or interpret, but to change the way that knowledge is represented, and make these selections explicit when describing assemblages of everyday life and scientific knowledge. Indeed, this assemblage of Koyukon hunters, wooden-hulled boat, winding river, distant wildfire, automatic rifle, moose, and academic geographer: we all produced this narrative, we together reproduced these ethics of the Koyukon human–animal relationship as much as we together produced food for Orville's family and the community of Huslia.

Acknowledgements

The authors acknowledge the community of Huslia and specifically Catherine Attla and First Chief William Derendoff. We also thank the Huslia Tribal Council, with whom Annette Watson engaged in a formal partnership agreement during her dissertation research, from which this ethnography of co-production is taken. This research was generously supported by the National Science Foundation Grant No. 0425873. Previous

versions of this paper have been presented by Watson at the Annual Meeting of the Association of American Geographers, 2005, and at the Society of the Social Studies of Science (4S) Annual Meeting, 2006—for which we thank audience members for their comments. Lastly, we thank Ryan Holifield and Gabriela Valdivia for reviewing the draft, as well as three anonymous reviewers—all of whom should not be held accountable for the arguments herein.

Notes

- 1 Moss (2001) admits this method of analysis has been controversial within geography, but she sees it as an opportunity to engage data reflexively. Autobiography also has the potential to provide insights uniquely attainable from a subjective position. We take an autobiographical approach to combine both our concern about appropriating knowledge of indigenous consultants, as well as to highlight our approaches to animal nature, environmental observation, and experience of space. However, autobiography is not without its critics, who suggest that it re-affirms a unified humanist subject (Smith and Watson 1996).
- 2 In fact, while the paper was initially drafted by Watson, it has undergone extensive editing and review by Huntington, both verbally and in print. The process was iterative and performative, taking place over a period of a year and a half. Watson thus is not only a co-author, but served as the final editor—which is why our narrative has the cohesive tone we desired.
- 3 We thank Karen Till for initially suggesting this unique use of first-person narrative to tell our story, but she is not responsible for how we executed the style.
- 4 Deleuze and Guattari (1998) recognize a 'multiplicity of multiplicities' instead of a stable and consistent Subject; individuals have hybrid identities themselves, and thus it is difficult to describe different peoples' identities as dichotomous, such as 'Indigenous' and 'Western.'
- 5 Also called a snowmobile; in Alaska it is referred to as a snow machine, and in many villages a snow-go.
- 6 Rather than pseudonyms we will identify known lands and cabins as merely known by locals, to highlight the geography of knowledge.
- 7 In Alaska and the Arctic more generally, Indigenous Knowledges (IK) are referred to as Traditional

- Ecological Knowledge (TEK); Annette wants to avoid the critiques of using a term such as 'traditional,' and align this story with global debates that refer to it as IK.
- 8 For an excellent history of this engagement, see Berkes (1999).
 - 9 Most often indigenous expertise is understood to be the product of lifetime of observations, just as in the West experts are understood to be produced by the academy. Thus goes the oft-repeated adage, 'when an elder dies, so does a whole library.' The very definition of expertise justified research aimed at preserving the knowledges of tribal elders. And the critique follows that such initiatives are largely conducted by non-indigenous peoples who archive this 'data' in centralized libraries outside the physical and cultural context in which they produce these knowledges, leaving it more vulnerable to misunderstandings and misappropriations (Agrawal 1995). Annette suggests that while elder knowledge remains important to respect and preserve, this narrow concept of indigenous expertise renders incomprehensible the concept of a 'practice' of IK that could even better correlate to the practice of the sciences. It is not that elders never hunt; indeed, many do. This is a comment on methodological practices that rely exclusively on interviews/oral histories as opposed to ethnographies to get at the notion of a 'practiced' IK.
 - 10 Orville also notes that what seems like reluctance comes from either not having the patience to teach, or not knowing whether it is appropriate to do so with the questioner. Elders are very specific with whom they share their wisdom.
 - 11 By the time of publication, gas prices in Huslia are up to \$5.25 a gallon.
 - 12 Orville notes that the bull was knocked out on his feet, something I have seen many times; if you do not act quickly, you might lose them.
 - 13 People for the Ethical Treatment of Animals.
 - 14 And Orville's aunt.
 - 15 After reading Annette's response Orville noted: better to use an SKS instead of an arrow, so that their lungs do not slowly fill with blood, miles from the river. You cannot be 'nice' and kill.
 - 16 In his study Nelson catalogued all nonhuman species in the region and how the Koyukon utilized them; however, he did not employ a social theory or science-studies framework for his work, as he wrote in the context of 1970s environmentalism.
 - 17 Some feminist geographers suggest that the scholarly voice is only a 'disruption' of the authority of the

