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**“WE DON’T HARVEST ANIMALS; WE KILL THEM”**

AGRICULTURAL METAPHORS AND THE POLITICS  
OF WILDLIFE MANAGEMENT IN THE YUKON

“We don’t harvest animals. When a bear gets one of us it doesn’t harvest us. It kills us. And we kill them too. We don’t harvest animals; we kill them.” With these words, Mary Jane Johnson, a citizen of Kluane First Nation (KFN),<sup>1</sup> urged participants at a 1996 salmon-management meeting to stop using the term *harvest* when referring to human hunting and fishing. Like other subarctic Athapaskans, the Kluane people of Canada’s southwest Yukon are hunters, not farmers. Mary Jane objected to the term *harvest* because it implies ownership and control; people harvest crops that they themselves plant, so they expect to harvest their whole crop every year (e.g., you reap what you sow). She felt this to be a very dangerous mindset when it comes to wildlife and urged everyone to use words like *hunt* and *kill*, rather than *harvest*. For the rest of the day, everyone attempted to follow Mary Jane’s advice, but this proved no easy task. Throughout the day, everyone—First Nation people included—kept on catching and correcting themselves. Nor did Mary Jane’s intervention have a lasting effect; at subsequent meetings everyone lapsed back into old habits.

Avoiding agricultural terms in wildlife management meetings is so difficult because such terms are ubiquitous in the field of wildlife management. Not only does the verb *harvest* regularly stand in for less obviously metaphorical terms such as *shoot* or *kill*, but biologists also refer to the overall number of animals killed by hunters each year as the *annual harvest* (e.g., the “annual salmon harvest”). In addition, a host of other agricultural terms, such as *crop*, *cull*, *husbandry*, *seed*, *brood stock*, *yield*, *fallow*, and *transplant*, are all commonplace and essential in the field. This suggests that Euro-American wildlife managers view what they do as somehow analogous to the production of crops and domesticated animals. While most Euro-Americans are hardly even conscious of the metaphorical nature of such language, it can be jarring to Yukon First Nation people who have never been farmers. Indeed, as we have seen, they are sometimes quite explicit in their rejection of the agricultural metaphors of wildlife management.<sup>2</sup> Instead, as I will show, they tend to subscribe to a different conception of wildlife management altogether. Given the centrality of agricultural metaphors in the discourse and practice of scientific wildlife management, it is worth attending to the effects the

metaphor has had upon the discipline and to the political consequences of its application in a cross-cultural context like the Yukon.

In contrast to early studies that viewed metaphor as little more than rhetorical flourish, more recent scholars have argued that metaphors actually play a critical generative and structuring role in the production of all human thought and practice (Black 1962; Lakoff and Johnson 1980; Ortony 1979). Building on these insights, others have explored how metaphors structure scientific knowledge and practice in particular (Hesse 1980; E. Martin 1987, 1991; Merchant 1980; Todes 1989). Few scholars, however, have analyzed the dynamics of cross-cultural interactions in which various participants subscribe to different, perhaps even incompatible, metaphorical systems. Anthropologist Colin Scott (1996) paved the way for such an analysis by pointing out that the root metaphors structuring human-animal relations among Cree hunters in northern Quebec are radically different from those underlying scientific understandings of wildlife. I build on Scott's insights by examining two root metaphors that structure wildlife management in the Yukon: WILDLIFE MANAGEMENT IS AGRICULTURE, subscribed to by biologists, and WILDLIFE MANAGEMENT IS THE MAINTENANCE OF SOCIAL RELATIONS, which structures many First Nation people's concept of wildlife management. Although these two root metaphors are incompatible with one another in many ways, we shall see that there is, in fact, enough overlap between them that wildlife biologists and First Nation people can talk to one another and sometimes even agree on particular management strategies. This can create the illusion that the two parties share a mutual understanding of the situation—and even of wildlife management more generally—thus obscuring the fact that their perspectives are in fact profoundly different, structured as they are by different root metaphors.

Lakoff and Johnson (1980, 97) describe metaphorical overlap of this sort as resulting from “complex coherences between metaphors,” and they note that “a metaphor works when it satisfies a purpose, namely, understanding an aspect of the concept. When two metaphors successfully satisfy two purposes, then overlaps in the purposes will correspond to overlaps in the metaphors. Such overlaps, we claim, can be characterized in terms of shared metaphorical entailments and the cross-metaphorical correspondences established by them.”

