Timely Assets

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Wildlife as Renewable Resource

Competing Conceptions of Wildlife,
Time, and Management in the Yukon

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Over the past fifteen years, the majority of Yukon First Nations have signed and ratified land-claim and self-government agreements with the governments of Canada and the Yukon[1]. Among other things, these modern-day treaties establish a new regime for the cooperative management of land and resources throughout the territory. In the process of laying out the various parties' roles and responsibilities in this regard, the agreements classify fish and wildlife (along with trees and other wild flora) as *renewable resources.* This is in contrast to *nonrenewable resources,* such as oil, gas, and gold. The very notion of resources as renewable implies a particular sense of time—one that is distinct from that implied by the notion of nonrenewable resources (see chapters 2 and 3 by Limbert and Ferry respectively). The phrase *renewable resource* conjures up an image of temporal cycles, of periods of renewal and regrowth punctuated by episodes of exploitation. Indeed, this image of cyclical growth and renewal resonates with Euro-American wildlife managers and Yukon First Nation people alike; both are apt to think about animals in relation to temporal cycles,[2] although, as we shall see, there are important differences between them.

Anthropologists have described notions of cyclical time among various peoples the world over. They have long argued that a sense of time as cyclical arises naturally from the cycling of days, tides, and seasons and the ways

in which these natural cycles structure human activities (for example, Evans-Pritchard 1940; Hallowell 1937; Thompson 1967). Agriculture is among the most important domains of human activity to be shaped by these natural cycles, and the agricultural cycle features prominently in anthropological analyses of how people conceive of time. At first blush, it seems that these anthropological insights should be directly applicable to a study of renewable-resource management, a set of practices clearly rooted in an agricultural worldview. Indeed, forest managers quite explicitly see themselves as engaged in a kind of long-term farming; the planting, care, and cultivation of trees are as important (at least in theory) as harvesting in the silvicultural cycle. The agricultural roots of wildlife management are also quite apparent. 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)

Since Leopold's time, the agricultural metaphor has continued to play an important role in structuring the knowledge and practice of wildlife management.[3] Wildlife biologists and government hunting regulations regularly substitute the verb *harvest* for the less metaphorical *shoot* or *kill* when talking about what hunters do to animals, and they refer to the overall number of animals within a species killed by hunters in a given territory each year as the *annual harvest*. Similarly, Yukon biologists studying Dall sheep populations are keenly interested in obtaining an estimate of the annual *lamb crop*, or the number of lambs born into a population in any given year.

All of this suggests that Euro-American wildlife managers view what they do as somehow analogous to the production of crops and domesticated animals. They see fish and wildlife populations as renewable in much the same way as, say, a wheat crop is renewable. Like domestic species, fish and wildlife have natural life cycles; they are born, grow, reproduce, and die. Each cycle is similar to those that have gone before, although the individual organisms themselves are continually replaced. Humans can exert a

degree of control over those cycles by "harvesting" animals, killing predators, rearing fish in hatcheries, and so on, but they must be very careful about these interventions. Like farmers, they need to limit the overall harvest in any year to allow for the survival of sufficient "seed" for the propagation of future generations. Through their intervention and control, wildlife managers are expected to *ensure* the continued renewal of wildlife populations. From this perspective, humans do not merely adapt to the "natural" cycles of animal populations; rather, humans are critical to their maintenance. Indeed, we have already seen that the notion of human *control* over other species is central to wildlife management.

The situation is quite different, however, for Yukon First Nation people, who are not—nor have their ancestors ever been—farmers. Indeed, Yukon First Nation people, like hunting peoples elsewhere, are often quite explicit in their rejection of the agricultural metaphors of wildlife management. At a wildlife management meeting I attended in 1995, for example, one member of Kluane First Nation objected to the use of the term *harvest.* Kluane people, she maintained, are hunters, not farmers: "We don't 'harvest' animals; we kill them." She objected to the term *harvest* in particular because its use implies ownership and control; people harvest crops that they themselves plant, so they are entitled to harvest them all. Indeed, farmers replant annually, so they expect to harvest their entire crop every year. She argued that this mindset is very dangerous when it comes to wildlife management and urged all meeting participants to use words like *hunt* and *kill* rather than *harvest* (see Stevenson 2006:170).[4]

Although Yukon First Nation people generally reject the agricultural metaphors of wildlife management, there is nonetheless something compelling to them about the cyclical temporality implied by the idea of a renewable resource. They are, of course, very knowledgeable about animal life cycles and seasonal patterns of animal behavior. Scholars have written extensively about northern hunters' annual subsistence round, their strategy for adapting to those seasonal patterns (for example, McClellan 1975: 95–105). However, they understand the temporality of these cycles very differently than do biologists. I suggest that this difference has to do with what Alfred Gell (1992:30–36) referred to as the "topology" of time. Gell noted that two very different senses of time—each with its own distinct topology—have been confused with each other because both are "cyclical." He argued that we need to distinguish between *cyclical* time, characterized by the periodic recurrence of events of the same type (as one summer follows another), and *circular* time, in which the *same event* recurs over and over again.

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Like other northern hunting peoples, many Yukon First Nation people conceive of hunting as a reciprocal relationship between humans and animals. In this view, fish and animals are 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. Hunting in such societies should not be viewed as a violent process whereby hunters take the lives of animals by force, but rather as a long-term social relationship between animal-people and the humans who hunt them.[5]

Central to any understanding of the temporal dimensions of such a relationship is northern hunters' belief in the reincarnation of both human- and animal-people. As long as a hunter follows the prescribed ritual procedures, the animals he or she kills do not really die but will instead be reborn to give themselves to the hunter again in the future (see Brightman 1993). Thus many Yukon First Nation people view hunting as part of an ongoing social relationship between human- and animal-people that transcends the lifetime of any individual hunter or prey animal. The complex nature of these human–animal relations is expressed in a large body of "Long Time Ago" stories. These stories concern events that occurred in the distant past, such as the creation of the world, and explain how animals and people came to assume their current forms and roles. Although most non–First Nation people regard these stories as mythical, many First Nation people maintain that they are not "just stories" but that they are true. Indeed, although the events they recount occurred "a long time ago," there is another sense in which they are quite contemporary. Indeed, the ritual practices in which First Nation hunters engage and that continue to structure reciprocal relations between humans and animals *presuppose* the contemporary and real-life existence of animal-people as they appear in Long Time Ago stories (Tanner 1979; see also Nelson 1983).

There is, in fact, an important sense in which all the people from Long Time Ago—animal and human alike—are still alive today. When First Nation hunters kill a moose, say, they do not merely participate in an event that is similar to those in which they have participated in the past. Rather, they take part in yet another iteration of the same event, an event they have participated in over and over again since the relationship between human- and moose-people was first forged in the distant past of the Long Time Ago stories. The hunt is the instantiation of an ongoing social relationship

between *the same* human- and animal-people across multiple lifetimes. This means that the temporality of First Nation hunting is not *cyclical*, as it is for farmers who harvest the same crop (but different individual plants) every year; rather, it is *circular*. This distinction has important implications for how First Nation people understand the role of human agency in relation to animal populations.

Like scientific wildlife managers, First Nation people see themselves as intimately involved in animal cycles and as able to affect those cycles in important ways. Through the observation of certain ritual practices and the maintenance of proper social relations, First Nation hunters play an important role in the renewal of animal populations. (For example, proper disposal of animal remains is critical if the animals are to be reborn.) Although First Nation hunters may resort to trickery and even a degree of coercion in their conduct of social relations with animals (Nadasdy 2007), they do not generally subscribe to the view that humans *control* animals, who may abandon hunters at any time if they decide that their human partners are not living up to their social obligations. This view stands in sharp contrast to that of Euro-American wildlife managers, who attempt to control animal cycles in much the same way that a farmer seeks to control the agricultural cycle. Indeed, many Yukon First Nation people find the assumption of control inherent in wildlife management at best ludicrous, possibly even offensive. As one Kluane First Nation hunter regularly noted at wildlife management meetings, the term *wildlife management* itself is a misnomer. Humans cannot "manage" wildlife populations, he said. Animals are quite capable of taking care of themselves; they make their own decisions about when to reproduce and where to go—decisions that are quite independent of any desires on the part of humans. Wildlife management, he said, is not about managing animals; it is about managing people.