- subjects with whom researchers work, but Annette argues that including all kinds of subjectivities fosters dialogue, and can actually expand the boundaries of expertise if the academic discourse is itself 'disrupted' by the 'other' subjectivities, particularly when academic discourses fail to describe the experience.
- 18 To Annette, this sounded reminiscent of Helen Verran's (2002) account of the Yolngu of Australia, whose clan relations are understood through the landscape, so that it would become 'what we might call in English "people-places" or "clans-lands". Yolngu reality has people and place as one entity' (Verran 2002: 749).
 - 19 And the Apaches are linguistically related to the Koyukon; Koyukon too recognize their kinship with them.
 - 20 This invocation of 'place' is used here to be synonymous with 'location' or 'stage,' and does not draw upon humanistic geographers' theoretical interventions on sense of place.
 - 21 One reviewer pointed to Verran's (2002) work with the Yolngu and ecologists' practices of prescribed burning to contest my argument here, but Verran does not discuss their *co-production* of knowledge—her description of Yolngu traditions seem 'pure' except for the occasional use of a modern lighter. And her intent was to show the scientists have rituals—not that the Yolngu do science.

References

- Agamben, G. (2004) *The Open: Man and Animal*. trans. Attell, K. Stanford, CA: Stanford University Press.
- Agrawal, A. (1995) Dismantling the divide between Indigenous and Scientific Knowledge, *Development and Change* 26: 413–439.
- Attla, C. (1990) *K'etetaalkkaanee: The One Who Paddled Among the People and Animals, The Story of an Ancient Traveler*. Fairbanks: Alaska Native Language Center, University of Alaska Fairbanks.
- Basso, K. (1996) *Wisdom Sits in Places: Landscape and Language Among the Western Apache*. Albuquerque: University of New Mexico Press.
- Berkes, F. (1999) *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. London: Taylor & Francis.
- Bondi, L. et al. (2002) Introduction, in Bondi, L. (ed.) *Subjectivities, Knowledges, and Feminist Geographies: The Subjects and Ethics of Social Research*. Lanham, MD: Rowman and Littlefield Publishers.