Key to their argument is the observation that all metaphorical understandings are always partial (10). Just as a metaphor highlights (and perhaps even creates) certain aspects of a concept (e.g., the agriculture-like aspects of wildlife management), it simultaneously obscures or effaces others. Thus, it makes little sense to ask whether a metaphor is “true,” or even which of two partially overlapping

metaphors is “more true.” Instead, each metaphor, providing it “works” in Lakoff and Johnson’s sense, merely creates and/or highlights different aspects of the concept and has its own set of metaphorical entailments.<sup>3</sup> For the purposes of this chapter, the important work is to understand how each root metaphor structures thought and practice by creating or highlighting certain aspects of wildlife management and obscuring others. In a cross-cultural context, where there is no agreement about the root metaphors themselves, the question of power becomes especially critical. We need to ask which metaphors are accepted (at least implicitly) and acted upon, in what circumstances, and by whom. And, in such situations, what is the role of partial metaphorical overlap of the sort described above? Does it foster cooperation between parties *despite* their different understandings of and approaches to wildlife management? Or does it serve to mask unequal power relations between them?

With these questions in mind, I begin by examining the agricultural metaphor and its role in structuring the knowledge and practice of scientific wildlife management. I then turn to the social-relations metaphor that underlies First Nation notions of wildlife management; I examine its entailments and show that they partially overlap those of the agricultural metaphor. Finally, I examine the political consequences of all this by analyzing a particular case of wildlife management in the Yukon.

## **METAPHOR ONE: WILDLIFE MANAGEMENT IS AGRICULTURE**

### THE AGRICULTURAL METAPHOR AND THE ORIGINS OF WILDLIFE MANAGEMENT

WILDLIFE MANAGEMENT IS AGRICULTURE is a clear example of what Schön (1979) refers to as a “generative metaphor” in the field of wildlife management. It played a crucial role in the development of scientific wildlife management and has continued to structure knowledge and practice in the field ever since. One useful way of getting at the metaphor’s generative role in the field is through a close reading of wildlife management textbooks. Thomas Kuhn (1970, 136–38) argued that scientific textbooks are products of the prevailing scientific paradigm—so much so that they need to be rewritten with every paradigm shift. As such, textbooks enmesh students in the prevailing paradigm, inculcating in them a particular way of seeing the world. Emily Martin (1987, 1991) has demonstrated the value of analyzing medical textbooks as a means for getting at the metaphorical underpinnings of biomedical approaches to human reproduction. In a similar way, I trace the use of the agricultural metaphor in wildlife management textbooks to show how it has structured the field. In the process, I pay particular attention to one set of the metaphor’s entailments: namely, those objected to by

Mary Jane Johnson in this chapter's opening vignette: human ownership and control over land and animals.<sup>4</sup>

In 1933 Aldo Leopold, widely regarded as the father of scientific wildlife management in North America, wrote *Game Management*, the first textbook in the newly emerging field. In it he defined wildlife management in explicitly agricultural terms: "Game management is the art of making land produce sustained annual crops of wild game for recreational use. Its nature is best understood by comparing it with the other land-cropping arts. . . . Like the other agricultural arts, game management produces a crop by controlling the environmental factors which hold down the natural increase, or productivity, of the seed stock" (Leopold 1933, 3). It is clear that Leopold did not view the relationship between agriculture and wildlife management as metaphorical at all. For him, wildlife management was simply one of many different forms of agriculture, and the common thread linking all the various "land-cropping arts" is the exercise of human control. Indeed, for Leopold, control was the essence of wildlife management: "any practice may be considered as entitled to be called game management if it controls one or more factors with a view to maintaining or enhancing the yield" (4), and he structured *Game Management* around what he saw as the emerging discipline's primary objective: to control the factors that affect the production of wildlife.<sup>5</sup>

Leopold noted that "in game, as in forestry and agriculture, there is no sharp line between the practice which merely exploits a natural supply, and the practice which harvests a crop produced by management" (1933, 4). He then went on to describe a spectrum of activities characterized by differing amounts of human control over animals: from no control at all (exploitation of a natural supply), through game management, to game farming, and then to the raising of livestock, which, he noted, are "incapable of survival in the wild state, much less of perpetuating themselves as wild populations" (4). He argued that by the beginning of the twentieth century, however, there no longer existed any "natural supplies" of wild animals on the continent—that, in effect, the low-control end of the exploitation spectrum by then existed only in theory. As he put it: "Every head of wild life still alive in this country is already artificialized, in that its existence is conditioned by economic forces" (21). In other words, wildlife populations had by then become every bit as incapable of perpetuating themselves as livestock populations. As a result, he concluded that "hunting is the harvesting of a man-made crop, which would soon cease to exist if somebody somewhere had not, intentionally or unintentionally, come to nature's aid in its production" (210). Like it or not, then, humans were *already* "in control" of wildlife populations; and as a result, he argued, we have an ethical responsibility to exercise that control so as to

ensure the continued existence of these already artificialized populations (19). For Leopold, this meant applying the scientific methods that had by that time already been adopted in other forms of agriculture.<sup>6</sup>

