

Ways We Respect Caribou: Teetł'it Gwich'in Rules

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ABSTRACT. Debates about respectful caribou harvesting have arisen during the most recent cycle of caribou population decline in the Western Arctic. One aspect of this debate has been focused on younger harvesters, who are perceived by some leaders, elders, and wildlife management officials as lacking in knowledge and skills for respectful harvesting compared to previous generations. Guided by previous research in northern Canada, we examined this issue through a collaborative study (2007–10) in the Teetł'it Gwich'in community of Fort McPherson. This paper uses the common pool resource concept of “rules” (verbalized by research participants as “ways we respect the caribou”) as the lens for exploring how knowledge about traditional practices of respectful harvesting varies with age. Rules for respectful harvesting were documented through semi-structured interviews with Teetł'it Gwich'in elders and used as a guide for assessing the knowledge of active harvesters ranging in age from 19 to 70. While the rules spoken by younger generations show some degree of simplification, there is generally a good match between the rules spoken by elders and those spoken by all generations of active harvesters. Although the depth of knowledge around each rule was not assessed, the results seem to illustrate continuity in key aspects of Teetł'it Gwich'in knowledge and skills for caribou harvesting. Further research is needed, however, into the mechanisms and processes of continuity, with particular attention to how traditional knowledge and skills are being adapted to meet the needs of current and future generations.

Key words: barren-ground caribou, harvesting, hunting, youth, Fort McPherson, Teetł'it Gwich'in, rules, traditional ecological knowledge, resource management

RÉSUMÉ. Des débats entourant la récolte respectueuse du caribou ont surgi à la lumière du plus récent cycle de déclin de la population de caribous de l'Arctique de l'Ouest. Un des aspects de ces débats concerne les jeunes chasseurs qui, aux dires de certains chefs, aînés et représentants de la gestion de la faune, ne posséderaient pas les connaissances et les habiletés nécessaires à une récolte respectueuse et ce, comparativement aux générations précédentes. Grâce à des recherches antérieures effectuées dans le nord du Canada, nous nous penchons sur cet enjeu dans le cadre d'une étude collaborative (2007-2010) réalisée dans la collectivité de Teetł'it Gwich'in, à Fort McPherson. Le présent article s'appuie sur le concept des règles régissant les ressources communes (verbalisées par les participants à l'étude comme des « moyens de respecter le caribou ») comme point de mire pour explorer la manière dont les pratiques traditionnelles entourant la récolte respectueuse du caribou varie en fonction de l'âge. Les règles relatives à la récolte respectueuse ont été documentées au moyen d'entrevues à demi-structurées avec les aînés des Teetł'it Gwich'in, après quoi elles ont servi de guide pour évaluer les connaissances des chasseurs actifs dont l'âge variait de 19 à 70 ans. Bien que les règles citées par les gens de générations plus jeunes affichent un certain degré de simplification, il existe généralement une bonne équivalence entre les règles énoncées par les aînés et celles énoncées par toutes les générations de chasseurs actifs. Même si nous n'avons pas évalué l'ampleur des connaissances de chaque règle, les résultats semblent attester d'une continuité à l'égard d'aspects-clés des connaissances et des habiletés des Teetł'it Gwich'in en matière de récolte du caribou. Toutefois, il y a lieu de pousser les recherches plus loin afin de mieux connaître les mécanismes et les processus de cette continuité, en portant une attention particulière à la manière dont les connaissances et les habiletés traditionnelles sont adaptées pour répondre aux besoins des générations actuelles et futures.

Mots clés : caribou de la toundra, récolte, chasse, jeunes, Fort McPherson, Teetł'it Gwich'in, règles, connaissances écologiques traditionnelles, gestion des ressources

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INTRODUCTION

In many regions of northern Canada, recent declines in barren ground caribou populations, including the Porcupine caribou herd, have been a key issue for policy, research, and public debate. Although many ecological drivers are known, the harvesting practices of Aboriginal people have been a particular focus of wildlife management institutions. Within this context, concerns have been raised that younger generations of Aboriginal people are not as knowledgeable and respectful in harvesting as their parents and grandparents were and may be influencing population dynamics to a greater extent than previous generations.

The caribou harvesting practices of many Aboriginal peoples, including the Gwich'in of the Western Arctic, have been conceptualized as part of a system of traditional ecological knowledge, which is defined by Berkes (2008:9) as a “cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.” The sustainability of such systems of living off the land is predicated on the existence of social norms or rules for respect that are highly adapted to the unique ecological conditions of a given community and resource. Research in other regions has highlighted the effectiveness of these rule systems. Previous studies have shown that these systems work well because cultural institutions (i.e., systems of rules) exist that prevent cheating and enforce ethics of conservation and sharing (Berkes, 1987; Feeny et al., 1990; Collings et al., 1998). But as noted by Berkes (1987) and others, these systems are fragile and prone to disruption by numerous factors, including increased access to resources by those outside the community or group and decreased community control over management. As northern communities grow and change, questions about the continued relevance of these rule systems are being asked, particularly in relation to younger generations of hunters.

