Co-Management:
Managing Relationships, Not Resources

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Conclusions drawn from the body of co-management research generally agree that cultural diversity can enhance the pool of human resources from which management decisions are drawn. Based on the belief that group heterogeneity will generate a diverse set of problem-based solutions, co-management is being heralded as an emergent intellectual tradition to guide the stewardship of natural resources. However, research has yet to show under what conditions and at what cultural consequence indigenous representatives are able to express themselves. Nor has it been shown how cultural biases, including perceptions of the 'other,' influence group behavior. Based on research involving the Little Salmon Carmacks First Nation (Yukon Territory), this paper explores whether cultural differences either enhance or hinder the working-group effectiveness of resource co-management boards established under Canada's comprehensive land claims process. In doing so, we identify some of the 'hidden' conflicts that can occur when culturally diverse groups, with fundamentally different value systems and colonial histories, enter into a coordinated resource management process.

Key words: co-management, Yukon, cross-cultural relations

Introduction

Over the past several decades the management of natural resources has undergone considerable change. Once solely under the purview of state administrators, responsibility is now being shared increasingly with those who are most dependent on the continued availability of the resource(s). Referred to generally as co-management, these systems of joint authority have evolved from informal agreements made between local resource users and district managers into complex decision and policy-making bureaucracies now responsible for the management of lands, forests, fisheries, and wildlife resources in countries throughout the world. Viewed by some as a belated recognition of the knowledge and wisdom of indigenous peoples (Jull 2003), co-management is being heralded as an emergent intellectual tradition that can be used to guide the stewardship of the

world's natural resources into the future (Jentoft, Minde, and Nilsen 2003).

Beyond its role in land and resource management, co-management has also been endorsed as a potential means by which to resolve longstanding conflicts between indigenous peoples and state governments (e.g., Canada's Royal Commission on Aboriginal Peoples 1996). Inspired in part by the World Commission on Environment and Development (Brundtland 1987), co-management regimes are being introduced in countries throughout the world and are yielding considerable promise for indigenous communities who have long played a passive receiving role in rules and regulations (Jentoft 2003: 7). With a range of institutional authority, co-management regimes are not only changing the way in which lands and resources are being managed, but are also restructuring indigenous-state relations more broadly.

Despite the prominence that resource co-management now has, research pertaining to the formation and maintenance of these cross-cultural institutions has been approached in rather vague ways, more by description than by any practical approach to theory building (Carlsson and Berkes 2005). This theoretical oversight is surprising given the considerable multidisciplinary interest afforded to these arrangements over the past 30 years.[1] While conclusions drawn from this body of research generally agree that cultural diversity can enhance the pool of available human resources from which management decisions are drawn— perspective, values, knowledge, and insights—research has yet to show under what conditions and at what cultural consequence indigenous representatives are able to express themselves. Nor has it been shown how cultural biases, including perceptions of the 'other,' influence group behavior.

Because co-management has more to do with managing human relationships than resources per se, understanding the underlying cultural conditions by which these arrangements perform is critical to forecasting their ultimate success or failure. This cultural understanding necessarily includes the values and beliefs participants hold regarding social and ecological relationships, how they are prioritized and linked to each other, and the conflicts that often arise from their differences. Although the cultural variability found within co-management institutions precludes generalization, if we are to advance our understanding of the potential success or failure of co-management arrangements, aspects of cultural diversity must be taken into account. Thus an analysis of these institutional arrangements requires the inclusions of cultural factors that influence group cohesion.

In an effort to advance this understanding, this paper applies elements of cultural and organizational theory to an analysis of the Carmacks Renewable Resources Council (CRRC), in the Yukon Territory of Canada. Established under the terms of the Yukon Umbrella Final Agreement (UFA-1993), the CRRC has assumed administrative responsibility for a 7,800 km^2 co-management area. Represented equally by First Nation (3) and non-First Nation (3) community members, the CRRC is examined in order to assess the conditions by which cultural diversity either enhances or detracts from working group effectiveness. In doing so, we identify some of the 'hidden' conflicts that can occur when culturally diverse groups, with fundamentally different value systems and colonial histories, enter into a coordinated management process. By way of conclusion the authors argue that the ultimate success of the CRRC, and co-management regimes in general, depends on the participants' abilities to engage rather than subvert differences in knowledge and cultural experiences.