Thus Euro-American wildlife managers and First Nation hunters can agree that wildlife is a renewable resource and that humans play an important role in the maintenance of the temporal cycles in which they, along with animals, are enmeshed. But the term *renewable resource* here is *fundamentally contested*, an appellation I use to describe a situation in which all parties to a conversation agree on a term's importance and centrality but at the same time understand it to mean very different things.[6] Those employing such terms often assume that these "reflect a shared universe of meaning" when in fact they "actually represent non-congruent realities" (Morrow and Hensel 1992:42). In such cases, participants in the discussion are seldom aware of the semantic discrepancy, and talk takes place *as if* they all shared an understanding of the term's meaning. This situation

can lead to serious misunderstandings—often without the parties to the conversation even being aware of it. And these misunderstandings can have significant political consequences, especially in contexts of social inequality, because it tends to be the meanings ascribed to fundamentally contested terms by parties with access to power that are acted upon in broader sociopolitical contexts.

In this chapter, I build on the work of Morrow and Hensel (1992), who demonstrated the analytic value of attending to fundamentally contested terms in cross-cultural negotiations over wildlife management in Alaska, and that of Michael Asch (1989; see also Usher 1986:81–83), who focused on the contested nature of the term *wildlife* itself in northern Canadian land-claim negotiations. I focus in particular on the fundamentally contested notion that fish and wildlife are *renewable resources*. In the next two sections, I examine in somewhat more detail the different spatiotemporal topologies underlying each conception of renewability: the circular and the cyclical. After dealing with each in turn, I consider the political consequences of this spatiotemporal heterogeneity.

THE CIRCULAR SPACE-TIME OF FIRST NATION HUNTING

As suggested above, hunting enmeshes Yukon First Nation people in a temporal order that resembles what Walter Benjamin (1968) called messianic time. Following Benjamin, Benedict Anderson notes that messianic time is characterized by "a simultaneity of past and future in an instantaneous present. In such a view of things, the word 'meanwhile' cannot be of real significance" (Anderson 1991:24). Similarly, Gurvitch describes a sense of time that he refers to as enduring time, in which "the past is relatively remote, yet it is dominant and projected into the present and future" (Gurvitch 1964:31). Such a conception of time was prominent in—among other places—medieval Europe (but see Le Goff 1980 for a description of temporal heterogeneity even then), and it implies a disjunction between concepts of time and space. In Lewis Mumford's analysis of the medieval worldview, for example, he notes that time and space were relatively independent systems:

> The medieval artist introduced other times within his own spatial world, as when he projected the events of Christ's life within a contemporary Italian city, without the slightest feeling that the passage of time has made a difference.… When a medieval chronicler mentions the King…it is often a little difficult to find out whether he is talking about Caesar or Alexander the Great

> or his own monarch: each is equally near to him. Indeed, the
> word anachronism is meaningless in medieval art: it is only when
> one related events to a coordinated frame of time and space that
> being out of time or being untrue to time became disconcert-
> ing.… The connecting link between events was the cosmic and
> religious order. The true order of space was Heaven, even as the
> true order of time was Eternity. (Mumford 1962[1934]:19)

Although there are many significant differences between medieval Christianity and the beliefs and values surrounding Yukon First Nation hunting, they seem to share a similar spatiotemporal orientation. Because of beliefs about reincarnation and human–animal reciprocity, there is a very important sense in which the animals encountered by Yukon First Nation hunters out in the bush in 2006 are *the same animals* (just as the hunters are *the same hunters*) as those in the Long Time Ago stories that teach Yukon First Nation people how to relate properly to animal-people. This situation is possible only if time and space are disarticulated in the manner described by Mumford.

For those who subscribe to such a view, animals are very different sorts of "resources" than they are for most Euro-American hunters and biologists. In an analysis of Rock Cree hunting in northern Manitoba, for example, Robert Brightman (1987, 1993) concluded that hunters historically did not believe that humans could affect animal populations through over-hunting. Because animals do not die forever when hunters kill them (so long as the hunters observe all the necessary rituals), overhunting of the sort warned against by wildlife biologists is not possible. As a result, Brightman argues, there was no indigenous conservation ethic among the Cree. Still today, he notes, Euro-American notions about wildlife conserva-tion coexist uneasily alongside aboriginal ideas about reincarnation and proper human–animal relations. Similarly, Ann Fienup-Riordan (1990) reports that many Yup'ik Eskimos of western Alaska continue to doubt that overhunting is possible, which leads at times to serious tensions between Yup'ik villagers and state wildlife managers.

Yukon First Nation people subscribe to many of the same beliefs and practices described by Brightman and others. Although the historical record is unclear on whether Yukon First Nation people ever regularly engaged in practices of overhunting and meat wastage like those described by Brightman and Fienup-Riordan, most contemporary Yukon First Nation people now believe that human hunting can affect the size of animal pop-ulations and have incorporated prohibitions against overhunting and waste

into the set of obligations that hunters incur toward animals through the act of hunting. This does not mean, however, that they have abandoned beliefs about animal reincarnation and human–animal relations. Indeed, one of the main First Nation objections to the controversial (in the Yukon) practice of catch-and-release fishing is that it is a repudiation of the reciprocal act at the very heart of the relationship between human- and animal-people: "The fish comes to you as a gift. It's offering its life to you. And if you don't accept it, that's an insult. Sooner or later, the fish will stop coming to you" (Mark Wedge, quoted in Yukon Department of Renewable Resources 1997:21).

Although Yukon First Nation people and biologists agree that over-hunting can reduce the number of animals, they differ fundamentally in their interpretation of *why*. At least some Yukon First Nation people now believe that overhunting and waste affect the animals not because they reduce the number of animals in the total population, as biologists would have it, but because such practices offend the animals, making it less likely that hunters will be able to kill them in the future. For them, animals are still a potentially unlimited resource, their availability dependent on the maintenance of social relations between animal- and human-persons in accordance with the principles laid out in Long Time Ago stories. Indeed, it is through the reciprocal relations of hunting that humans and animals each contribute to the others' renewal.

None of this is to say that Yukon First Nation people live out their lives in the enduring space-time of the Long Time Ago stories. Indeed, we will see that First Nation people also engage with human- and animal-people in social contexts that are structured by very different senses of space and time. Yet Long Time Ago stories and the spatiotemporality associated with them continue to inform many First Nation people's understanding of their interactions with animals and with other people in relation to animals.

THE CYCLICAL SPACE-TIME OF SCIENTIFIC WILDLIFE MANAGEMENT

Euro-Canadian wildlife managers conceive of the renewability of fish and wildlife very differently than do many First Nation people. For them, space and time are linked such that a given hunter can kill a given animal only once. Following Benedict Anderson (1991), I refer to this second spatiotemporal framework, within which the management of animal cycles takes place, as homogeneous empty space-time. Homogeneous empty space-time is characteristic of (and, indeed, essential to the administration of) the large and complex bureaucracies that govern corporations, as well as nation-

states, under contemporary capitalism.[7] According to Anderson, the development of a conception of homogeneous empty time was a necessary prerequisite for the emergence of the "imagined community" that is a nation:

> The idea of a sociological organism moving calendrically through homogeneous, empty time is a precise analogue of the idea of the nation, which is also conceived of as a solid community moving steadily down (or up) history. An American will never meet or even know the names of more than a handful of his 240,000,000-odd fellow-Americans. He has no idea what they are up to at any one time. But he has complete confidence in their steady, anonymous, *simultaneous* activity. (Anderson 1991:26; emphasis added)

Drawing an explicit contrast to messianic time, Anderson notes that in homogeneous empty time, "simultaneity is, as it were, transverse, cross-time, marked not by prefiguring and fulfillment, but by temporal coincidence, and measured by clock and calendar" (Anderson 1991:24). It is only in relation to such a notion of simultaneity, he notes, that the concept "meanwhile" can have any meaning, and it is only by means of measurements made with devices such as clocks and calendars that the concept of simultaneity as temporal coincidence makes any sense.