Concerns that hunters of the current generation are not as knowledgeable as their elders have been present for several decades. Concern about the pace and scale of socio-cultural change has spurred interest in and analysis of the well-being and future of youth (O'Neil, 1983; Salokangas and Parlee, 2009), the state of the traditional economy (Condon et al., 1995), and diet-related chronic illness among northern Aboriginal peoples (Kuhnlein and Receveur, 1996; Kuhnlein et al., 2009). A more recent focus has been on the adaptability of northern Aboriginal youth to climate-related environmental change (Ford et al., 2010; Pearce et al., 2011).

Despite the lack of baseline data about the traditional ecological knowledge and skill sets of youth, their “lack of knowledge” was a key issue in many regions during recent discussions on caribou population decline and harvest management (see particularly Nesbitt and Adamczewski, 2009; ACCWM, 2011). A key example is the dichotomous categorization of past versus present harvesting practices

by governments, which describe harvesting in the past as “conservation-oriented,” “careful,” and “part of a cultural way of life” and current harvesting practices as “indiscriminate” and “lacking a conservation ethic” (Nesbitt and Adamczewski, 2009:16). Similar framing comes from Aboriginal elder presentations in community meetings and other public forums (Simmons et al., 2012). However, the consistent framing of younger hunters and their practices as deviant may be alienating youth from the wildlife institutions that seek to engender their trust and participation.

Previous studies in the Inuvialuit region and in Nunavut have considered the problem of declining knowledge and skills among younger hunters in a different way. As Condon et al. (1995) pointed out, Inuit youth have a different, rather than simply a lesser, level of involvement in subsistence harvesting compared to older hunters. Pearce et al. (2011) deconstructed the complex of traditional skills and the way in which they are passed down. Although many niche skills for travel, harvest, and preparation of country food seem to have been lost, the majority of youth still retain significant capacity to travel, hunt, trap, and fish on the land, and because of their exposure to other knowledges, they may have a greater capacity in the long term to cope with ecological threats such as long-range contaminants and climate change. Others, such as Turner (2007), warn about the essentialization of traditional ecological knowledge as historical practice and argue that the issue should be conceptualized as one of cultural continuity. Further, this idea is reflected in the description of Gwich'in traditional knowledge: “It continues to have relevance today and draws its strength from being used, revised and continuously updated to take into consideration new knowledge” (Gwich'in Tribal Council, 2004:1). But such continuity is not guaranteed. Castellano (2000:25) emphasizes the importance of creating safe spaces for the interpretation and reinterpretation of cultural knowledge and practice, particularly given past and successive waves of cultural disruption:

...aboriginal people have been bombarded with the message that what they know from their culture is of no value. Intergenerational transmission of ancient knowledge has been disrupted, and the damage has not been limited to the loss of what once was known: the process of knowledge creation—that is, the use of cultural resources to refine knowledge in the laboratory of daily living—has also been disrupted. As aboriginal people reassert their right to practice their cultures in a somewhat more hospitable social environment, they will have to decide how to adapt their traditions to a contemporary environment.

Historical Context

Traditional systems of wildlife management in the North have been complicated in the last hundred years by the imposition of state systems of management, including harvest regulation (Usher, 2004; Sandlos, 2007). The most

significant tensions in recent caribou management history have arisen during periods of caribou population decline, which in the case of the Porcupine caribou herd are documented to have occurred every 30–70 years (CARMA, 2012). Such variability in both the range and population of caribou is well understood and accepted in Gwich'in oral tradition and in livelihood practice (Nuttall et al., 2005). Such variability is less accepted within the Euro-Canadian wildlife management system, and until recently, alternative viewpoints have rarely been considered (Kendrick and Manseau, 2008). The conviction that the scientific approach to game management is superior to systems espoused by Aboriginal peoples is well established (Freeman, 1985). For example, government perceptions that overharvesting by Aboriginal people was the cause of caribou population decline after World War II precipitated a range of efforts to end subsistence harvesting practices in many parts of the North. But with little ability to enforce anti-hunting regulations, the government focused more on persuasion and coercion (e.g., scare tactics about caribou extinction), with the full intent to convince Aboriginal people to abandon harvesting as a livelihood practice (Sandlos, 2007). As in other parts of western Canada, these efforts of government were made with little or no understanding or recognition of the traditional management practices of Aboriginal peoples, whose adaptability to the dynamics of caribou health, population, and movements had ensured their sustainability and that of their communities for many hundreds if not thousands of years (Sandlos, 2007; Kendrick and Manseau, 2008). As a consequence many Aboriginal people, particularly elders in northern communities, still associate wildlife management, including efforts to control subsistence harvesting, with the kinds of “social engineering” that took place for many decades in the mid-20th century (Usher, 2004).