Co-Management in the Yukon Territory

In the Yukon Territory, the political organization of the Council of Yukon Indians (1973) resulted in the long negotiated settlement of the Yukon Umbrella Final Agreement (UFA-1993). As a political accord, the UFA sets out the ground rules by which the fourteen individual Yukon First Nations would negotiate their comprehensive land claims with the Federal government. To date, eight of the fourteen Yukon First Nations have concluded negotiations and implementation of their agreements are now underway, while four have recently agreed to terms, and two remain unresolved. Securing a wide range of self-governing responsibilities such as health and social service delivery, education, and economic development programs, Yukon First Nations have been awarded 41,595 km^2 (16,060 mi^2) of what is now referred to as settlement lands. Representing nearly nine percent of the Yukon's total land base, this territorial allocation includes resource management and land use planning responsibility.

In addition to the above provisions, the UFA also established a framework by which Renewable Resource Councils

(RRCs) would be created. Represented equally by six community members, three nominated by the First Nation and three by the Yukon Territorial Government (YTG), with an internally appointed chair, RRCs serve as community co-management boards designed to represent the collective interests of both First Nation and non-First Nation community members who reside within the respective traditional territory of the signatory First Nation. Created to provide community members with a more meaningful role in management and policy formation, the implementation of RRCs proved to be one of the more contentious issues of debate during the UFA negotiations. This was due largely to the reluctance of the Yukon Territorial government to devolve jurisdictional authority over non-settlement lands to the community level (Cameron and White 1995:30). While undergoing considerable debate during negotiations, the implementation of RRCs proved successful in large part to the persuasive argument made by both First Nation and non-First Nations representatives, that with greater authority being exercised at the local level, environmental management would occur more efficiently. By sharing relevant information regarding the management of traditional territories, it was argued that RRCs could incorporate the knowledge and values of community members into the decision-making process and would be better positioned to deal with the complexity of contemporary resource management issues. From a more pragmatic point of view, it was argued that RRCs would serve as a cost effective measure in that local residents are already in place to assume a greater role in management and regulatory responsibility, thereby helping to ensure local compliance to agreed-upon rules and regulations. In addition to these notable benefits, this form of co-management was seen as an institutional mechanism for cross-cultural communication that could help facilitate greater respect and cultural awareness among community members. This direct and unmediated interaction was considered necessary in order to mitigate many of the cultural differences that have long challenged effective collaboration in the past. Used together these arguments proved successful at advancing local efforts to legitimize community-based approaches to resource management in the Yukon (Natcher, Hickey, and Davis 2004).

Now serving as the principal institution for managing renewable natural resources on non-settlement lands, RRCs have secured administrative responsibility for the management of fish, wildlife, or any other renewable natural resource within the co-management areas. Although subject to the final approval of the Minister of Renewable Resources who can adopt, reject or modify local recommendations, decisions made by the RRCs are seldom overridden if they can demonstrate competence, credibility and effectiveness; although by whose criteria competence and credibility are measured is becoming a point of increasing contention. Nonetheless the form of local representation now practiced in the Yukon is consistent in many ways with a general trend in resource management that calls for more inclusive stakeholder participation and the democratization of decision-making procedures.

Despite the purported benefits of co-management, debates concerning the participatory effectiveness and social equity of these cross-cultural arrangements have emerged on both empirical and political grounds. For instance, while Maznevski (1994) suggests that ethnic diversity, as a source of inherent differences, provides groups with different kinds of information from which they could potentially benefit, Pelled (1996) has found that cultural plurality, as a source of visible diversity, can actually incite inter-group bias, leading to negative outcomes and management conflicts. Similarly, Blalock (1957) has argued that numeric increases in traditionally under-represented groups can result in heightened levels of discriminatory behavior; a response Yoder (1991) describes as representational 'backlash'. Taking a more critical view of co-management, Nadasdy (2003) and others (Howitt 2001; Stevenson 2004) have called into question the "co-management success story." Owing in part to the ideological structure by which co-management institutions generally function, it has been argued that First Nation representatives are being forced to participate in an institutional process that is in many ways culturally inappropriate. Rather than promoting socio-political equity, co-management has been criticized by some as furthering the hegemonic role of government. Owing to these contradictory findings it remains unclear as to whether the proportional representation of aboriginal peoples alone results in improved management outcomes or if co-management, as practiced today, represents an institutional structure that is at all compatible with aboriginal value systems.