Although there is not necessarily a single spatiotemporal framework associated with clocks and calendars, both are generally associated with notions of cyclical—as opposed to circular—time. Tributary states and capitalists alike have long used them as tools for controlling agricultural production, collecting taxes, regulating the length of the working day, and managing a host of other similarly cyclical processes, including those related to wildlife. As administrative tools, calendars and clocks help produce a sense of time as homogeneous and empty. Of the calendar, Bourdieu notes:

> Just as a map replaces the discontinuous, patchy space of practical paths by the homogeneous, continuous space of geometry, so a calendar substitutes a linear, homogeneous, continuous time for practical time, which is made up of incommensurable islands of duration, each with its own rhythm, the time that flies by or drags, depending on what one is doing. (Bourdieu 1977:105)

Although of more recent vintage than the calendar, the mechanical clock has been in existence since at least the fourteen century. Its invention

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facilitated dramatic changes in people's perception of time. "The clock," according to Lewis Mumford, "is a piece of power-machinery whose 'product' is seconds and minutes: by its essential nature it disassociated time from human events and helped create the beliefs of an independent world of mathematically measurable sequences" (Mumford1962[1934]:15). He noted that there is little foundation in everyday human experience for belief in such an abstraction,[8] but that once such a conceptual leap has been made, it has profound consequences: "When one thinks of time, not as a sequence of experiences, but as a collection of hours, minutes, and seconds, the habits of adding time and saving time come into existence. Time took on the character of an enclosed space: it could be divided, it could be filled up, it could even be expanded" (Mumford 1962[1934]:17).

It is no accident that Mumford—like Anderson—uses spatial terms to describe this notion of abstract time (that is, as an empty space that people "move through"). Homogeneous empty time and the concept of simultaneity with which it is associated (that is, as temporal coincidence) *necessarily* imply a spatial dimension (for example, *meanwhile* "x" is happening *somewhere* else). Indeed, Mumford notes that the emergence of abstract time coincided with similar developments in the conceptualization of space. At the same time that the mechanical clock was spreading across Europe, artists were discovering the rules of perspective, and mapmakers were developing modern cartographic methods. Just as the mechanical clock coincided with dramatic changes in the way people could think about time, so the rules of perspective and proportional mapping both reflected and helped bring about a fundamental shift in the way people conceptualized space: "Space as a hierarchy of values was replaced by space as a system of magnitudes" (Mumford 1962[1934]:20; see also Harvey 1990: 240–259). Indeed, Renaissance paintings and maps implied and facilitated movement through space (imagined or real) in a way that older medieval paintings and maps had never done, and it was movement that linked the concept of abstract empty space inextricably to that of abstract empty time: "Within this new ideal network of space and time all events now took place; and the most satisfactory event within this system was uniform motion in a straight line, for such motion led itself to accurate representation within the system of spatial and temporal coordinates" (Mumford 1962[1934]: 20–21). Thus, "the categories of time and space, once practically disassociated, had become united: and the abstractions of measured time and measured space undermined the earlier conceptions of infinity and eternity" (1962[1934]:22).[9]

The concept of abstract, homogeneous, and empty space-time forms

the basis for modern scientific inquiry; indeed, it was a necessary precondition for the development of Newtonian mechanics. It also underlies the development of capitalism. David Harvey (1990:252) observed that a concept of "homogeneous universal time" is implicit in "conceptions of the rate of profit…the rate of interest, the hourly wage, and other magnitudes fundamental to capitalist decision-making" (see also Landes 2000 on time and value). Marx himself made it clear in his discussions of surplus value and the length of the working day that capitalism depended in large part upon the institutionalization of a new way of thinking about time. It is by now well accepted that the rise of the capitalist labor process—along with the concept of value to which it was linked—led to new ways of thinking about time.[10] In this chapter, however, I would like to suggest and explore another aspect of the spatiotemporal order wrought by capitalism. This has to do with the imperatives of bureaucratic administration.

Under capitalism—especially industrial capitalism—production, distribution, and consumption become ever more complex processes linking far-flung peoples and places to one another. The activities of all these people must be coordinated if the whole system is to work (parts and raw materials must arrive at the factory on time; finished products must be transported to markets; payments must be sent, received, and processed on time). As the whole process speeds up (because of improvements in transportation and communication), coordination becomes all the more crucial. The calendar, no doubt invented at least in part to coordinate activities in the tributary state (Rotenberg 1992), becomes more crowded with events that require coordination. The clock, which can subdivide the calendar day into smaller and ever more precise units, becomes a critical tool for the fine-grained scheduling and coordination necessary for administration, as well as production.[11]

There are few if any social forms as well suited as bureaucracy to the task of coordinating events in a complex capitalist society. Max Weber noted that although bureaucracy predates the rise of capitalism, the particular demands of the capitalist economy are what led to the perfection of the bureaucratic form:

> Today, it is primarily the capitalist market economy which demands that the official business of the administration be discharged precisely, unambiguously, continuously, and with as much speed as possible. Normally, the very large, modern capitalist enterprises are themselves unequaled models of strict bureaucratic organization. (Weber 1946:215)

Although Weber was well aware of the many deficiencies of the bureaucratic form, he nevertheless argued that bureaucracy is by far the most effective means for administering large and complex social systems, such as corporations and modern industrialized states:

> The decisive reason for the advance of bureaucratic organization has always been its purely technical superiority over any other form of organization. The fully developed bureaucratic mechanism compares with other organizations exactly as does the machine with the non-mechanical modes of production. (Weber 1946:214; see also 228–229)

Bureaucracies are "machinelike" in that they are complex hierarchical organizations characterized by an elaborate internal division of labor. Their various components are highly integrated with one another and replaceable (in theory at least) so that although each attends to only a small part of the overall problem of administration, their combined efforts enable the bureaucratic apparatus as a whole to administer the extraordinarily complex affairs of an industrialized state or corporation. Such activity is necessarily based on a notion of homogeneous empty space-time. To see why, consider what bureaucrats actually do.

Government bureaucrats in industrial states (for example) are faced with the daunting task of administering very large and complex systems of people, institutions, land, and resources. To accomplish this, they must, among many other things, keep track of and collect a multitude of different forms of revenue. They must schedule and execute the distribution of funds both internally and externally. They must plan and administer social programs throughout the territory. They must implement and enforce all laws and regulations—including those governing resource use—throughout their jurisdiction. They must plan, oversee the construction of, and maintain public infrastructure. They must negotiate and oversee political, economic, and social relations with their counterparts in the bureaucracies of other states, as well as those in the bureaucracies of corporations and other levels of government. To invoke Anderson in a new context, it is clear that all these administrative functions demand—indeed are premised upon—the conception of a "socialogical organism [composed not only of the bureaucracy itself but also of the entire society] moving calendrically through homogeneous empty time" (Anderson 1991:26) While one bureaucrat is making sure that sufficient funds are transferred to a government-sponsored health care program, for example, he or she has

confidence that another bureaucrat somewhere else—whom he or she has probably never met—is tending to the collection of oil and gas revenues.