The naive paternalism that has long accompanied wildlife management was in large part checked in the 1970s by the socio-political actions associated with the recognition of Aboriginal rights to lands and resources in Canada and elsewhere. Co-management boards, such as the Beverly and Qamanirjuaq Caribou Management Board, created in 1982, were among the first formal institutions to recognize Aboriginal systems of knowledge, practices, and beliefs for managing caribou and to make efforts to consider these in tandem with Euro-Canadian models. The overall effectiveness of these co-management arrangements has been challenged, however, by those who worry that traditional ecological knowledge is given limited value in these institutional contexts; biases toward Western science, a general lack of resources for Aboriginal engagement, and the bureaucracy of the management process itself are key issues (Nadasdy, 2003). These regional co-management arrangements are only one dimension of a complex management system that operates at many different geographic, political and social scales; the traditional systems of caribou management, including “rules” for respecting caribou as spoken by elders, continue to be important in many communities

across the Arctic (Kofinas, 1998; Kendrick and Manseau, 2008).

The term “rules” is grounded in the common pool resource literature but is also used here to talk about the social norms, customary laws, guides, directions, taboos, and limits that define proper and improper behaviour toward the environment (Nelson, 1983; Guédon, 1994; Kofinas, 1998). The title of this paper, “Ways we respect caribou,” reflects the way the community approaches what is discussed here and in other literature as “rules.” Rules dictating right and wrong behaviour toward nature, if followed, result in well-being of both people and nature (Nelson, 1983). If these rules are not followed, and the balance between the animal and human world is not maintained, “repercussions will be dramatic” (Sherry and Vuntut Gwitchin First Nation, 1999:212). Previous research in Fort McPherson suggests that the Teet'it Gwich'in have a variety of traditional rules related to respectful harvesting (Kofinas, 1998). Kofinas discusses these rules, which are collectively legitimized over time, as guides for local systems in dealing with resource uncertainty. There are also specific rules related to “respecting the caribou leaders” or the first bulls that pass during migration. The specifics of what is meant by respect, however, can vary significantly from one community to another and even within communities, leading to a conclusion that “one size fits all” regulations of this kind are not easily definable (Padilla, 2010).

Scholars involved in research elsewhere might similarly argue that rules guiding human-caribou relations cannot easily be reduced to a “reified series of descriptive or normative statements” but are better understood as principles of good relations (Guédon, 1994:61). Rules may not be clearly framed as generalizable to all members of a community: while some rules seem to be framed as applying to everyone, others may be voiced as “that’s the way I do it” and not “that’s how one should do it” (Guédon, 1994:49).

Where do these rules, so defined, come from? And why do they persist? Previous research on this theme with the Teet'it Gwich'in highlights the ways in which these rules, described by some scholars as “customary law,” find their origins in the “obligations between caribou and people, and people and their community” (Kofinas, 1998:147). Such obligations may stem, in part, from beliefs about the relatedness of people to the caribou, as conceptualized by Slobodin (1981:526):

Kutchin have a particular affinity with caribou. In mythic time, the Kutchin and the caribou lived in peaceful intimacy, although the people were even then hunters of other animals. When the people became differentiated, it was agreed that they would now hunt caribou. However, a vestige of the old relationship was to remain. Every caribou has a bit of the human heart... in him, and every human has a bit of caribou heart.

Other anthropologists highlight the reciprocal nature of these obligations; people follow rules of respect so that the

caribou will come back (Wishart, 2004); when these obligations are not sustained or people act in ways that violate the proper human-animal relationship, the caribou may “go away” or not give themselves to hunters.

Unlike formal regulations or laws, these rules are not fixed in time but are highly flexible and adaptive (Walker et al., 2002). The benefit of such heterogeneity and flexibility is that the rules can be responsive to changing ecological conditions and thus are continually being updated as new knowledge is generated (Parlee et al., 2006). Much like a living system, rules hold greater meaning and significance over time as individuals interpret and apply them in different kinds of ecological scenarios. For example, some rules may be more important during periods of peak caribou population, while others take on significance and are applied rigidly during periods of resource scarcity. The rules themselves, as well as their deeper meanings, are transmitted from one generation to the next in many different ways.

The Persistence of Rules Over Time

Our work focused on learning more about the persistence of traditional rules for harvesting caribou. Such a focus necessitates consideration of the mechanisms of persistence, or the ways in which knowledge, including rules, is passed on from one generation to the next in cultures of oral tradition. Anthropologists have tended to emphasize two aspects of the oral tradition: learning by doing and storytelling. Learning by doing is seen as a fundamental way in which people learn and understand their place in the environment. In contrast to formalized rule systems, many “rules” that elders described as important are transmitted orally and learned through experience, rather than written down. Youth learn how to behave around caribou by watching and by carrying out the required tasks along with their parents or others in the know. For caribou harvesting, this transfer of knowledge occurs in a variety of situations: while harvesting; while talking about harvesting; while preparing, storing and distributing meat; and of course, while eating caribou (Gwich'in Elders, 2001:21).