#### WILDLIFE MANAGEMENT, AGRICULTURE, AND PROPERTY

Underlying the notion of control that is so critical to Leopold's agriculturally inspired vision of wildlife management is the concept of ownership. Given the importance of property rights in the practice of other forms of agriculture, this should hardly come as a surprise. Leopold himself noted quite explicitly that the kind of control required for wildlife management "can only be accomplished by the landowner" (21), and his account of the evolution of wildlife management (5–18, 408–10) deals in large part with the evolution of property rights, in both animals themselves as well as in land; and, indeed, the different sorts of management interventions he described depend variously upon ownership rights in animals and land. As Leopold (409) was aware, there is a long tradition in Euro-American property law, which holds that no one owns wild animals until they are killed or captured (e.g., Locke 1947). As some scholars have noted (Asch 1989; McCandless 1985), however, the common-law principle that wildlife are unowned has in effect meant that they are owned by the state, and this is born out—explicitly or implicitly—in the language of North American wildlife statutes and aboriginal land claims agreements. Indeed, state ownership of wildlife was essential to Leopold's vision of management because it justifies the state's restriction of hunting through the imposition of hunting seasons, bag limits, and the like (Leopold 1933, 409).

As Leopold noted, however, the state's ownership of wildlife—and hence its ability to exercise the control necessary to manage wildlife populations—is not absolute. The existence of private property limits the state's ability to manage wildlife, particularly when it comes to implementing strategies that protect or improve wildlife habitat on private lands (409). Indeed, Leopold adopts the Lockean position that it is only landowners (whether individuals or the state) who would ever be willing to invest in such "improvements" to the land. Because private landowners are in a unique position to "produce" wildlife crops cheaply, one of the primary goals of state-employed wildlife managers should be convince them to do so (398).

Thus, the agricultural metaphor has two entailments that are critical for the purposes of this chapter. First, humans can and should control animal populations and the factors that affect them so as to maximize the wildlife crop for human benefit. Second, humans (collectively or individually) own both the wildlife crop and the land on which it is grown. This ownership not only justifies human

control over and manipulation of wildlife; it also provides the necessary incentive for humans to “improve” animal habitat and so increase production.

#### PARADIGM SHIFT: TRANSCENDING THE AGRICULTURAL METAPHOR?

We have now seen that the agricultural metaphor played a critical role in shaping Leopold’s conception of wildlife management. It is reasonable to ask, however, whether the metaphor continues to shape the discipline eighty years later. And in fact, in their 2003 textbook, *Wildlife Ecology and Management*, Eric Bolen and William Robinson acknowledge the importance of the agricultural metaphor to the history of their discipline but suggest that it has now been transcended: “Since its inception, wildlife management developed in the context of an ‘agricultural paradigm’ that stressed the production and harvest of a few species. . . . However, a shift to an ‘ecological paradigm’ marks the continuing maturation of wildlife management. . . . With this shift comes the broader recognition and appreciation for the conservation of all species and the functions and services of healthy ecosystems” (188).

This leads them to propose a definition of wildlife management that differs significantly from Leopold’s: “wildlife management is the application of ecological knowledge to populations of vertebrate animals and their plant and animal associates in a manner that strikes a balance between the needs of those populations and the needs of people” (2), and they link this ecologically based concept of wildlife management to the rise of *adaptive management*, an approach that treats the making of management policy as part of the scientific enterprise, in which “policy options are tested repeatedly, with each option thereafter given more or less weight based on comparisons of predicted and actual results” (187).

There have certainly been important changes in wildlife management since Leopold wrote his seminal text. It is by no means clear, however, that the paradigm shift described by Bolen and Robinson really frees wildlife management from the agricultural metaphor that spawned it. Although these authors do make considerably less use of agricultural language than did Leopold, some agricultural terms, such as *harvest* and *yield*, have become so deeply entrenched in the field that they, too, use them quite unselfconsciously. For instance, it is in a section entitled “Harvest and Hunting” that they introduce the basic principles of adaptive management, supposedly one of the centerpieces of the new paradigm. Their continued focus on managing *harvest* levels (adaptively or otherwise) suggests that the new paradigm has not fully transcended the discipline’s generative metaphor.

Indeed, although other recent wildlife management textbooks also invoke the notion of a “paradigm shift” in the field, there is considerable variation in how

they characterize this shift. In his 2002 textbook, *Introduction to Wildlife Management*, for example, Paul Krausman describes the shift from the “traditional” paradigm of managing for multiple use and sustained yield of resources, in which “habitat protection for a diversity of wildlife is often viewed as a constraint to realizing management goals,” to the new paradigm of *ecosystem management*, “which is concerned with preserving the complex interactions that drive ecological processes and individual species” (354–55). Significantly, he never identifies the agricultural metaphor as a problematic part of the old paradigm. Indeed, his entire text—itsself presumably a product of the new paradigm—is redolent with agricultural language. What is more, Krausman explicitly adopts Leopold’s definition of wildlife management, cites *Game Management* extensively, and even adopts the general structure of Leopold’s original text.