It is not enough, however, simply to assert that the administrative functions of bureaucracy are premised upon a conception of homogeneous empty space-time. Although homogeneous empty space-time may be a conceptual prerequisite for the administration of large and complex social systems, in practice the spatiotemporal framework of bureaucratic administration remains neither "empty" nor "homogeneous" for long. Indeed, imparting order and structure to the imagined abstraction of homogeneous empty space-time is a critical part of bureaucratic practice; it is a large part of what bureaucrats actually do on a day-to-day basis. Consider again the task of bureaucratic administration. Bureaucrats must accomplish all the diverse goals described above with the finite resources (time, money, personnel) at their disposal. For bureaucrats administering a complex social system, there is always more to do than can be accomplished in any given period of time. As a result, they must prioritize. They do so by engaging in elaborate processes of planning and evaluation that include, among other things, the preparation and approval of work plans and budgets (which are continually being revised), the negotiation of (inter- and intragovernmental) funding agreements, and the preparation, evaluation, and auditing of interim and annual reports. Work plans, budgets, reports, audits, and similar administrative tools bring structure to the homogeneity and emptiness of abstract space-time. While bureaucrats plan and carry out the construction of a new road somewhere, they know of other roads and bridges elsewhere that, because of budgetary constraints, are not scheduled for construction until next year or the year after. And there are other bureaucrats who prepare, review, and approve (or reject) year-end reports and audits to make sure that government employees or contractors building the road adhere to proper timetables and budgets (so that there will be sufficient resources to construct those other roads and bridges in the future). It is precisely through the use of plans, budgets, reports, accounting techniques, and the other "soft technologies" of administration that bureaucrats seek to impose a particular spatiotemporal structure upon the abstract field of homogeneous empty space-time.

In 1900 the government of Canada devolved jurisdiction over fish and wildlife to the Yukon territorial government. The twentieth century witnessed the gradual development of an elaborate administrative apparatus for the management of fish and wildlife.[12] The development of a modern transportation and communication infrastructure in mid-century enabled

bureaucratic managers to enforce an ever-more-complex set of management policies and regulations across hitherto largely inaccessible parts of the territory (see Nadasdy 2003:38–41). The hiring of staff biologists (beginning in the 1970s) ushered in an era of scientific management with the aim of controlling the natural population cycles of fish and wildlife for the maximum benefit of humans. The growing management bureaucracy increasingly made use of the administrative technologies discussed above, thus enmeshing the people and animals of the territory within a single spatiotemporal framework, a framework structured by bureaucrats wielding budgets, work plans, accounts, and reports.

Having examined the two different spatiotemporal perspectives from which Yukon people view animals and human–animal relations, we are now in a position to consider the political consequences of this spatiotemporal heterogeneity.

THE POLITICS OF SPACE-TIME AND HUMAN–ANIMAL RELATIONS IN THE YUKON

Since the influential works of Durkheim (1915), Evans-Pritchard (1940:100–104), Hallowell (1937), Leach (1961:114–136), and others, anthro-pologists have accepted it as a given that conceptions of time are socially constructed and vary considerably across cultures. Although those early scholars recognized that cultures are not necessarily characterized by a single, totalizing notion of time,[13] it was only relatively recently that anthropologists began to focus in a systematic way on the multiplicity of temporal orders within any given society. This multiplicity inevitably raises questions of power (for example, Greenhouse 1996; Rutz 1992). Among the first to attempt a systematic exploration of the multiple forms of social time, Georges Gurvitch (1964) was also among the first to conceptualize time in explicitly political terms: "Each society, each social class, each particular group, each micro-social element—indeed every social activity…has a tendency to operate in a time proper to itself…no society, no social class, no structured group…can live without trying to control these times" (Gurvitch 1963, cited in Rutz 1992:15). In this view, the temporal order of any society is not a cultural given but rather the product of struggles among social actors to determine which of the multiple possible forms of social time should constitute the basis for any particular social interaction or process. For this reason, "the social construction of time must be seen as a political process" (Verdery 1992:37). Henry Rutz notes that "a *politics* of time is concerned with the *appropriation* of the time of others, the *institutionalization* of a dominant time, and the *legitimation* of power by means of

the control over time" (1992:7; emphasis in original). All these dimensions are evident in the politics of wildlife management in the Yukon.

Environmental historians and anthropologists agree that the development of bureaucratic wildlife management at the beginning of the twentieth century was inextricably bound up with the expansion of state power (Feit 1998; Jacoby 2001; Marks 1984). In many parts of the world, including North America, the imposition of state wildlife management and conservation programs first brought not only land and wildlife under the effective control of central governments, but local and aboriginal people as well. This certainly describes the situation in the Yukon throughout much of the twentieth century (Nadasdy 2003).

Recently ratified Yukon First Nation land-claim and self-government agreements, however, have altered this dynamic, although to what extent is not yet clear. On one hand, these agreements have dramatically increased the complexity of wildlife management in the Yukon and have given First Nation and other village Yukoners a genuine role in the management process. As a result, First Nation people now possess the political means— at least in theory—to challenge the spatiotemporal assumptions underlying scientific wildlife management and to advocate management strategies based on their own very different perspectives. On the other hand, however, I will argue that the structure of these new land-claim agreements in some ways actually makes it more difficult to mount such challenges. As I have shown elsewhere (Nadasdy 2003), these agreements are extremely bureaucratizing. First Nation people had to construct bureaucratic structures of their own that mirror those of the federal and territorial governments as a prerequisite for even sitting down to negotiate with them. The agreements themselves are extremely complex legal documents that define First Nations as a "third order of government" (the federal government and the provinces/territories being the other two) and lay out the relationship among these orders of government. Because the federal and territorial governments are themselves large bureaucracies, the formal mechanisms for intergovernmental relations are necessarily bureaucratic in form. In other words, it is primarily at the bureaucratic level that these complex agreements are implemented. Federal, territorial, and First Nation bureaucrats must work closely together to implement these agreements, and their relations with one another are mediated (and in large part instantiated) by the administrative practices and technologies discussed above: budgets, work plans, financial reports, and audits. Wildlife management is no exception. The provisions governing rights to the use and management of fish and wildlife create a formal space within the

existing management bureaucracy for First Nation people and governments (Nadasdy 2005a). To assume their role within this bureaucracy, however, First Nation people have no choice but to wield the administrative technologies discussed above, technologies that presuppose a bureaucratic notion of space-time as homogeneous and empty. This process effectively institutionalizes the spatiotemporal assumptions of bureaucratic management, making it very difficult for First Nation people to challenge them and the power relations they support.

In the remainder of this chapter, I examine the spatiotemporal politics of wildlife management in the Yukon. As we shall see, however, it is not simply a matter of different actors invoking different spatiotemporal orders depending upon their particular interests and/or cultural backgrounds. Rather, the spatiotemporality of wildlife resources is context dependent; certain social contexts are predicated upon particular spatiotemporal orders (which structure them). Actors who would engage with wildlife (or with one another in relation to wildlife) in such a context—whatever their individual interests or cultural backgrounds—often have little choice but to do so from that particular spatiotemporal perspective. One can reject that perspective as inappropriate, as some First Nation people do, but only by rejecting the whole bureaucratic context of wildlife management. Other social contexts, however, allow more latitude for struggles over the spatiotemporality of wildlife. Either way, such struggles are deeply political.

Because wildlife management in the territory is now occurring within the larger context of land-claim agreements, I necessarily begin with a brief discussion of these agreements, particularly the provisions dealing with wildlife management.

THE YUKON LAND-CLAIM AGREEMENTS AND THE BUREAUCRATIZATION OF WILDLIFE MANAGEMENT

In 1993 representatives of Canada, the Yukon Territory, and the Council for Yukon Indians signed the Yukon Umbrella Final Agreement (UFA). Although the UFA is not in itself a land-claim agreement, it serves as a framework for the negotiation of specific final agreements between each of the Yukon First Nations (there are fourteen) and the federal and territorial governments (Council for Yukon Indians 1993). The UFA contains many general provisions that apply to the entire Yukon and others that identify areas in which individual First Nations may negotiate provisions specific to their own needs. Eleven of the fourteen First Nations in the Yukon have now signed and ratified final agreements based upon the UFA. These final agreements are extremely complex documents consisting

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of twenty-eight chapters that deal not only with land but also with financial compensation, heritage, taxation, renewable and nonrenewable resources, economic development, and more. Of particular relevance here is chapter 16, which establishes a new regime for the co-management of fish and wildlife. One of the primary objectives of the chapter is "to enhance and promote the full participation of Yukon Indian People in Renewable Resource management" (Council for Yukon Indians 1993:153). To this end, the agreement provides for the establishment of the Yukon Fish and Wildlife Management Board (FWMB), a territory-wide body, and fourteen Renewable Resources Councils (RRCs), one for each of the fourteen Yukon First Nations. The UFA establishes the FWMB as the "primary instrument" for fish and wildlife management throughout the Yukon (Council for Yukon Indians 1993:166) and each RRC as the "primary instrument" for renewable-resources management within each First Nation's traditional territory (for example, Kluane First Nation 2003a:241).[14] The FWMB and RRCs are considered co-management bodies because half the members of each are nominated by the Yukon government and half by the Council of Yukon First Nations (or the relevant First Nation government in the case of RRCs). These bodies are charged with the responsibility of carrying out public consultations on management issues (on either a Yukon-wide or traditional territorial basis) and making recommendations to the relevant government in any particular case.[15] Board and council appointees are not government officials and are not expected to act as representatives for the governments that appointed them. Rather, they are "ordinary citizens" chosen on the basis of their interest in and knowledge about wildlife.[16] In other words, the board and councils are supposed to be external to the bureaucratic structures of government; their role is to consult with the wider public and provide government bureaucrats (both territorial and First Nation) with recommendations based on those consultations. In fact, board and council members do come from all walks of life; very few of them are government officials or have any experience working in a bureaucratic setting.