At the same time, tremendous emphasis is placed on the narrative or “story” as the backbone of cultural knowledge and on storytelling as the critical mechanism or pathway for passing on knowledge (Cruikshank, 1998; Gwich'in Elders, 2001). Words, through the oral tradition, provide guidelines for living a good life in the present and “lay a foundation for thinking about the future” (Cruikshank, 1998:103). Words and things, objects and stories are used to root new experiences into one's conception of the world, to make them understandable and give them cultural meaning (Cruikshank, 1998). Elders are key to this process because they “provide corporate memory for the group, the wisdom to interpret uncommon or unusual events, and they help enforce the rules and ethical norms of the community” (Berkes, 2008:118). Yet phenomenologists might suggest that rules cannot be shared by experience or told by people at all but rather come from the process of being or dwelling

in the environment (Ingold, 2000). Knowledge or “truth” is not something that can be told but resides in the land itself and is “progressively revealed by experience on the land” (Davidson-Hunt and Berkes, 2003:5).

Another emergent theory focuses on the role of cultural symbols or representations that may be viewed as shortcuts for transmitting significant bodies of knowledge in ways that ensure their persistence over time. For example, hundreds of years of experiences and perhaps hundreds of thousands of encounters with caribou may be seen as cumulatively influencing the behaviour of contemporary Gwich'in harvesters. The multiple accounts of these experiences over many generations add up to an almost infinite pool of knowledge that cannot easily be passed down in its entirety. Arguably only thin slices of observation, experience, and belief are passed on from one generation to the next with the intent of helping to ensure the sustainability of future generations. These thin slices, which have been referred to as “rules of thumb,” can cut through the infinite levels of complexity and have the added benefit of being easily remembered (Berkes and Kislalioglu Berkes, 2009:7). These rules of thumb are thought to be similar to other cultural symbols, categorizations, or naming practices (e.g., place-names) that relay information about landscapes, animals, plants, and other ecological processes (Kritsch and Andre, 1994; Johnson and Hunn, 2010). Although rules of thumb are rooted in the past, new ones are continually being created in response to variation and change in communities and the environment. Guided by the references cited above, we use the common pool resource concept of “rules of thumb” or “rules” as the lens for exploring Gwich'in knowledge about respecting caribou. With the aim of unpacking simplistic assumptions that younger hunters have limited knowledge and skills for caribou harvesting, this paper explores to what extent Teet'it Gwich'in knowledge of traditional rules for caribou harvesting varies by age.

STUDY AREA

The Teet'it Gwich'in of Fort McPherson, Northwest Territories, are one of 11 Gwich'in communities that together span the Northwest Territories, Yukon, and Alaska. They have lived for many hundreds of years in the Peel River watershed of the present-day Northwest Territories and eastern Yukon. The present location of the community is near a traditional summer fishing area on the Peel River at the base of the Richardson Mountains. A Hudson's Bay Post was established there in 1850 (after being at a nearby location since 1840). At that time, the harvesting and fishing territory of the Peel River Kutchin (the term used in the anthropological literature) was recorded as 100–200 miles upriver from the Fort (Slobodin, 1962). In 1992, the land and resource rights and interests of the Teet'it Gwich'in were recognized by the federal government through the Gwich'in Comprehensive Land Claim Agreement (Government of Canada, 1992). The Gwich'in Settlement Area

comprises 56 935 km² of land in the Northwest Territories and Yukon (GLUPB, 2003) and includes significant areas of the Porcupine caribou herd range. The Gwich'in have always relied heavily on the Porcupine caribou, particularly during fall and winter (October to April), when people would make their way from summer camps along the Peel River and Mackenzie River into the mountains (Gwich'in Elders, 1997:24). Today, the Porcupine caribou continue to be important to the culture, livelihood, and health of the Teet'it Gwich'in people.

The Porcupine caribou herd is the fifth-largest herd of migratory caribou in North America. It migrates over approximately 250 000 km² of northern Alaska, Yukon, and the Northwest Territories. The herd moves annually between its calving grounds in northern Alaska and its fall and winter range in the mountains surrounding Fort McPherson (Kofinas and Russell, 2004). "People do not find vadzaih [caribou] herds at random. They know where to find vadzaih at different times of the year" (Gwich'in Elders, 1997:25). The Teet'it Gwich'in would look for caribou at key locations, such as crossing points on the Peel River and passes in the Ogilvie Mountains northwest of the present-day community. People also built and maintained caribou fences and corrals for larger-scale harvesting (Osgood, 1936:25; Kofinas, 1998). A large number of caribou would be harvested at key points and periods of the fall and winter to ensure enough meat for the community until the spring and summer fishing season (Burch, 1972). Consequently, people had well-developed knowledge and skills for harvesting to ensure the survival of the community.

Today, caribou harvesting often takes place throughout the Dempster Highway corridor south of the community. Some harvesting occurs in areas not accessible by highway: hunters travel by skidoo in winter and up the Peel River and its tributaries in the ice-free months (Kofinas, 1998:113). The harvesting season in Fort McPherson runs from August until April, corresponding to the presence of Porcupine caribou in the area. Harvesting activity peaks in October as caribou are moving to their wintering grounds, and again in March, as caribou journey back to their calving grounds (Kofinas, 1998).

The Gwich'in Harvest Study led by the Gwich'in Renewable Resources Board (GRRB) provides valuable context for understanding patterns of harvesting, including caribou harvesting. The average number of caribou harvested (Table 1) varies significantly by season as well as by year, which is a reflection of many ecological factors (location and abundance of caribou), as well as socio-economic circumstances (e.g., employment, price of gas for travel).