- Braun, B. (2004a) Editorial: Querying posthumanisms, *Geoforum* 35: 269–273.
- Braun, B. (2004b) Modalities of posthumanism, *Environment and Planning A* 36: 1352–1355.
- Bravo, M. and Sörlin, S. (eds) (2002) *Narrating the Arctic: A Cultural History of Nordic Scientific Practices*. Canton, MA: Watson Publishing.
- Brower, H. Sr (2004) *The Whales, They Give Themselves: Conversations with Harry Brower, Sr., Brewster, K.* (ed.). Fairbanks: University of Alaska Press.
- Cajete, G. (2000) *Native Science: Natural Laws of Interdependence*. Santa Fe, NM: Clear Light Publishers.
- Castree, N. (2003) Environmental issues: relational ontologies and hybrid politics, *Progress in Human Geography* 27: 203–211.
- Castree, N. and Nash, C. (2006) Editorial: Posthuman geographies, *Social & Cultural Geography* 7: 501–504.
- Coyle, F. (2006) Posthuman geographies? Biotechnology, nature, and the demise of the autonomous human subject, *Social & Cultural Geography* 7: 505–523.
- Cronon, W. (1996) The trouble with wilderness: or, getting back to the wrong nature, in Cronon, W. (ed.) *Uncommon Ground: Rethinking the Human Place in Nature*. New York: W.W. Norton and Co., pp. 69–90.
- Dawson, A. (1999) The problem of pigs, in Proctor, J. and Smith, D. (eds) *Geography and Ethics: Journeys in a Moral Terrain*. New York: Routledge, pp. 193–206.
- Deleuze, G. and Guattari, F. (1998) *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: University of Minnesota Press.
- Ellen, R. and Harris, H. (2000) Introduction, in Ellen, R., Parkes, P. and Bicker, A. (eds) *Indigenous Environmental Knowledge and its Transformations*. Amsterdam: Harwood Academic Publishers, pp. 1–33.
- Emel, J. (1998) Are you man enough, big and bad enough? Wolf eradication in the US, in Wolch, J., Emel, J., Partes, P. and Bicker, A. (eds) *Animal Geographies: Place, Politics, and Identity in the Nature–Culture Borderlands*. New York: Verso, pp. 91–118.
- England, K. (1994) Getting personal: reflexivity, positionality, and feminist research, *The Professional Geographer* 46: 80–89.
- Feit, H. (2004) Hunting and the quest for power: the James Bay Cree and whitemen development, in Morrison, R.B. and Wilson, C.R. (eds) *Native Peoples: The Canadian Experience*. New York: Oxford University Press, pp. 101–128.
- Foucault, M. (1980) *Power/Knowledge: Selected Interviews and Other Writings, 1972–1977*. New York: Pantheon Books.
- Fox, R. (2006) Animal behaviours, post-human lives: everyday negotiations of the animal–human divide, *Social & Cultural Geography* 7: 525–537.
- Grove, R. (1995) *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600–1860*. Cambridge: Cambridge University Press.
- Haraway, D. (1997) *Modest_Witness@Second_Millennium.FemaleMan©_Meets_OncoMouse™ Feminism and Technoscience*. New York: Routledge.
- Haraway, D. (1999) Situated knowledges: the science question in feminism and the privilege of partial perspective, in Biagioli, M. (ed.) *The Science Studies Reader*. New York: Routledge, pp. 172–188.
- Huntington, J. (with Elliott, L.) (2002 [1966]) *On the Edge of Nowhere*. Kenmore, WA: Epicenter Press.
- Ingold, T. (2004) Introduction, in Anderson, D. and Nuttall, M. (eds) *Cultivating Arctic Landscapes: Knowing and Managing Animals in the Circumpolar North*. New York: Berghahn Books Incorporated, pp. i–xiv.
- Latour, B. (1993) *We Have Never Been Modern*. Cambridge, MA: Harvard University Press.
- Lorimer, J. (2007) Nonhuman charisma, *Environment and Planning D: Society and Space* 25: 911–932.
- Lynge, F. (1992) *Arctic Wars: Animal Rights, Endangered Peoples*, trans. Stenback, M. Hanover, NH: University Press of New England.
- Maffie, J. (2003) To walk in balance: an encounter between contemporary Western science and conquest-era Nahua philosophy, in Figueroa, R. and Harding, S. (eds) *Science and Other Cultures: Issues in Philosophies of Science and Technology*. New York: Routledge, pp. 70–90.
- Moss, P. (2001) Engaging autobiography, in Moss, P. (ed.) *Placing Autobiography in Geography*. Syracuse: Syracuse University Press, pp. 188–200.
- Nadasdy, P. (1999) The politics of TEK: power and the ‘integration’ of knowledge, *Arctic Anthropology* 36(1/2): 1–18.
- Nadasdy, P. (2003) *Hunters and Bureaucrats: Power, Knowledge, and Aboriginal–State Relations in the Southwest Yukon*. Vancouver: University of British Columbia Press.
- Nast, H. (1994) Opening remarks on ‘Women in the Field,’ *Professional Geographer* 46: 54–66.
- Nelson, R. (1986) *Make Prayers to the Raven: A Koyukon View of the Northern Forest*. Chicago: University of Chicago Press.

- Rose, G. (1997) Situating knowledges: positionality, reflexivities and other tactics, *Progress in Human Geography* 21: 305–320.
- Salmón, E. (2000) Kincentric ecology: indigenous perceptions of the human–nature relationship, *Ecological Applications* 10: 1327–1332.
- Scollon, R. and Scollon, S. (1980) *Interethnic Communication*. Fairbanks: Alaska Native Language Center, University of Alaska Fairbanks.
- Scott, C. (1996) Science for the West, myth for the rest? The case of James Bay Cree knowledge construction, in Nader, L. (ed.) *Naked Science: Anthropological Inquiry into Boundaries, Power, and Knowledge*. New York: Routledge, pp. 69–86.
- Smith, S. and Watson, J. (1996) Introduction, in Smith, S. and Watson, J. (eds) *Getting a Life: Everyday Uses of Autobiography*. Minneapolis: University of Minnesota Press, pp. 1–24.
- Thompson, C. (1990) *K'etetaalkkaanee: The One Who Paddled Among the People and Animals, An Analytical Companion Volume*. Fairbanks: Alaska Native Language Center, University of Alaska Fairbanks.
- Tuhiwai Smith, L. (1999) *Decolonizing Methodologies: Research and Indigenous Peoples*. London: Zed Books.
- Turnbull, D. (1993–94) Local knowledges and comparative science traditions, *Knowledge and Policy* 1993–94(6): 29–54.
- Turnbull, D. (1997) Reframing science and other local knowledge traditions, *Futures* 29: 551–563.
- United States Fish and Wildlife Service (USFWS) (2006) *Federal Subsistence Regulations Glossary*, < <http://alaska.fws.gov/asm/law.cfm?wcr=1> > (accessed 19 November 2006).
- Verran, H. (2002) A postcolonial moment in science studies: alternative firing regimes of environmental scientists and aboriginal landowners, *Social Studies of Science* 32: 729–762.
- Watson-Verran, H. and Turnbull, D. (1995) Science and other Indigenous Knowledge systems, in Jasanoff, S., Peterson, J.C. and Pinch, T.J. (eds) *Handbook of Science and Technology Studies*. Thousand Oaks, CA: Sage Publications, pp. 115–139.
- Whatmore, S. (2002) *Hybrid Geographies: Nature Culture Spaces*. London: Sage Press.
- Whatmore, S. (2004) Humanism's excess: some thoughts on the 'posthumanist' agenda, *Environment and Planning A* 36: 1360–1363.
- Wishart, R. (2004) A story about a muskox: some implications of Tetlit Gwich'in human–animal relationships, in Anderson, D. and Nutall, M. (eds) *Cultivating Arctic Landscapes: Knowing and Managing Animals in the Circumpolar North*. New York: Berghahn Books, pp. 79–92.
- Wright, S. (2005) Knowing scale: intellectual property rights, knowledge spaces and the production of the global, *Social and Cultural Geography* 6: 903–921.