Despite the requirement that co-management bodies such as RRCs stand at "arm's length" from government and the fact that, for the most part, appointees to these bodies are not themselves professional bureaucrats, co-management of this sort does not represent as radical a break from centralized state management as is often supposed. Indeed, I have argued elsewhere (Nadasdy 2005a) that far from representing an *alternative* to bureaucratic state management, co-management bodies like those created by chapter 16 of the Yukon UFA are firmly *embedded within* that bureaucracy. Their establishment was accompanied by the creation of a set of

administrative rules and procedures regulating not only how they function internally but also how they relate to external bureaucratic institutions in the territorial and First Nation governments (although, as we shall see below, those rules and procedures have been subject to fairly intense struggle). Such rules enable co-management boards to interface with existing offices and institutions of state management, and this process is absolutely essential if they are to play their appointed roles. In this important sense, co-management boards are inherently bureaucratic. Rather than liberate First Nation people from government bureaucracy, then, the creation of such boards has simply given First Nation people their own "slot" in the bureaucratic system.

RENEWABLE RESOURCES COUNCILS AND BUREAUCRATIC TIME

As we saw above, the administration of a large and complex state such as Canada is necessarily premised on the conception of a "social organism moving calendrically through homogeneous empty time." The bureaucratic administrators of such a social system must have faith in the "steady, anonymous, simultaneous, activity" not only of other officials but also of all those people and processes they administer. Co-management bodies, such as the RRCs, being bureaucratic entities themselves, are necessarily part of all this steady, anonymous, simultaneous activity. As noted above, however, it is not enough simply to note that RRC members function in the homogeneous empty space-time of bureaucratic practice. Rather, they are necessarily caught up in the ongoing struggle and negotiation among bureaucrats wielding administrative technologies to structure the abstract expanse of homogeneous empty space-time.

Stephen Lukes (1977) argues that structure implies power. If this is so, then the use of any administrative techniques to impose a particular structure upon the spatiotemporal order necessarily has a political dimension. And indeed, as John Sweetman (1984:3) notes, "administration is the means by which power is exercised," an observation borne out by recent work on the political dimensions of accounting, audits, and other modern administrative practices (Neu 2000; Power 1997; Strathern 2000). This idea suggests that some understanding of these administrative technologies—and their histories—is crucial to any study of the contemporary politics of space-time in the Yukon.

Chapter 16 of each First Nation final agreement describes in broad strokes the roles, powers, and responsibilities of the Renewable Resources Councils (see, for example, Kluane First Nation 2003a:241–246). First Nation

final agreement implementation plans, which are attached to each agreement, provide a bit more information, including statements of each RRC's total annual operating budget for the year it is established and a multiyear financial forecast (see, for example, Kluane First Nation 2003b: 432–436). Aside from these broad guidelines, however, the agreements provide relatively little detail about day-to-day operations of the RRCs or about the administrative context in which they are to operate. As a result, RRC members, along with the First Nation and territorial officials responsible for dealing with them, have had to work out many of these practical details for themselves. The result has been ongoing negotiation and struggle both within individual RRCs and between RRCs and territorial and First Nation bureaucrats. One of the most important areas of contestation during the ten years since the first agreements were put in place has been how to structure the homogeneous empty space-time within which the RRCs are to function. Much of this negotiation and struggle has taken place in the realms of planning, budgeting, reporting, and other forms of administrative practice.

The final agreements state that "each Council shall prepare an annual budget, subject to review and approval by Government. The budget shall be in accordance with Government guidelines" (for example, Kluane First Nation 2003a:243). The agreements further specify that these budgets may include (1) "remuneration and travel expenses" for RRC members to attend meetings; (2) "the cost of public hearings and meetings"; (3) "research review, public information and other activities"; and (4) "other items as the Council and Government agree on" (for example, Kluane First Nation 2003a:243). The implementation plans lay out each RRC's annual operating budget and also provide a recommended budget for its first year of operation, with spending broken down into only three major categories: administration, meetings, and support. They further stipulate that "annual budgets prepared by the [RRC] in subsequent years will provide greater detail than that provided in the Year 1 Budget to better reflect the operational requirements of the [RRC]" (for example, Kluane First Nation 2003b: 436). The government's role in approving RRC budgets and line items gives territorial administrators a potentially important role in defining and regulating the activities in which RRC members can engage.

The federal government ultimately bears the costs associated with the operation of the RRCs, but because the Yukon government has jurisdiction over fish and wildlife in the territory, the federal government transfers the appropriate funds to the territorial government on an annual basis. So it is largely the territorial government that is charged with reviewing and approving RRC budgets, negotiating contribution agreements with RRCs,

distributing payments, and otherwise administering these funds. As we shall see, its control over the budgeting process enables it to exert direct influence over RRC activities.

In 2003–2004 I served as the Kluane First Nation's representative to the Yukon Implementation Review Group (IRG), an intergovernmental body charged with conducting a formal nine-year review of the Yukon Umbrella Final Agreement and those First Nation final and self-government agreements that had been in effect for at least five years.[17] The object of the review was to assess how well the parties had implemented the agreements and to identify problems or obstacles to their implementation—with an eye to possibly renegotiating problematic sections of the agreements. As part of the review process, the IRG invited written statements from each of the RRCs and invited members to appear before the IRG in person to present their concerns and answer questions. Territorial officials were also invited to appear before the IRG to express concerns and answer questions about government–RRC relations.

Disagreements over reporting requirements and other aspects of administration have been a source of tension between RRCs and the Yukon government since the first RRCs were established in 1995. For the first few years, the projected annual budgets prepared by most RRCs were not much more detailed than those spelled out in the implementation plans. This should not be too surprising; as we have already seen, few RRC members were themselves bureaucrats or had any experience in preparing budgets, work plans, or other administrative documents of this sort. What is more, each RRC prepared its own budget, so there was considerable variation in the detail and quality of the budgets submitted. Each RRC also used its own spending categories and budget format. The lack of standardized budgets made it difficult for Yukon officials to deal with the RRCs in a coordinated fashion and forced them to spend a great deal of time (at public expense) on the phone with RRCs clarifying what was going on. Yukon officials noted that during the first few years, they even had trouble getting year-end audited financial statements from some of the RRCs and that several RRCs continue to this day to submit them late.[18] Gradually, Yukon officials introduced a series of new reporting requirements. Some of these, such as requiring RRCs to use a standard budget form, were calculated to reduce the variation among individual RRCs and to rationalize the overall process and were seen by RRC members as generally helpful. Other changes, however, were resisted by RRCs, who viewed them as onerous or as attempts by territorial officials to exert inappropriate influence over RRC activities.