METHODS

The research was developed with guidance from Gwich'in land-claim institutions, including the Gwich'in Social and Cultural Institute, the GRRB, and the Teet'it Gwich'in Renewable Resources Council (TGRRC). A

research agreement was developed specifying terms for data collection, compensation of interviewees, plain-language reporting, academic publications, and long-term storage of interview results. Data collection was carried out in 2007 and 2008 in the community of Fort McPherson and included two phases of interviews and focus groups, as well as public presentations of research results to the GRRB. In total, 51 people (11 women and 40 men) were interviewed: 27 harvesters, 19 elders, and 5 others involved in aspects of Porcupine caribou management. Research assistants Christine Firth and Effie Jane Snowshoe helped with many aspects of the work. Interviewees were identified and asked to participate with guidance from the TGRRC and the research assistants, as well as through snowball sampling. In Phase 1 of the research, which focused on documenting traditional rules for caribou harvesting, we aimed to interview elders in the community who were considered traditional ecological knowledge holders. In Phase 2, the aim was to interview active hunters over the age of 18, with the hope of having balanced numbers of younger hunters, middle-aged hunters, and elder hunters. In the end, the 27 harvesters interviewed in Phase 2 had this age distribution: ages 19–29 (seven), 30–39 (five), 40–49 (seven), 50–59 (six), 60–69 (one), and 70–79 (one).

Phase 1

Semi-directed interviews with 19 elders were carried out in Phase 1 of the research. We used the question: "What are the ways you respect caribou?" as the basis for the dialogue. Interviews were from one to two hours long. The interviews were not intended to form a comprehensive ethnographic record of rules, but rather aimed at identifying the critical elements of good behaviour toward caribou that elders felt were most important to pass on to future generations. Significant data saturation in themes was found after only a few interviews; in other words, most of the elders had very common perspectives and spoke rules in a very similar fashion. An elder verification workshop held three months after the completion of all the interviews revealed the same themes.

Phase 2

The results of the interviews with elders formed the basis for analyzing a second set of interviews carried out with 27 active hunters. A survey was used as the basis of these interviews. It consisted of 50 short-answer and multiple-choice questions, with 37 quantitative questions and 13 questions aimed at eliciting more qualitative information. In addition to general profile questions (e.g., age), interviewees were asked about the frequency of their harvesting activity in the past year and about their experiences in harvesting. We also asked the questions, "What kind of traditional practices do you think are important to remember in caribou harvesting?" and "What knowledge about caribou do you get from elders or other hunters?" and "Does this

TABLE 1. Porcupine caribou harvest data (number of caribou harvested each month) for Fort McPherson, Northwest Territories, 1995–2001 (Adapted from GRRB, 2009).

	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Total
1995–96	43	84	78	54	84	329	150	291	214	17	0	11	1355
1996–97	43	167	42	25	83	120	230	205	153	0	0	2	1070
1997–98	87	15	298	133	108	357	406	153	60	0	0	0	1617
1998–99	1	43	336	52	50	51	32	62	176	14	0	0	817
1999–00	11	135	106	16	6	30	14	3	31	20	0	0	372
2000–01	37	570	132	79	11	83	118	128	466	24	0	14	1662
Total	222	1014	992	359	342	970	950	842	1100	75	0	27	6893

information affect your harvesting practices?” Analysis for this paper involved comparing the Phase 2 survey results to the Phase 1 results. The intent was to discover patterns between the age of harvesters, their frequency of harvesting practice, and their knowledge of traditional rules for harvesting.

RESULTS

Elders’ Rules for Respecting Caribou

Elders described a diversity of rules for respecting caribou. Many appeared to emerge from the set of beliefs and worldview that caribou present themselves as gifts to respectful harvesters. One marker of this respect is not talking badly about caribou. For example, some elders were concerned that people should “not talk smart” or the caribou would not come around anymore.

Because it is what we eat, and that’s how much they have respect for caribou. My mother says you can’t laugh at bigger animals like caribou, moose. You can’t talk smart about them; you have to have respect.
(E. Kay, 2007)

Some stories suggest “taking only what you need” and “being happy with whatever the Creator gives you”: “Don’t be picky.” Being picky may also be seen as an act of devaluing caribou and disrespecting the hardships of previous generations. “People made a lot of effort to find caribou as they had to walk around on snowshoes looking for them, so they were happy with what they got” (A. Vittrekwa, 2007). This belief in “not being picky” was also interpreted in relation to government regulations and management board efforts to encourage harvesters to hunt only bulls. According to Alice Vittrekwa, preferential harvesting is seen as bad behaviour. Passing by the Creator’s gift of a caribou cow in the hopes of finding a bull is disrespectful.