In response to this uncertainty a number of analytical models have been developed in order to evaluate the institutional effectiveness of varying co-management arrangements. For example, in an effort to arrive at a generalized model of complete and incomplete co-management systems, Pinkerton (1989) has offered seven criteria for assessing the likelihood of co-management 'success.' Analyzed systematically, the use of these criteria allows generalizations to be made about the conditions that promote successful co-management agreements. More recently, Carlsson and Berkes (2005) suggest that because co-management regimes represent an iterative process of problem solving, analysis should address the function rather than the formal structure of co-management systems. Such an approach involves six steps, including: defining the social-ecological systems under focus; mapping the management tasks and problems to be solved; identifying the participants who are involved in problem-solving; analyzing cross-scale linkages; identifying features that contribute to capacity-building among participants; and finally the prescription of remedies.

While each of the above models have contributed to a better understanding of the operational factors that may influence the success or failure of co-management arrangements, they have proven limited thus far to account for the cultural variations present within these cross-cultural institutions, and how this cultural variance might influence management outcomes. While it is tempting to view co-management institutions as static constructs, removed from cultural influence, such an approach fails to consider the cross-cultural factors that influence group interaction. Because co-management arrangements, like all social systems, are governed by human behavior and anticipatory objectives, the cultural variability found within these institutions requires foremost consideration in the evaluation process. Although it is possible to examine co-management institutions objectively and without reference to values, for long-range solutions it is necessary to see these social systems as normative or moral processes (Bennett 1996). It is in this context that the present analysis has been framed.
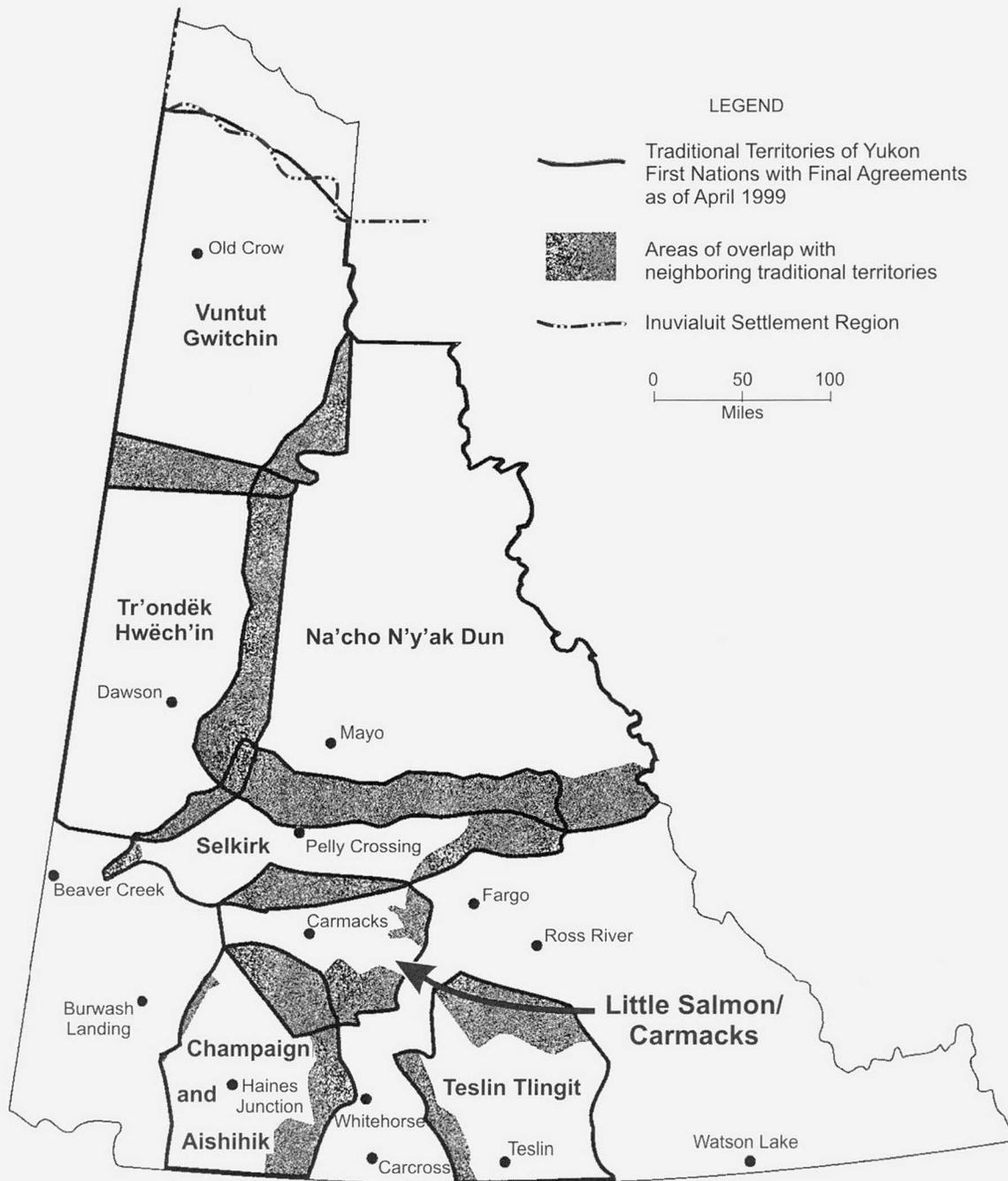
Research Setting