Despite the degree to which contemporary wildlife management texts vary in their use of agricultural terms, all of them continue to take for granted the entailments of the agricultural metaphor: ownership and control. Whether the focus is on managing for a few game species or overall ecosystem health, wildlife managers seek to control human activities, predator and competitor species, and habitats. Indeed, many of the approaches espoused by contemporary textbooks are quite consistent with—if not foreshadowed by—Leopold himself. For instance, although *Game Management* predated the elaboration of the ecosystem concept, Leopold was well aware of the complex interrelationships among species, and he explicitly argued that failure to take such complexity into account in designing management strategies could lead to disaster (Leopold 1949, 129–33). Nor would Leopold likely have been very surprised by the “invention” of adaptive management, since he himself advocated an experimental approach to policy making.<sup>7</sup> Even if we allow that the ecological insights informing contemporary wildlife management bring something new to the field, this does not necessarily translate into radically new practices, since wildlife managers continue to be constrained by the political economy of resource extraction, which is what gave rise to the need for scientific wildlife management in the first place (Nadasdy 2007a).

#### **METAPHOR TWO: WILDLIFE MANAGEMENT IS THE MAINTENANCE OF SOCIAL RELATIONS**

I turn now to Yukon First Nation people’s understanding of wildlife management. As we saw, First Nation people are sometimes explicit in their rejection of the agricultural metaphor. Instead, they subscribe to a very different set of beliefs about the nature of human-animal relations and so have very different ideas about what it might mean to “manage” wildlife.

The key to understanding this alternate vision of wildlife management is First Nation hunting, which is—and has long been—the fundamental organizing principle governing social relations not only among Yukon First Nation people, but also between them and animals. Like other northern hunting peoples, many Yukon First Nation people conceive of hunting as a reciprocal social relationship between humans and animals. In this view, fish and animals are, to use Irving Hallowell’s phrase (1960), “other-than-human persons” who give themselves to hunters in exchange for the hunters’ performance of certain ritual practices. These practices vary across the North—as well as by animal—but they commonly include the observance of food taboos, ritual feasts, and prescribed methods for disposing of animal remains, as well as injunctions against overhunting and talking badly about, or playing with, animals. Hunters who fail to live up to the obligations that they incur through hunting risk the possibility of retribution from the animals, who may withhold themselves in the future or visit sickness or even death upon the hunter and his or her family.<sup>8</sup>

It should hardly be surprising, then, that northern First Nation people generally do not view wildlife management as a process whereby humans tend to an annual “crop” of wild animals. Rather, they see it as being about the management of social relations—among humans as well as between humans and animals. I suggest, then, that we might view First Nation people’s concept of wildlife management as structured by the root metaphor WILDLIFE MANAGEMENT IS THE MAINTENANCE OF SOCIAL RELATIONS.<sup>9</sup>

Yukon First Nation people do see themselves as intimately involved in the ongoing production of animal populations. By observing hunting rituals and maintaining proper social relations, First Nation hunters play a critical role in the continuous renewal of animal populations (e.g., proper disposal of animal remains is critical if the animals are to be reborn). Although First Nation hunters may resort to trickery and even coercion in their conduct of social relations with animals (Nadasdy 2007b), they do not generally subscribe to the view that they control animals, who may abandon their human partners at any time if they do not live up to the social obligations incurred through hunting. Indeed, many Yukon First Nation people find the assumption of control inherent in the agricultural metaphor absurd, perhaps even offensive to the animals. At wildlife management meetings one KFN hunter regularly objected to use of the term *wildlife management* itself. Humans cannot “manage” wildlife populations, he said. Animals manage themselves; they make their own decisions about when to reproduce and where to go, decisions that are quite independent of any human desires. Wildlife management, he said, is not about managing animals; it is about managing people (see also Natcher, Davis, and Hickey 2005).

The agricultural metaphor's entailment of ownership is equally incompatible with Yukon First Nation people's ideas about appropriate human-animal relations. A case in point is the concept of aboriginal hunting rights, viewed in Canadian law as a form of usufructuary property right possessed by people of aboriginal descent. However useful this notion has been to Yukon First Nation people in defending their interests against the Canadian government, it is nevertheless largely incompatible with the social-relations metaphor. Recall that animals give themselves to hunters only if they prove themselves worthy; if hunters don't live up to their responsibilities, then the animals will cease giving themselves. In such a world, one does not possess a "right" to kill animals simply because one was born of First Nation parents. In fact, the expectation accompanying someone's aboriginal right to hunt is contrary to the proper attitude of respect and humility that a hunter must have if he or she is to be successful in the hunt (Nadasdy 2003, 242–47).