And back then, you never heard the hunter say, “Oh I saw a bull moose, but I didn’t want bull. I want cow.” You didn’t hear stuff like that. Whatever came their way, they shot and they appreciated it.
(A. Vittrekwa, 2007)

At the same time, there were specific rules about not harvesting bulls during the fall rutting periods because of the problem of poor meat. “Just don’t bother it [a rutting bull] because I know there were some times when the young people didn’t know, and they shot bulls and all that is wasted...” (A. Vittrekwa, 2007). The idea of “not wasting” meat was also generally highlighted by most of the elders interviewed. Part of this idea stemmed from the similar principle of “take only what you need.” According to Emma Kay (2007), hunters must be careful not to take more animals than they can handle or carry. Women were particularly detailed and forthcoming about how to prepare and care for meat so it would not be wasted, as described in this story by Emma Kay:

And when they kill caribou, way back in our days? In the 40s, 50s, if our elders went out harvesting, they cut all the meat, and they even bring the skin home for their wives to tan. They clean it and then they bring it back to town. And wherever they kill caribou, you know, the blood? They said they cover it with snow too, and then they cover the guts, you know, the stomach? What they don’t eat...even the legs...[they] wouldn’t throw that away those days they collect it... They don’t throw anything away... Skin the feet and the guts and then they use that skin for—they make later something out of it too.
(E. Kay, 2007)

This principle of not wasting and using the entire animal is closely related to the principle of “share what you have” (so that it is not wasted) rather than throwing it away. The norms and practices of sharing can be highly varied; many elders, for example, are given organ meat and caribou heads. “I like [caribou] liver and I always get liver. Somebody is always giving me liver... So it is not going to waste” (E. Colin, 2007).

While many of these rules are generations old and deeply fixed in both oral traditions and practice, other kinds of rules are more recently constructed or adapted. For example, some rules relate to behaviour on and around the Dempster Highway, which was completed in the late 1970s. Recently, rules about skidoos have also been developed: “don’t chase caribou with skidoos” was among the most commonly spoken rules related to the road.

We never had skidoos those days [the past]. You know, they are just chasing them with skidoos. That's not good because they used to go by dog team and they walk after the caribou with snowshoes, you know. You don't see skidoo chasing them. It does something to the meat when they chase them around... It does something... to them when they are forever chasing them, and they shoot them.

(E. Colin, 2007)

These “new” rules may not be new at all but are arguably more recent adaptations. Given that many Gwich'in people systematically used mountain passes, crossing sites, and natural landscape or manmade corridors and corrals, the use of the road as a feature for harvesting may be interpreted as an adaptation of older practices. Although the use of snowmobiles is a relatively recent technological adaptation in harvesting in the Gwich'in region, the idea of not “chasing caribou” is more commonplace.

There was also some critical discussion about chasing or disturbing caribou—what level of chasing is acceptable—as some degree of chasing and disturbance is inevitable when harvesting.

The animals are smart too... What if a bunch of us went this way and people started chasing us with skidoo? So the animals know that, and they can take a different route. And that way, maybe we might not see caribou here. One year, we were getting caribou way past Eagle Plains. That's how far we had to go. And the only people I think that got caribou were the ones that got trucks. And the ones that don't have trucks or skidoos, it is too far for them. How can they go? And so, the young people, they think it is easier chasing, sure, it's easier to get caribou with skidoo, but they don't realize that the animals are smart too. They know, they get chased, so they could find another route, where we might have a long ways to go.

(A. Vittrekwa, 2007)

The stories about respecting caribou were similar in theme, form, and statements of rules. Many of the stories were structured around past experiences and observations. Some implied rather than explicitly stated prescriptions of good behaviour or avoidance of bad behaviour. Others were more explicit in speaking particular summary statements of “rules,” and there was consistency in the kinds of statements and words used. Elders gave these rules for respecting caribou:

- Don't laugh at or “talk smart” about animals.
- Don't shoot rutting bulls. Know/have knowledge/information about when the bulls are rutting and inedible so they are not shot and wasted.
- Don't leave wounded caribou behind.
- Let caribou cross the highway; the highway is closed when caribou are crossing.

- Take all the guts and parts home and clean up the site. You can use all of the parts, and leaving them on the side of the road is a problem.
- Share meat.
- Don't throw out meat or waste meat.
- Work with caribou meat immediately upon receiving it.
- Wait for each other when hunting.
- Don't hunt within the 500 m corridor on each side of the Dempster Highway.
- Don't chase caribou with skidoos.

Often the implications of not following rules were not explicitly defined. In some cases, however, the consequences of bad behaviour were clearly articulated. For example, chasing caribou was thought to result in a negative effect on the health of caribou, poorer tasting meat, or changes in migration.

Active Hunters' Rules

The research set out to determine to what extent traditional rules for harvesting were more or less known to active hunters in the community. We asked the hunters a question similar to the question asked of elders in Phase 1: “What are traditional rules for caribou harvesting?” Given that the rules are not written down and shared in a formal sense, it was hypothesized that there might be diversity in the content as well as the framing of rules by each interviewee. However, although numerous answers were given, most were very similar to rules shared by elders. The most common three rules related to using everything, taking only what is needed, and respecting caribou. The rules presented in Table 2 also outline elements of disrespectful harvesting behaviour by suggesting the rules that elders described during the Phase 1 interviews.