The community of Carmacks is located 180 km. (115 mi.) north of the Yukon's capital city of Whitehorse (see Figure 1). Located along the banks of the Yukon River, the present day site of Carmacks served traditionally as one of several seasonal residencies for the Tsawlnjk Dan, a Northern Tutchone Nation now known as the Little Salmon Carmacks First Nation (LSCFN). It was not until 1898, with the onslaught associated with the Klondike Gold Rush, that Carmacks became an important layover for thousands of non-aboriginal miners on their way north to the gold fields of Dawson City.

Despite this territorial intrusion, First Nation members remained relatively isolated and maintained a subsistence-based economy that drew predominantly from resources of the land. However, with the completion of the first stage of the Klondike Highway in 1950 the mobility patterns of First Nation members were significantly disrupted. With highway access, the community of Carmacks grew into a major service center for what had become a mineral-rich mining district. With new economic opportunities now available, together with the availability of health and social services, LSCFN members had in the latter half of the 20th century entered into a more sedentary community lifestyle. Although continuing to disperse during certain times of the year to take part in seasonal harvesting activities (i.e., spring waterfowl, summer fish camps, and fall moose camps) Carmacks now serves as a permanent residence for First Nation members.

The current population of Carmacks is approximately 461 residents, 300 of which are First Nation members. In terms of employment, 78 percent of all Carmacks residents over the age of 15 reported some involvement in the wage economy (Statistics Canada 1996). However, only 31 percent reported full time and year round employment. Most (40%) full time employment opportunities are found in government service, either at the Federal, territorial, or First Nation levels. Located in a mineral mining district, resource extraction industries also provide some employment, although such opportunities have become quite variable due to the current uncertainties associated with the Yukon mining industry. Other employment outlets include highway maintenance, tourism, guiding and outfitting, and other service related and 'cottage' industries. Significant variance exists between First Nation and non-First Nation involvement in wage labor. In fact, First Nation members suffer more than three times the

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Figure 1. Little Salmon Carmacks First Nation

LEGEND

— Traditional Territories of Yukon First Nations with Final Agreements as of April 1999

▨ Areas of overlap with neighboring traditional territories

—··—··→ Inuvialuit Settlement Region

0   50   100
|——————|——————|
       Miles

Old Crow

Vuntut Gwitchin

Tr'ondëk Hwëch'in

Na'cho N'y'ak Dun

Dawson

Mayo

Selkirk   Pelly Crossing

Beaver Creek

Fargo

Carmacks

Ross River

Little Salmon/ Carmacks

Burwash Landing

Champaign and Aishihik   Haines Junction

Teslin Tlingit

Whitehorse

Teslin

Watson Lake

Carcross

Source: Yukon Renewable Resources, 2000.

rate of unemployment (37%) than do their non-First Nation neighbors (11.6%). This discrepancy lends to a $12,528 medium personal income (MPI) for First Nation residents while the MPI for non-First Nation residents is $26,488. The general variability of wage earning opportunities in Carmacks has resulted in considerable transience within the local non-First Nation population. In fact, of the 161 non-First Nation residents living in Carmacks in 2001, only 112 residents had been living in the community five years earlier, 15 of whom came from outside of the Yukon Territory. Most non-First Nation

community members reside on the south bank of the Yukon River, directly opposite the First Nation settlement.