Nearly all the RRCs—either in their written submissions to the IRG or

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in their oral testimony—expressed concerns over reporting requirements imposed by territorial officials. Several complained that nearly every year territorial officials changed the format of the required reports and that they were constantly returning documents to the RRCs to be revised to meet the current guidelines. RRCs complained that these requirements were becoming more and more onerous, using up excessive amounts of the RRCs' scarce time and resources on what they viewed as pointless paper-work. Yukon government officials, for their part, saw changes in the reporting requirements as part of an effort to fine-tune the administrative process. They maintained that such changes were not arbitrary, as they seemed to the RRCs, but were instead always in response to particular issues; and they argued that in the aggregate such changes were leading to an increasingly rational and streamlined process. They did admit that in at least one case, changes to the reporting requirements had *not* been primarily about increasing administrative efficiency. That case, however, had been the result of "political" (that is, extrabureaucratic) pressures over which they had had no control.[19] Yukon officials also denied that the RRCs' reporting requirements were particularly onerous. On the contrary, they asserted that appropriate reporting was necessary to ensure that RRCs remained accountable to Canadian taxpayers, whose money they were spending, and officials described several incidents of inappropriate spending by RRCs to back up their position.

One particularly contested issue had to do with the production of annual work plans. Several years before my tenure on the IRG, that body (as part of a formal five-year review of the agreements) had agreed that the RRCs were underfunded and had recommended that the federal government provide an additional $20,000 per year to each council. The federal government agreed to increase RRC funding, but in return RRCs were compelled to produce detailed annual work plans laying out how they would spend the extra money. Because it would have made very little sense for RRCs to plan only how they would spend the *extra* $20,000 (and not do the same for the rest of their budgets), territorial officials were soon requiring that RRCs submit work plans detailing how they intended to spend their entire projected budgets. Some RRC members conceded that putting together an annual work plan was a potentially useful exercise (because it might help them set priorities for the coming year), but most found the process at best irrelevant; many feared that it was actually undermining the RRCs' autonomy.

Because of their small budgets, RRCs are severely limited in the number of staff they can hire and the other resources at their disposal. At the

same time, they are widely viewed as key institutions of the land-claim agreements; territorial and First Nation governments must (and do) consult with them on all manner of issues related to renewable resources, from the granting of water licenses and land-use permits, to proposed changes in hunting regulations, to plans for development anywhere in their traditional territories. In addition, new federal and territorial legislation can increase the roles and responsibilities of Yukon co-management boards, sometimes without corresponding increases in their funding levels.[20] Many RRC members complained that, as a result of all this, it was impossible for them to be proactive. Rather, all they could hope to do was to respond to the many demands placed on them by governments. Thus, although in theory the RRCs had the power to structure their time as they saw fit, in practice they could often do little more than react to outside pressures, and any planning they may have done at the start of the year was largely irrelevant.

Worse yet, the RRCs felt that to the extent they *did* have the time and resources to pursue their own agendas, their ability to do so was being undermined by officials in the territorial government. Nearly all the RRCs complained that territorial officials were using the required work plans to interfere with council activities. Although RRC mandates are spelled out in the final agreements, there is considerable room for disagreement over how these mandates should be interpreted. RRC members felt that territorial officials were inappropriately using their power to approve or reject work plans to enforce their own particular (and, members felt, excessively restricted) interpretation of RRC mandates. Yukon government officials, for their part, denied that they were interfering inappropriately. They did, however, feel that on behalf of the parties, it was their role to make sure that RRCs stuck to their mandates. One of the most contentious areas of dispute in this regard was whether RRCs should be allowed to fund wildlife research. Yukon government officials felt that funding and carrying out wildlife research was the sole responsibility of the territorial government. They maintained that if RRC members decided that some particular wildlife study was necessary, they should make a recommendation to the territorial government that it be carried out. Several of the RRCs vehemently disagreed, arguing that the territorial government had its own research agenda, which often did not correspond well with the interests of First Nations and RRCs. They argued instead that identifying significant gaps in existing knowledge about wildlife and devising ways to fill those gaps was a critical part of their mandate and this might well include funding wildlife studies. In fact, the official RRC mandates—as spelled out in the agreements—are unclear on the issue of research. But because

Yukon officials controlled the RRCs' budgets and steadfastly refused to approve budgets and work plans that funded wildlife research, they were effectively able to enforce their own interpretation of the mandate.[21] In this way, they were able to exert considerable influence over the ordering and structuring of events within the homogeneous empty space-time of wildlife management.

Yukon officials' control over the situation, however, was far from complete. The RRCs did not submit passively to what they saw as Yukon officials' efforts to dictate to them the terms of their own mandates. In some cases, they simply funded research that was outside their approved budgets and work plans, knowing full well that at year end they would face the ire of territorial officials. Having been presented with a fait accompli, however, these officials could do little more than scold RRC members retroactively for having exceeded their authority. Another important means utilized by RRCs in their efforts to regain control over their mandates was to raise their own funds from nongovernmental organizations, such as the Gordon Foundation. They could then use these funds to carry out research and other activities that territorial officials would not have approved.[22] "Resistance" of this sort has its own temporal implications, however. Proposal writing is extremely time-consuming, and there is no guarantee that proposals will be successful. Given the time pressures faced by RRC members and staff, the choice to pursue nongovernmental funding is a risky one; even when RRCs are successful at it, those that choose this route necessarily put off—or forsake entirely—engaging in other important activities.[23]

We have seen that government officials, RRC members, and others caught up in the wildlife management bureaucracy wield administrative technologies as they vie with one another to structure the empty homogeneous expanse of bureaucratic space-time. To the extent that they do so, however, they necessarily take for granted the spatiotemporal framework upon which those administrative tools are based. They take for granted the "steady, anonymous, simultaneous, activity" not only of humans but also of the animals they would manage. This process effectively enmeshes First Nation people in a set of practices rooted in a spatiotemporal order that is in many ways incompatible with their notions of what constitutes proper human–animal relations. The fact that these practices have become entrenched within new institutions of governance and management created by land-claim and self-government agreements, however, makes it very difficult for First Nation people to question them. As we shall see, the only option for those who would challenge the dominant spatiotemporal framework is to reject the land-claim agreements themselves, along with the

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assumptions of bureaucratic management upon which they have been built.

COMPETING SPATIOTEMPORAL FRAMEWORKS AND CATCH-AND-RELEASE FISHING

As noted earlier, many Yukon First Nation people do not regard human–animal interactions as occurring within homogeneous empty space-time. The simultaneity that connects a contemporary Yukon First Nation hunter with the animal-people of Long Time Ago stories is of a very different order than the simultaneity that structures practices of bureaucratic wildlife management. Similarly, although First Nation hunters and Euro-American wildlife managers can agree that wildlife is a renewable resource, they have very different ideas about the role humans play in the maintenance of animal cycles. As a result, many First Nation people regard the basic assumptions and practices of bureaucratic wildlife management with suspicion. It is well known, for example, that many First Nation people object to standard management practices such as the radio-collaring of animals by wildlife biologists, because they see such treatment as insulting to animal-people. But the insult does not lie merely in the fact that such practices subject animals to the indignities of being drugged, handled, and forced to wear radio collars. Equally problematic is the fact that through such practices, wildlife biologists impose upon animals their own time schedules, budgets, and research agendas. Rather than try to understand animals on their own terms, biologists force them into the context of bureaucratic space-time in an attempt to wrest knowledge from them by force. This work is completely at odds with Kluane people's notions about what constitutes respectful behavior toward all persons, whether human or nonhuman (see Nadasdy 2003:108–111).

Thus many standard wildlife-management practices are insulting to animal-people, not merely because these practices subject them to physical indignities but also because they impose on human–animal relations a new spatiotemporal framework, one that is geared specifically toward asserting what many First Nation people see as an inappropriate degree of control over animals. No amount of wrangling over budgets and work plans can address the concerns of First Nation people who object to such practices on these grounds. For them, the only option is to reject the spatiotemporal assumptions of bureaucratic wildlife management, an option that is becoming increasingly difficult because of the entrenchment of such assumptions in the provisions of Yukon land-claim agreements. The struggle over catch-and-release fishing is a case in point.