Much like the field of wildlife management, Yukon First Nation people's beliefs and practices regarding animals have changed significantly over the past eighty years, largely in response to contact with Euro-Americans. Some of the old practices regarding disposal of animal remains, ritual feasting, and food taboos have fallen into disuse.<sup>10</sup> These changes, however, have not altered the social-relations metaphor. Many Kluane people continue to conceive of animals as intelligent, social, and spiritually powerful other-than-human persons with whom they are engaged in ongoing social relations; and they view these relations as vital to their own survival. For them, wildlife management is about the careful maintenance of these relations, not the production of a crop they own and seek to control.

Having laid out these two quite different concepts of wildlife management, structured as they are by different root metaphors, it is important to note that there is some common ground between them. It makes sense from both perspectives, for example, to talk about managing for some optimum-size animal population, though the explanations for *why* animal populations change and the kinds of "management" interventions that are effective and permissible differ markedly from one perspective to the other. Like scientific wildlife managers, Yukon First Nation people subscribe to the notion that human hunting affects the size of animal populations. Thus, on the surface it seems that their beliefs and practices are at least partially in line with those of wildlife managers, but this is something of an illusion. Though Kluane people and biologists agree that overhunting is "bad," they differ fundamentally in their understandings of *why* it is bad. As far as at least some Kluane people are concerned, overhunting and meat waste affect the animals not so much because they reduce the number of animals

in the total population, as wildlife biologists would have it, but because they defend the animals, making it less likely that they will give themselves to hunters in the future. Indeed, many Yukon First Nation people view the prohibition against overhunting as simply one facet of their complex relationship with animals, a relationship that also entails many other responsibilities not so easily classified by biologists as “wildlife management,” including prohibitions against talking badly about animals, “playing” with them, laughing at them, and so on (Nadasdy 2003, 83–94; 2005).

The illusion of agreement created by the partial overlap of metaphorical systems can lead to misunderstandings and political difficulties, as we shall see in the case of the Aishihik wolf kill, to which I now turn.

### **PARTIAL METAPHORICAL OVERLAP AND THE CASE OF THE AISHIHIK WOLF KILL**

In 1993 the Yukon Territorial Government began a five-year moose and caribou recovery program in the Kluane and Aishihik areas. One of the main components of the program involved reducing wolf populations, principally by shooting them from helicopters. In the press and everyday conversation in the territory, this program came to be called the Aishihik “wolf kill”—much to the consternation of wildlife biologists, who preferred the program’s official moniker, Aishihik-Kluane Caribou Recovery Program, and who were quick to point out that the program involved more than just the killing of wolves. Although wolf populations in the Yukon are not endangered, the species’ status as a charismatic large predator combined with its near-extirpation from much of the rest of the continent—largely as a result of just this kind of predator control—virtually assures that any such program will be extremely controversial. This one was no exception; it drew protesters from as far away as Germany.

Despite all the controversy, however, territorial wildlife managers and local First Nation governments—all of which came out in support of the program—appeared to be in complete agreement with one another and to share an understanding of the program. As I will show, however, this was an illusion, a product of partial metaphorical overlap of the sort discussed above. This illusion was threatened a few years into the program when wildlife biologists introduced a new management technique: sterilization. In this section, I first discuss scientific wildlife managers’ and then First Nation people’s perspectives on the Aishihik wolf kill, with attention to the different understandings that underlay their respective positions in support of the program. I then examine the wolf-sterilization initiative and the disagreements it sparked between biologists and First Nations.

## PERSPECTIVES ON THE AISHIHIK WOLF KILL

Predator control has a long history in Euro-American society (long predating the rise of scientific wildlife management). Leopold himself devoted a chapter of his seminal textbook to predator control, identifying it as one of the standard techniques in the wildlife manager's toolbox. As a predator-control program, then, the Aishihik wolf kill was simply the latest application of a time-honored wildlife management technique. Because of its controversial nature, however, government biologists were under intense pressure to design an ecologically sound program that would not threaten Yukon wolf populations in the long term.<sup>11</sup> Taking an adaptive approach, they framed the wolf kill as part of a broader "large mammal recovery" experiment designed to take into account not only valued ungulates, but also the health of the wider ecosystem (Hayes 1992). Not surprisingly, the agricultural metaphor shaped the way they conceived of the wolf kill. Participants at an October 1992 meeting to design the program,<sup>12</sup> for example, regularly used the term *harvest* to refer to human hunting, and they referred to the wolf kill as a *cull* (YFWB 1992). The experimental-design document that resulted from the meeting also uses *harvest* (though it generally refers to wolf population *reduction*, rather than a *cull*). That biologists designing the program also subscribed to the underlying assumptions of ownership and control entailed by the metaphor will become apparent shortly.