With the signing of the 1993 Yukon Umbrella Final Agreement, the basis by which all outstanding land claims were to be settled with Yukon First Nations was established. However, it was not until July 21, 1997, that the LSCFN agreed to terms with the Governments of Canada and the Yukon Territory for their specific Land Claims Agreement. With its signing, the LSCFN relinquished any future territorial claims against the Canadian Government. While agreeing to the extinguishment of Aboriginal Title to non-settlement lands, the LSCFN has maintained a rights-based interest in the management of those areas. These interests are now exercised through the Carmacks Renewable Resources Council (CRRC). As outlined in the agreement, appointments to the CRRC are for a duration of five years and are renewable per the continued support of the nominating body. While memberships on CRRC are non-salaried positions, remuneration for expenses accrued for travel and attendance at planning meetings is provided through a financial transfer agreement made annually from the Territorial government. The sole requirement for membership on the CRRC is that the nominees have lived within the traditional territory of the First Nation for at least one year immediately prior to their appointment and should have a familiarity with the co-management area. The non-First Nation members of the CRRC include the Chair who is a placer miner and has been a permanent resident of Carmacks for 20 years, an owner and operator of a big-game outfitting service who has been a Carmacks resident for 5 years, and a fisheries biologist who has been in residence since 1998 and who is also the only female representative on the council. With a range of skills and professional experience, the non-First Nation appointments are considered by the Yukon Territorial Government (their nominating body) as being fairly representative of community interests. The First Nation appointments are all male, ages 40 to 60 and are lifelong residents of Carmacks. While taking advantage of seasonal employment opportunities such as fire fighting and construction, the primary occupation of each of the First Nation representatives is trapping. In fact, their continued involvement in trapping and other 'bush' activities figured prominently in their appointment to the council by First Nation leadership where an intimate knowledge of the land was considered critical to making informed management decisions on the Nation's behalf.

Methodology

In reviewing methodologies that have been used elsewhere to assess the effects of cross-cultural differences on working group relations, little consensus could be found as to how this complex issue is best approached methodologically. However, a point of convergence exists in the work of Ostrom (1990, 1992, 1998) and Thomas, Ravlin, and Wallace (1994), who suggest that an effective starting point is to first identify the cultural attributes of group members. These attributes may include religious beliefs and practices, traditions and customs, sources of livelihood, the degree of social, cultural, economic and residential heterogeneity or homogeneity, asset ownership, and the level of integration into the polity. Together these attributes organize one's definition of 'self' among individuals who share a historical experience in a common geographical location. Because each of these attributes has cognitive and motivational aspects, they can also be identified as potential catalysts that affect management actions and outcomes.

In order to assess the cultural attributes of the CRRC, as well as determine how these attributes might be affecting management activities, a number of research instruments were employed. These methods included participant and non-participant observation, community surveys, informal interviews, and content analysis. With the intentions of the research made explicit, structured observations took place during several formal and informal gatherings where CRRC members were engaged in management activities. On average the CRRC meets between 18 to 21 times per year or as management issues warrant. For the most part our involvement was that of non-participants and observations took place unobtrusively during: CRRC planning meetings; inter-governmental planning workshops; First Nation General Assemblies; Northern Tutchone May Gathering Celebrations; and a range of public forums used to elicit community involvement in the land management process. While our involvement in CRRC planning meetings and community assemblies was largely non-participatory, on occasion our opinions were elicited for a broader or more comparative perspective on resource management issues. In other cases we were called upon directly to assist the CRRC in their management efforts. For example, in December of 2003, Natcher was asked to develop a survey on behalf of the CRRC that would address: (1) management issues that are of most concern to community members; (2) whether existing land management programs are considered relevant to community needs; (3) how best to facilitate communication between community members and the CRRC; and (4) how or if a balance can be struck between resource development and the traditional land use activities of First Nation members (Natcher 2003). While the results of these 63 completed surveys proved informative to the management efforts of the CRRC, they also demonstrated a range of opinions that are held by First Nation and non-First Nation members regarding land management, and in many ways reinforced the necessity of this analysis.