In Table 2, “hunt safely” refers to a group of rules relating to hunting on the road generally. The “Other” category includes those rules mentioned only once: “Don't hunt in the 500 metre corridor,” “Don't hunt cows,” “Leave shot injured meat for animals,” “Have communal versus individual hunts,” “Continue the harvest survey,” “Teach youth,” “Let the leaders pass,” “Use common sense,” “Use proper hunting techniques,” “Learn by watching,” “Avoid the rutting bulls and take younger males instead,” “Don't kill out of season,” “Don't shoot caribou for fun,” and “What I learned from my father.”

By interviewing harvesters aged 19 to 70, we hoped to determine whether age influenced knowledge of the rules. For ease of analysis, we created general age categories of young adult (age 19–32), adult (age 33–48) and older adult/elder (age 49–70) by organizing the 27 interviewees into three groups of nine. The youngest group of harvesters spoke a range of one to three rules, the middle group spoke one to four rules, and the older harvesters spoke two to five rules (Table 3). The number of rules spoken was positively correlated with age; as interviewees advanced in age, they spoke more rules. Although younger hunters seem to speak

TABLE 2. Harvester descriptions of rules for respecting caribou and proportions to other spoken rules.

Harvester descriptions of rules for respecting caribou	Number of times spoken by interviewees
Take and use everything	15
Take what you need	12
Hunt safely	12
Respect caribou	7
Use proper places to field dress meat	7
Reduce waste	6
Get wounded caribou	5
Prepare meat properly	3
No chasing with skidoos	2
Other	14

fewer rules, their responses nonetheless highlighted rules previously defined by elders.

Table 4 shows the results from the question “On average, how many times do you go hunting in the fall and how many times in the spring?” The number of trips was similar for all age groups, and half of all respondents hunt four to six times a year. Additional qualitative comments from harvesters (“depends on if we need caribou,” “depends on how far you need to walk,” “depends on where they are,” “when we need meat,” and “if lucky, once”) show that the number of harvests per year is only part of the picture: the number of trips can be somewhat affected by ecological conditions (“depends on where they are”) and socio-economic circumstances (“when we need meat”). The last comment about being lucky suggests that harvesters will continue to make hunting trips until they get what they need. Statistical analysis of the data found no significant correlation between either age or knowledge of the rules and harvest activity.

From the number of caribou harvested by hunters in a year, we calculated the average annual harvest per person as 12.9 caribou. By age group, the hunters aged 33–48 were the most active harvesters, with an average total annual harvest of 16.8 caribou per person, followed by the older harvesters aged 49–70 (12.3 caribou per person) and younger harvesters aged 19–32 (9.7 caribou per person). A comparison of these results with Table 4 shows that the middle age group (33–48) harvested the most caribou on average, but the number of hunting trips per year was in the same range for all age categories.

DISCUSSION

The Teetł'it Gwich'in hold a significant body of knowledge about caribou and caribou harvesting that has accumulated over many generations. As discussed earlier, only thin slices of this complexity of observation, experience, and belief may be passed on from one generation to the next. The speaking of rules for respecting caribou, like other kinds of naming practices (e.g., place-names), is a kind of shorthand that enables harvesters to relay a significant body of information about human-caribou relations in a form that is easily remembered and passed on to future generations (Berkes and Kislalioglu Berkes, 2009).

Debate and discussion about harvest practices during the recent period of caribou population decline has suggested that these rules are not being passed down. In some public forums and government reports, younger hunters have been described as indiscriminate and lacking a conservation ethic. Elders in this research seem to reiterate similar concerns that youth are limited in their knowledge and don't know many things about how their elders lived and hunted. Elder Ernest Vittrekwa said that many of the youth don't know about his extensive travels in the Richardson Mountains. “Now, young people see me—they don't know—they think I've been here all my life, here at 8 Mile. They don't know I've been all over. Alice, too, has been all over [the] mountains” (E. Vittrekwa, 2007). Younger generations of Gwich'in people who do not have these experiences will certainly have a more limited body of knowledge and skills for surviving on the land and harvesting than their elders. They may be little different from the elders, who also had to adapt to socio-economic and environmental stresses different from those faced by the generation who came before them. The situation may not be as grave as assumed, and persecuting younger generations as universally bad hunters is highly problematic; by doing so, leaders and wildlife managers may be alienating new generations of harvesters rather than integrating them into the system of wildlife management that is seen to be so important.

With the aim of unpacking simplistic assumptions that younger hunters have limited knowledge and skills for caribou harvesting, this paper explored whether age is a factor in Teetł'it Gwich'in caribou harvesters' knowledge of traditional rules for caribou harvesting. We determined that there was a relatively good match between the kinds of rules that were identified by active harvesters and those previously identified by elders as “traditional rules for respecting caribou.” Although the youngest hunters interviewed (19–32) spoke fewer rules and explained them slightly more simplistically, they easily identified and relayed their ideas about ways of respecting caribou in very similar fashion as their elders.

Continuum of Rule Making

The rules that have been spoken by elders suggest a continuum of understanding of human caribou relations over time. Some of this continuity seems to stem from

TABLE 3. Comparison of number of rules spoken by harvesters in three age categories.