Although the wolf kill was designed and carried out almost exclusively by territorial biologists, the political climate in the territory at the time was such that the territorial government could not have proceeded without the support of local First Nation governments. As noted above, these did support the program, but it is also worth noting that individual First Nation citizens were far from uniform in their support (Nadasdy 2005; YFWB 1992, 8). Although they held a wide range of views on the program, most had quite ambivalent feelings about it. On one hand, many agreed that because of a decline in trapping in recent decades, the wolf population had grown too large and was having a devastating impact on the ungulate populations upon which First Nations depend. On the other hand, many were troubled by the methods the government used and would have preferred bounties or trapping subsidies to a capital-intensive helicopter hunt (Buckley 1993a; Yukon News 1993).

First Nation support for the wolf kill puzzled—and angered—some of its non-First Nation critics, who had difficulty squaring First Nation people's assertions about the sacredness of wolves with their support for the wolf kill (Nadasdy 2005). Assertions about the "sacredness" of wolves are largely based on First Nation people's view of wolves as other-than-human persons who possess particularly potent spiritual power (McClellan 1975, 135–39).<sup>13</sup> Yet Yukon First Nation

people have *always* killed wolves, and their “spiritual relationship” with these animals—as with all animals—is *predicated* on their need to kill them (Nadasdy 2003, chap. 2; 2007b).<sup>14</sup> Indeed, the view that a belief in the sacredness of wolves is incompatible with the practice of killing them is the result of an inappropriate projection of Christian conceptions of “the sacred” onto First Nation practice. As one First Nation supporter of the wolf kill stressed to me, *wolves are sacred*, but when a native person shoots a wolf, “it’s not the same as shooting St. Peter.” It is not a sin to shoot a wolf. On the contrary, killing animals has *always* been a critical aspect of the long-term social relationship between human- and animal-people in the Yukon. As long as First Nation hunters behave properly toward wolves and their remains, killing them is a perfectly respectful—indeed, sacred—act.

Thus, the social-relations metaphor is not necessarily incompatible with predator-control programs such as the Aishihik wolf kill, and territorial wildlife managers and First Nations did indeed appear to be in substantial agreement about the program—at least for the first few years. Both groups wanted to reduce the number of wolves in the region to limit their impact on ungulate populations. The alliance between them, however, was a fragile one, because it was based on the partial overlap of different metaphorical systems. This apparent agreement broke down in the third year of the program, when wildlife biologists began sterilizing wolves in the study area.<sup>15</sup>

#### PERSPECTIVES ON THE STERILIZATION OF AISHIHIK WOLVES

Yukon biologists hoped that the sterilization of wolves, because it is nonlethal, would make the program more palatable to the general public. They also had reason to believe that sterilization would improve the program’s long-term effectiveness and affordability (Ralston 1996b; Spence 1998, 4–5). Shooting wolves by helicopter is a costly endeavor that produces only short-term results.<sup>16</sup> Every year new wolves moved into the Aishihik region to fill the vacuum left by the previous year’s wolf kill. So to reduce the wolf population to the target level each year, wildlife managers had to kill off these incomers as well as deal with any natural increase in the population. Sterilization offered a potential solution to this problem. The plan was to sterilize the dominant breeding pair of each wolf pack in the area and then kill off the rest of the pack. The remaining wolf pairs would kill significantly fewer ungulates; and, because wolves are territorial, the hope was that they would defend their territories against incursion by outside packs.<sup>17</sup> If this worked as hoped, biologists would have to kill fewer total wolves over the course of the program.<sup>18</sup>

First Nation governments in the region decided not to oppose the sterilization program, because they did not want to jeopardize the wolf kill as a whole. Nearly

every First Nation person with whom I spoke, however, expressed to me his or her profound discomfort with it.<sup>19</sup> This discomfort was fully in keeping with their concept of wildlife management. In contrast to the killing of wolves, there is no way to reconcile forced sterilization with the ongoing social relationship that First Nation people seek to maintain with wolves as other-than-human persons. There is simply no precedent for such behavior; indeed, it explicitly violates many of the beliefs about the respectful treatment of animals discussed above. As a result, many viewed the program as dangerous because it exposed the entire community to the possibility of retribution for failing to live up to their social obligations to wolf-people.