In the late 1990s, the Fish and Wildlife Management Board, aware of First Nation concerns about catch-and-release fishing, commissioned several studies to investigate whether voluntary catch and release was an appropriate technique for the management of fish stocks. As Easton (2002) notes, knowledge that the board was investigating the practice of catch and release generated a contentious public debate. Yukon government fisheries managers and most Euro-American sports fishermen and tourism operators supported catch and release because it enables fishermen to be selective about the fish they kill, allowing them to release the large spawners that are critical for the reproduction of fish populations. Clearly underlying this perspective on the practice are assumptions about the cyclical temporality of fish as a resource and the notion that humans can and should control their natural population cycles through the regulation of "harvest" levels (among other things).

In contrast, the vast majority of Yukon First Nation people oppose the practice of catch-and-release fishing (Muckenheim 1998). They do so both because it subjects fish-people to the indignities of insulting treatment at human hands and because releasing fish is a repudiation of the act of reciprocal exchange that lies at the heart of the relationship between human- and animal-people (see Easton 2002; Nadasdy 2003:81–83; Natcher, Davis, and Hickey 2005:246). First Nation stories such as "The Boy Who Stayed with Fish," a well-known tale about a boy who spoke disrespectfully about a piece of fish, make clear the dangers of such behavior. As a result of his disrespectful behavior, the boy was transformed into a fish, and he lived among the fish-people for several years. Eventually, he regained his human form and taught people the proper way to treat fish.[24] In one of the reports prepared by the board, a First Nation person objected to catch-and-release fishing because it "goes against the fundamental beliefs of the First Nations people.…They consider [it] to be 'playing with the fish' which is very disrespectful." They believe that "you only fish for food…and that you never, never play with the animals. You must respect them or they won't come back" (cited in Muckenheim 1998; see also Easton 2002:17). This phrasing suggests that if one treats a fish properly (that is, one kills and eats it rather than releases it), it *will* "come back" to be caught again. Indeed, because both humans and fish are reborn, there is an important sense in which everyone in "The Boy Who Stayed with Fish"—human and fish alike—is still alive today and continues to enact this age-old relationship of reciprocal exchange in the manner prescribed by the fish-people themselves and relayed to humans via that boy.[25] In contrast to the perspective of biologists and sport fishers, then, the First Nation perspective on catch-and-release

fishing is based on the assumption that fish populations are *circularly*, rather than *cyclically*, renewable and therefore fish management should be about maintaining social relationships rather than controlling biological cycles.

Despite a great deal of talk about the need to find "common ground" on the issue, in 2000 the Fish and Wildlife Management Board recommended that voluntary catch and release continue to be used and promoted in the Yukon, although the board did recommend that only barbless fishhooks be used in an effort to reduce the mortality of released fish. They also created the Fish Think Tank, a working group charged with educating the public about catch-and-release fishing and promoting it as a management practice (Fish and Wildlife Management Board 2000:20; see also Easton 2002:16). Easton is highly critical of the way in which the board disregarded First Nation interests and values. He attributes this situation to a discursive strategy by proponents of catch and release to frame First Nation concerns as "ethical" in nature (and thus not an appropriate basis for policy making), in contrast to their own concerns, which they portray as rooted in biological and economic realities (the proper bases for the regulation of fisheries) (Easton 2002:19–21). Easton views as disingenuous proponents' self-proclaimed desire to "keep ethical decisions out of the fishing regulations," noting that "the law and its regulations are precisely the codification of ethics within a statutory frame by which they can be legitimately enforced by the State" (2002:20).

I would add that it is possible—indeed *necessary*—to dismiss First Nation concerns as "merely ethical" because First Nation conceptions of animals and the *circular* spatiotemporality of human–animal relations are fundamentally incompatible with assumptions of scientific and bureaucratic fisheries management. Because of this incompatibility, there is *no way* to make fisheries policy that is consistent with *both* First Nation and biological ideas about management. To truly accept First Nation concerns as the basis for making management decisions, one would first have to *reject* the cyclical spatiotemporality that underlies biological conceptions of fish and fishing. Indeed, at least one wildlife biologist has recognized this point explicitly. He believes that most members of the board and various RRCs take First Nation beliefs and values seriously in their deliberations. Difficulties arise, he said, when board members try to "operationalize" these beliefs in the realm of management, and the problem is especially evident when First Nation beliefs and values *contradict* those of biologists. A good example of this, he told me, was the debate over catch-and-release fishing, because it was impossible to act on the beliefs and values of First Nation people in

relation to this issue without *denying* the insights of biologists (see Povinelli 1995 for a similar dilemma in the Australian context).

So why did First Nation members of the Fish and Wildlife Management Board go along with recommendations to continue and even promote catch-and-release fishing? One First Nation board member told me that he had done so reluctantly and for pragmatic political reasons. He noted that First Nation people make up less than a third of the Yukon population and that "we all have to live together." He told me that he would never practice catch-and-release fishing himself but, he did not feel right dictating to non–First Nation people how they should behave. Like all members of the board, he was also acutely aware that any recommendation to prohibit catch-and-release fishing would have ignited a political firestorm.[26] Although such a position is certainly understandable from a pragmatic standpoint, it is worth considering its full social and political implications. In the first place, when First Nation people acquiesce to Euro-Canadian desires to practice catch and release, they are making a huge sacrifice. Because improper behavior by Euro-Canadians can destroy the delicate social relationship between fish and *all* humans, First Nation people consciously risk their children's futures in the name of social harmony.[27]

Second, and perhaps more important, in acquiescing to catch and release, First Nation people implicitly accept the biological assumptions about fish that underlie the practice. In so doing, they tacitly agree to use the framework of bureaucratic space-time as the only legitimate basis upon which to make—and contest—fisheries management decisions. They are still free to vie with others in the attempt to bring structure to homogeneous empty bureaucratic space-time (in the ways described above), but it becomes increasingly difficult for them to question the conceptual bases of bureaucratic management.

CONCLUSION

Anthropologists and others have noted that the social construction of time is an inherently political process. In the second half of this chapter, I explored the political dimensions of wildlife management in the Yukon, which can be seen at least in part as a struggle between First Nation people and bureaucratic wildlife managers to impose their own particular spatiotemporal perspectives on human–animal relations in the territory. Although First Nation people can and do assert some degree of control over space and time within the new bureaucratic context of wildlife management in the territory, that very context takes for granted the cyclical topology of bureaucratic space-time and so is incompatible with their view

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of proper human–animal relations. To some extent, then, First Nation people's participation in the bureaucratic co-management process (and acquiescence to the spatiotemporal assumptions underlying it) makes it increasingly difficult for them to challenge dominant Euro-Canadian views of wildlife management and human–animal relations.

In this chapter, I used Gell's concept of temporal topology to analyze the idea that fish and wildlife are *renewable resources*. Although everyone in the Yukon agrees that fish and wildlife populations are renewable, there is a fundamental disagreement over the concept of *renewability* itself and the spatiotemporal order it implies. Wildlife biologists view animal populations and human–animal relations as embedded in cyclical time, characterized by the periodic recurrence of similar events of the same type. First Nation people, by contrast, are more likely to view them as embedded in *circular* time, a temporal framework within which the *same event* recurs over and over again. This difference has significant implications for how each group conceives of the animal resource. Many First Nation people, for example, view animals as a potentially unlimited resource, their availability dependent only on the maintenance of social relations between animal- and human-persons, whereas non–First Nation hunters and biologists tend to view animals as a finite resource vulnerable to overexploitation. This view, in turn, leads them to subscribe to different notions about the proper role of human agency vis-à-vis animals and about what constitutes appropriate management.

Notes

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1. For those not familiar with the Canadian context, *First Nation* is the accepted term for referring to aboriginal peoples and their governments.

2. Some scholars (for example, Notzke 1994:1–2) argue that the resource concept is firmly rooted in Euro-American notions about human superiority over nature and so is incompatible with aboriginal worldviews. The concept certainly implies a view of the world that foregrounds utility to humans. But for reasons I elucidate elsewhere (Nadasdy 2005b), I am not convinced that all such perspectives *necessarily* imply human superiority over nature or that they are necessarily incompatible with aboriginal views of the world. Be that as it may, First Nation people in the Yukon do regularly talk about fish and wildlife as renewable resources.