Age category	Number of rules spoken				
	1	2	3	4	5
19–32	3	4	2	–	–
33–48	2	2	4	1	–
49–70	–	2	3	2	2

an understanding that people and caribou are intimately connected.

You know, many years ago, maybe weren't even born, way back, you know they say we used to be caribou? We changed with the caribou. Caribou used to be like us... and they say they changed. That's why they say when you kill caribou and you cut the legs off like that—right in here [points to inner mid-forearm], there's some meat—that is human meat. My grandmother showed us that. You cannot eat that. When you kill caribou, you work with that head—there is glands in there that is human glands, they say. I believe that.

(E. Kay, 2007)

The kinds of rules that are currently detailed by elders should not be viewed as historical anachronisms with little relevance to contemporary issues of harvesting. The fact that some of the rules highlighted by elders refer to recent management issues associated with the Dempster Highway suggests that the system of “traditional” rules has evolved according to both social and environmental conditions. While some rules may have originally developed in relation to past caribou harvesting technologies (such as caribou surrounds, used until the early 20th century, and the bow and arrow, used until 1840; Slobodin, 1981), they have clearly been adapted or continue to be relevant in more contemporary contexts. As an example, many “rules” are associated with the relatively recent shift to using motor vehicles and the Dempster Highway as a main caribou harvesting transportation method and the resulting changes in harvesting. Dempster Highway–related issues discussed by elders include safety and respect. Harvesting from the road concentrates hunters in the small area of the highway corridor, necessitating safety initiatives such as restricting harvesting to outside a 500 m corridor on both sides of the highway. Harvesting while using one's vehicle and the road as a “base of operations” can create issues around field dressing practices, in that frozen gut piles left by the road create a safety issue for highway drivers, as well as a respect issue (there is much cultural protocol around the how and the where of disposal of animal parts, as well as the use of animal parts left behind).

Heterogeneity of Rule Systems

This research found significant similarity in the kinds of rules for respecting caribou spoken by elders and by active

TABLE 4. Number of caribou hunts per harvester each year, by age group.

Number of caribou hunts per year	Age category			Total
	19–32	33–48	49–70	
Once	1	1	1	3
2–3	1	–	2	3
4–6	4	5	4	13
7–10	1	2	1	4
More than 10	1	1	1	3
Total	8¹	9	9	26

¹ One harvester did not give a quantitative reply.

hunters. However, this result does not mean that harvesters are homogenous in their perspective. There may be many subtle aspects of the ways in which these rules are understood and applied that were not documented through this research process and which require further study and contemplation. Fort McPherson, like many other Aboriginal communities, is heterogeneous and diverse; the residents come from many different family groups who historically lived apart from one another (Slobodin, 1981), each with its own ways of living in and with the environment, including caribou. It is therefore no surprise that some rules such as “don't be picky for caribou” and “don't chase with snowmobiles” are diversely interpreted. “No harvesting cows” seems to be another rule that is diversely interpreted. On the one hand, some harvesters say that harvesting cows is important, and being picky is disrespectful of the gift the caribou is giving of itself. On the other hand, others suggest that harvesting cows is not good, reasoning, as many biologists have, that killing a cow will limit the reproductive capacity of the herd. Further research on the ways in which rules are interpreted and followed would be useful. Of particular value would be further work on how these rules are adapted during different periods of the caribou cycle. As found in other research in the community, it may be that harvesters are more likely to follow certain rules during periods of scarcity but interpret these differently during periods of peak population (Parlee et al., 2006).

Wildlife management systems in northern Canada are also highly complex. In addition to the complex sets of regulations, guidelines, and protocols established formally by territorial governments and co-management boards, there are traditional systems of caribou management that include well-established rules or “ways to respect caribou” that stem from different kinds of beliefs.

CONCLUSIONS

Younger harvesters are often targeted in caribou management discussions as a source of “wrong” and “wasteful” hunting practices (Nesbitt and Adamczewski, 2009:16). These faults are attributed to the smaller amount of time they spend on the land and the increasing social disconnect between elders and youth. Links are thus made between

youth harvesting practices and caribou population decline, which is potentially dispiriting to youth already challenged in other areas of life. This focus on youth harvesting practice as wasteful and arising from a lack of knowledge about the correct way to hunt may be demoralizing to youth and may result in a lack of interest in participating in caribou and harvest management. Are these ideas about the harvest practices of youth justified? This paper explored the intergenerational understandings of the “rules” related to caribou harvesting with the Teetł'it Gwich'in of Fort McPherson. Comparisons of young harvesters' understandings of “what to do and not to do while caribou harvesting” with elders' statements on acceptable caribou harvesting methods reveal a shift in what is considered acceptable that is due mainly to changes in harvesting technologies and the concrete changes in behaviour that they imply. Accompanying these changes, however, is a solid base of respect as the fundamental basis of harvesting practice that is well understood by the younger generation. And despite the shift in acceptable practices, the research shows that younger harvesters and older hunters take similar numbers of hunting trips per year. Further research is needed to understand how knowledge of rules about respecting caribou are translated into behaviours and practices and how differing socio-economic situations, such as employment and health, affect harvesting practice.

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