Abstract translations

Ils sont ici—je peux les sentir: les espaces épistémiques des savoirs indigènes et occidentaux

Les savoirs indigènes sont constamment mis en contraste avec les sciences positivistes occidentales. Pourtant, la conception courante des savoirs indigènes—comme un savoir sur les choses qui est traduisible—rend incompréhensible les discussions sur ce sujet en tant que pratique spirituelle ou morale. Il s'agit d'une pratique qui se déroule dans ce que nous appelons un espace épistémique. Une partie de chasse à l'original peut servir à montrer comment les savoirs sont produits par les espaces épistémiques dans lesquels la chasse est pratiquée. Un des aspects de la performance revient à incarner un animal; tel que pratiquée par Koyukon Athabascans, une chasse à l'original reproduit les relations sociales entre le chasseur et sa proie, les relations spirituelles qui mettent en évidence une ontologie, et des principes d'éthique apparemment distincts de ceux des études scientifiques occidentales sur la faune qui tirent leur origine de l'humanisme des Lumières. Pourtant, de telles dichotomies «occidental indigène» donnent une indication erronée de l'existence d'espaces totalement séparables dans lesquels des descriptions de la réalité sont produites. Dans la présente description, la chasse à l'original témoigne au contraire d'un assemblage d'acteurs à l'intérieur d'un seul espace qui, pris dans leur ensemble, vont au-delà des positions individuelles et du soi des auteurs. La chasse devient alors un événement. Par ailleurs, nous soutenons qu'une représentation plus juste de cet assemblage exige que la forme habituelle d'un article scientifique soit modifiée. En manoeuvrant ainsi entre une approche narrative et théorique qui passe à travers chacun de nos points de vue à la première personne, nous tentons d'illustrer de quelle façon les éléments de savoir sur une partie de chasse sont assemblés.

Mots-clefs: savoirs indigènes, science occidentale, post-humanisme, ontologies relationnelles, assemblage, représentation.

Están aquí—yo los siento: los espacios epistémicos de conocimientos indígenas y occidentales

El conocimiento indígena (CI) se contrasta continuamente con las ciencias positivistas del occidente. Y sin embargo, la concepción usual del conocimiento indígena—la de un conocimiento traducible sobre cosas—hace que una discusión de CI como práctica espiritual o ética resulte incomprensible. Una práctica que tiene lugar dentro de lo que llamamos un espacio epistémico. Un acontecimiento de caza de alces puede demostrar cómo el conocimiento indígena se produce por los espacios epistémicos en los que se practica la caza. Una parte de la práctica es hacerse animal; tal como se lo practican los Koyukon Athabascanos, la caza de alces reproduce las relaciones sociales entre cazador y presa, relaciones espirituales que señalan una ontología y una ética

que parecen distintas de las de las ciencias occidentales de flora y fauna, fundadas en el humanismo de la Ilustración. Y sin embargo dichas dicotomías Occidental-Indígena indican, de modo equivocado, espacios totalmente separables en los que se producen versiones de la realidad. En cambio, esta explicación de una caza de alces demuestra una colección de actores dentro de un solo espacio, que, juntos, se hacen más que las posiciones y seres individuales de los autores, llegando a ser un acontecimiento. Además sugerimos que una representación más fiel de esta colección requiere un cambio en la forma del trabajo académico habitual. Así virando entre un enfoque narrativa y otro teórico que va de uno a otro de nuestros puntos de vista en primera persona, intentamos ilustrar cómo se construye el conocimiento de un acontecimiento de caza.

Palabras claves: el conocimiento indígena, ciencia occidental, poshumanismo, ontología relacional, colección, representación.