3. See Nadasdy (in press) for more on the central structuring role of the agricultural metaphor and its continued importance in the discipline of wildlife management.

4. For the rest of the day, everyone at the meeting attempted to follow this woman's advice, but it proved to be quite difficult to do so because of the frequency with which the term is used in such contexts. Over and over again throughout the day, biologists—and First Nation people as well—caught and corrected themselves. The effort did not seem to make a lasting impression on meeting participants, however. At subsequent meetings (and I attended many with the same people over the next three years), they all lapsed back into old habits. I never again heard anyone explicitly object to the term in a meeting.

5. For the classic description of animals as other-than-human persons and hunting as a part of the reciprocal relationship between human- and animal-people, see Hallowell 1960; see also Brightman 1993. For more on the specifics of the Yukon case, see Nadasdy 2003:ch. 2, and for reflections on the theoretical and political significance of such accounts, see Nadasdy 2007.

6. This is similar to what Lawrence Rosen (1984:185–186) has referred to as "essentially negotiable concepts." See also Fujimura 1992 for use of a similar idea in a very different context.

7. This is not to say that homogeneous empty space-time is exclusive to capitalism. Indeed, some conception of time as empty and homogeneous is probably essential to the administration of any large state or enterprise. Nor would I assert that homogeneous empty space-time is the only conception of time and space associated with large late-capitalist bureaucracies. Indeed, Michael Herzfeld (1992) identifies another important form of temporality (or, perhaps more accurately, atemporality) produced and reinforced by modern state bureaucracies. Although it would be interesting (and

fully in keeping with the development of a politics of time) to explore alternative temporal orders and struggles over their use *within* bureaucracies, such an inquiry unfortunately lies outside the scope of the present study.

8. He does, however, suggest that it may have been the rhythms of labor (spiritual as well as physical) in the monasteries of medieval Europe that led to the invention of the mechanical clock in the first place (Mumford 1962[1934]:12–14).

9. Henri Bergson (1910) argued that "abstract time," the homogeneous medium of physics, is entirely reducible to space. He contrasted abstract time with "duration," the experience of which he viewed as purely qualitative and unmeasurable. Although I disagree with the implication that abstract space is a more fundamental category than abstract time, I agree that the two are wholly implicated in each other. Thus I refer throughout this chapter to "space-time" rather than "time" or "space" alone.

10. Culturally minded Marxist scholars (Le Goff 1980; Thompson 1967) built upon Marx's insights by examining how European conceptions of time (as well as technologies for keeping it) changed in association with the rise of the capitalist labor process. Thompson, for example, citing Evans-Pritchard, characterized this change as a shift away from the irregular work rhythms of a "task-oriented" society—in which there is very little demarcation between "work" and "life" and in which people conform to the natural rhythms (seasons, tides, and so forth) that govern their subsistence—to a labor process that is strictly governed by the clock, where for the first time it becomes meaningful to speak of "spending" and "wasting" time. Significantly, however, he does not argue that the capitalist conception of time replaced the preexisting task-oriented conception. Rather, he points out that both continue to exist and that struggles over these alternate conceptions were intense and continue into the present.

11. It is not always possible to draw a clear distinction between administration and production. Indeed, although some scholars (for example, Piore and Sabel 1984) heralded the introduction of just-in-time production in the 1980s as a revolution in the nature of capitalist production, it was in large part a set of administrative innovations made possible by technological advances in transportation and communication.

12. Today, the Fish and Wildlife Branch of the Yukon Department of Environment has forty-eight employees, and Conservation Officer Services employs another thirty-two people territory-wide.

13. Evans-Pritchard distinguished, for example, between "oecological" and "structural" time among the Nuer, and Hallowell considered what happened when people enmeshed in "non-Western" time came into contact with the temporal order of capitalism.

14. The traditional territory of each First Nation is a geographical area, defined in the UFA, within which specific provisions of that First Nation's final agreement are

valid. The traditional territory defines the region of jurisdiction for each final agreement's RRC.

15. The question of jurisdiction can be fairly complex. In general, the Yukon government retains jurisdiction over fish and wildlife throughout the territory. First Nations, however, have jurisdiction over fish and wildlife on "settlement lands" retained under the agreements (subject to the limitation spelled out in section 16.5.1.8 of the agreements), and the federal Department of Fisheries and Oceans retains jurisdiction over the management of anadromous fish, such as salmon, throughout the territory.

16. The UFA has a provision requiring that RRC appointees be permanent residents of the traditional territory.

17. This review is called for in the agreements themselves.

18. Yukon government officials are themselves required to report to the federal government on the use of RRC funds. At one point, Canada redefined the Yukon's reporting requirements to include copies of each board or council's annual report and audited statement. At the same time, federal officials insisted that until they had received all those documents, no funds for any Yukon board would flow to the territorial government. As a result of this pressure, territorial officials in at least one case had to threaten to cut off the flow of funds to force an RRC to produce an audited statement.

19. In that case, certain new reporting requirements had been imposed at the request of federal bureaucrats by order of a federal minister whose government was under public pressure to increase the "accountability" of First Nations.

20. At the IRG review, for example, members of the Fish and Wildlife Management Board complained that the new federal Species at Risk legislation created a number of new roles and responsibilities for the board yet the federal government steadfastly refused to consider a corresponding increase in its funding.

21. Because of the uncertainties about board mandates, members of the IRG ended up recommending that the parties "communicat[e] and clarify…to RRCs and the FWMB the different mandates, responsibilities and roles of RRCs, the FWMB, Ministers and YFNs with regard to managing local, regional and territorial renewable resources, including fish and wildlife populations" (IRG 2007:recommendation 8.3.4).

22. It should be noted that fund-raising of this sort was more than just a response to perceived "meddling" by territorial officials. In fact, the Fish and Wildlife Management Board and RRCs began seeking nongovernmental funds almost immediately after they were established, in an effort to augment what they saw as insufficient government funding. Nevertheless, they maintain that government officials have no right to tell them how to spend money they have obtained through outside grants—which in any case must usually be spent according to the terms under which the grant

has been awarded. During IRG meetings, federal and territorial representatives challenged this practice, questioning whether it was appropriate for public co-management bodies to seek outside funding—because then they would be beholden to private foundations that have their own agendas. First Nation representatives asserted that unless the federal government would commit to providing these boards with sufficient funds to achieve their mandates, First Nations would not support any recommendation restricting their ability to look elsewhere for the funds they need to operate.

23. All members of the IRG acknowledged that fund-raising by these boards was not an ideal solution to the problem of inadequate funding. In the end, they recommended that "the Parties establish a base for the funding of each Board that eliminates the need for Boards to engage in fundraising activities to meet the financial requirements of their mandate. Boards should be advised that this is the approach that the Parties are taking and instructed to curtail fundraising activity that is disruptive to mandated work" (IRG 2007:recommendation 8.2.8). Of course, it remains to be seen whether this recommendation will actually lead to adequate board funding levels.

24. For complete versions of this story, see Cruikshank 1990:75–78, 208–213. See also McClellan 1975:185.

25. For another example of a Yukon First Nation person evaluating catch-and-release fishing in precisely this light, see Julie Cruikshank's (1998:57–58) account of an interaction between a biologist and a First Nation elder. The biologist explained the usefulness of catch and release as a management tool. In response, the elder told him the story of the boy who stayed with fish.

26. Indeed, as Easton points out, the controversy over catch and release was intense enough that the board felt compelled to announce—more than a year before it had completed its own study of the issue—that it did not intend to prohibit the practice (Easton 2002:16–17).

27. That improper behavior by Euro-Canadians can have a negative impact not only on their own relationship with fish but also on First Nation people's is evident in the following. In the summer of 2006, some First Nation people attributed low salmon numbers at Klukshu, a historically important fishing spot in the southern Yukon, not to overfishing but to the fact that Euro-Canadians had insulted the fish by bathing in the creek. As a result of this behavior, not only Euro-Canadian but also First Nation people were unable to catch fish.