By contrast, sterilization is predicated on notions of ownership and control that have their roots in an agricultural worldview. Indeed, sterilization is a standard practice in the management of livestock populations. That Burwash residents explicitly viewed sterilization as an agricultural practice was evident in one man's objection to wolf sterilization at a meeting in Burwash Landing on April 18, 1996. He interrupted a formal update on the sterilization project by asking the biologist who was making the presentation if she knew what happens to a horse after it is sterilized. When she replied negatively, he said simply, "It's good for nothing" (AKCRSC 1996a). Horses are the only livestock common to the region; in fact, many First Nation people have become skilled with them as a result of their experience working as horse wranglers and hunting guides for outfitters, and they're quite used to the idea of gelding horses. So it is not surprising that they viewed wolf sterilization through the lens of their experience with horses. But horses, relatively recent imports closely associated with the arrival of Euro-Americans, are anomalous (as are dogs, for different reasons); Yukon First Nation people relate to them differently than they do to most other animals. In this case, what is appropriate for horses is not appropriate for wolves. As a result, biologists' sterilization of wolves caused even First Nation people who had been in support of the wolf kill to begin distancing themselves from the program, which they now saw as a threat to the web of social relations upon which they depend.

## **CONCLUSION**

In this chapter, I have shown that notions of wildlife management in the Yukon are structured by two different root metaphors. These metaphors grow out of very different views of the world, and they lead to very different conceptions of wildlife management, its goals, and appropriate methods. We also saw, however, that there is considerable overlap between these metaphors, such that First Nation people and wildlife biologists sometimes appear to share common interests

in and understandings of particular wildlife management situations. Partial metaphorical overlap of this sort can facilitate cooperation between First Nation people and wildlife biologists. This is what we saw in the first three years of the Aishihik wolf kill, when First Nation people and wildlife biologists, despite their different conceptions of wildlife management, seemed to agree on what needed to be done to restore ungulate populations. Cooperation of this sort, however, is extremely fragile, based as it is on the accidental overlap of different metaphorical systems. The illusion of agreement engendered by such overlap is liable to disintegrate as soon as members of either party can no longer make sense of one another's actions through their own metaphorical lens—as occurred when biologists began sterilizing Aishihik wolves.

The real danger, however, is not that the illusion of common interests and understandings might disintegrate, since the resulting recognition of radical difference might actually lead participants to try to understand and appreciate one another's different positions. Rather, the danger is that, despite legitimate disagreement among the parties resulting from their different worldviews, the illusion of common understanding will not disintegrate. If the parties do not appreciate the extent to which their understandings actually differ from one another—*despite* the apparent convergence of interests due to metaphorical overlap—then they are likely to also misunderstand any disagreements that subsequently arise between them as resulting from ignorance or bad faith rather than from legitimate cultural differences. To those who take for granted the agricultural metaphor, for example, First Nation objections to sterilization may appear to be nonsensical, the result of childlike anthropomorphizing. As a result, they become easy to dismiss. By masking cultural difference in this way, the illusion of agreement engendered by metaphorical overlap also serves to obscure the politics underlying environmental knowledge production and application in management settings.

Wildlife biologists and First Nation people are equally likely to misunderstand and judge one another in this way, but because wildlife biologists are more closely linked to state management institutions, it is their understandings of wildlife management that tend to prevail in the making of management decisions.<sup>20</sup> It is thus the entailments of the agricultural metaphor, rather than those of the social-relations metaphor, that form the basis for most wildlife management decisions. Indeed, what may on the surface appear to be a case of wildlife biologists cooperating and compromising with First Nation people (e.g., by taking into account First Nation people's beliefs and interests when it comes to killing wolves, but not to sterilizing them) is, in fact, no compromise at all. Every aspect of the wolf control was consistent with wildlife managers' agricultural view of

management, whereas First Nation perspectives were respected and acted upon only insofar as they happened to be compatible with the agricultural metaphor. This suggests that attention to metaphorical overlap of the sort discussed here may provide a critical perspective on the politics of knowledge production and application in what may appear—on the surface—to be successful efforts to cooperatively manage environmental resources.

#### NOTES

To begin with, I would like to thank my co-editors, Matt Turner and Mara Goldman, and all the contributors to this volume for helpful comments, criticism, and feedback that enabled me to improve this chapter considerably. I also received helpful comments from Ken George, Kurt Jordan, and Marina Welker. As always, I acknowledge the help and friendship of the people of Burwash Landing, Yukon, without whom this chapter could never have been written. Thanks, too, to the members of the Aishihik-Kluane Caribou Recovery Steering Committee for allowing me to attend their meetings. Finally, the research on the Aishihik wolf kill was carried out with the support of the National Science Foundation (grant 9614319) and the Wenner-Gren Foundation for Anthropological Research.

1. First Nation is the accepted term in Canada for referring to aboriginal people and their governments.

2. In fact, it is the implicit comparison with large-scale capitalist agriculture, with its focus on maximizing production and attendant assumptions about ownership and control, to which they object. Small-scale noncapitalist forms of agriculture may be more compatible with First Nation ideas about human-animal-land relations (see Feit 2001).

3. Max Black's interactive model of metaphor (1962) would suggest that use of the agricultural metaphor not only shapes its users' understandings of *wildlife management*, but also alters the meaning of *agriculture* itself. It is beyond the scope of this chapter to explore the full range of semiotic interactions created by the metaphors I examine, but they would be worth exploring further.

4. Elsewhere (Nadasdy 2008) I have explored a different set of the agricultural metaphor's entailments.

5. In part 1 of the book, "Management Theory," Leopold (1933) set out to describe the properties of wildlife populations and identify the factors that influence their size. In part 2, "Management Technique," he focused on the specific techniques wildlife managers can use to control those factors and so effect change.

6. It was to scientific forestry in particular that Leopold turned for inspiration (Leopold 1933, 21; Kosek 2006, 91–92).

7. "The detail of any policy is an evanescent thing, quickly outdated by events, but the experimental approach to policy questions is a permanent thing, adaptable to new conditions as they arise. . . . There are conflicting theories on how to bring the land, the means of payment, and the love of sport into productive relationship with each other. No one can confidently predict which theory is 'best.' The way to resolve differences is to bring all theories susceptible of local trial to the test of actual experience" (Leopold 1933, 411).

8. For the classic description of hunting as a reciprocal relationship between human- and animal-people, see Hallowell (1960). For more on the specifics of the Yukon case, see Nadasdy (2003, 2007b).

9. Elsewhere (Nadasdy 2007b) I have argued that we must not dismiss First Nation people's beliefs about human-animal relations as "just metaphor." In suggesting that the social-relations metaphor structures First Nation people's understandings of wildlife management, then, I am not denying the "truth" of these understandings—any more than I intend to deny the "truth" of the beliefs about animals that underlie the agricultural metaphor. As noted above, it makes little sense to ask whether or not a metaphor is "true." Rather, the agricultural and social-relations metaphors both clearly "work," in Lakoff and Johnson's sense (i.e., they each create or highlight different aspects of the concept *wildlife management*), and each has its own attendant set of metaphorical entailments.

10. For a detailed discussion of such changes and their significance, see Nadasdy (2003, 88–94).

11. To this end, the Yukon government formed a citizen's action committee to consider the issue. The result of the committee's deliberations was the Yukon Wolf Conservation and Management Plan, which developed a set of criteria governing the implementation of any wolf-control program. The plan was widely endorsed by those on all sides of the wolf-kill debate, but there was significant disagreement over whether the wolf kill was consistent with the plan. Critics, including some nongovernment biologists, objected to it on the grounds that it was not consistent with the plan (Buckley 1993b, 1996; Jickling 1994; Theberge 1993; YCS 1994). Notably, First Nations were not represented on the committee (Buckley 1993b).

12. The meeting was attended almost entirely by biologists, and there was no KFN representative in attendance.

13. Along these lines, wolves appear in Yukon First Nation songs and stories, often providing assistance to human hunters (see, e.g., Smith 1982). In addition, wolves have totemic significance throughout the region.

14. Because First Nation people see wolves as competition for moose and caribou, they have historically killed wolves not only for their pelts but also in a conscious effort to keep wolf populations down (McClellan 1975, 135–37).

15. One wolf pair was actually sterilized in 1994, but sterilization was not introduced as a general management strategy until 1996.

16. By the end of 1996, the program had already cost nearly \$2 million, with one more season to go (Ralston 1996a).

17. According to the master's thesis of the biologist who designed the study (Hayes 1996), however, a pair of wolves can kill as many moose as a pack of six or seven.

18. In keeping with the biologists' adaptive management approach, the sterilization program, too, was designed as a scientific experiment (Spence 1998).

19. KFN decided not to oppose sterilization at a meeting in Burwash Landing on February 2, 1996. At a meeting of the Aishihik-Kluane Caribou Recovery Steering Group two days later, wildlife biologists acknowledged that although First Nation people "were not wholeheartedly behind sterilization," they had "decided not to interfere with it" (AKCRSC 1996b,

3). It is worth noting that until this time KFN had been largely uninvolved in the wolf kill. At the February 2 meeting, however, many Kluane people complained about not having been involved in the process. Thereafter, KFN began sending representatives to AKCRSG meetings; and, at the First Nation's insistence, the steering group began holding alternate meetings in Burwash Landing.

20. As Lakoff and Johnson (1980, 157) put it, "People in power get to impose their metaphors."