In addition to public observations and surveys, informal interviews were conducted with CRRC representatives. These discussions explored the concept of resource management, individual perceptions of the environment and 'our' place in it, and the role and responsibility of the CRRC. From these discussions an understanding was gained on the heterogeneity of group expectations and the extent to which CRRC representatives have similar and divergent perspectives concerning the management process and its objectives. Cognizant of the statistically limited population of the

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CRRC, informal interviews were also conducted with First Nation staff, Yukon government biologists, other government agency personnel, and First Nation elders. In addition to these informal/semi-structured interviews, five years of involvement with the Carmacks community has allowed for a considerable amount of interaction with community members during community potlucks, celebrations, school activities, and a host of unanticipated and informal encounters. This social interaction has allowed for a deeper understanding of the dynamics of the CRRC as well as the general relationship between First Nation and non-First Nation community members. As such this analysis benefits from a relatively long-term engagement with community members and CRRC representatives.

Last, because the written word serves as an evidentiary source of individual and social processes, a content analysis of Chapter 16 of the Little Salmon Carmacks Final Agreement was conducted. Setting out the parameters by which the CRRC is to function, Chapter 16 represents a potential source of predictive validity to the extent in which its contents correspond with the actions and behaviors of CRRC members. By systematically and objectively identifying characteristics found within the text—underlying attitudes, biases, or repeating themes—insight was gained on the intent of Chapter 16 as well as on those who drafted it. Together these methods have proven effective at measuring the social proximity of CRRC members and the transitivity of their social interaction. Thus by identifying the cultural variance found within CRRC, we have been able to sharpen the distinctions between culture and organizational fit.

Findings

One of the central premises supporting co-management is the belief that by ensuring the equal representation of traditionally under-represented groups, management performance will ultimately be enhanced. This notion is based on the belief that group heterogeneity will generate a diverse set of problem-based solutions, leading to creative group discussions, and innovative management outcomes. Notwithstanding the potential for creative problem solving, the cultural distance that currently exists between CRRC members represents a significant obstacle to successful intercultural collaboration. Defined here as the extent to which the norms and values of group members differ because of distinct cultural backgrounds, the cultural distance between CRRC members has in fact proven to be a formidable obstacle to reaching consensus on management issues. Foremost among these differences are the perceptual differences concerning the environment and 'our' place in it.

To non-First Nation representatives, their primary role on the CRRC is to protect and allocate wildlife resources between competing interests. Adhering to a utilitarian worldview, non-First Nation representatives feel that uncertainty, either ecological or social, can be overcome through effective planning. Mediating their relationship to the environment through resource inventories, wildlife assessments, management programs, policy initiatives, and administrative procedures, non-First Nation representatives remain distinctively removed from the environment. The result is a centralized approach to management that compartmentalizes individual categories of the environment (i.e., fisheries, wildlife, and forests). This ideological position is further reflected in Chapter 16 of the land claims agreement, where the CRRC has been given the mandate to make recommendations concerning: the anticipated harvest of moose and woodland caribou (provision 16.6.10.12); the management of fur-bearing species (provision 16.6.10.7); the content of wildlife management plans, including harvesting plans and total allowable harvests (provision 16.6.10.1); and the allocation and harvest of commercial salmon (provision 16.6.10.3) (Minister of Indian Affairs and Northern Development, 1998). Supporting each of these provisions is a fundamental ideology that remains firmly grounded in the western intellectual tradition.

In contrast, the relationship that First Nation representatives share with the environment is one manifestly bound in shared norms and customs. Mediated through a form of traditional law referred to locally as Doo'Li, First Nation members adhere to a moral system that is used to govern one's relationship with the environment. Based on reciprocity and exchange, this moral conception of the environment is articulated through rules and codes of conduct that remain grounded in Northern Tutchone culture. Rather than an overt form of environmental management, Doo'Li is a means by which social relationships, both human and non-human, are maintained and respected. Although challenged by a century of colonial institutions—governance, health, education—First Nation members continue to observe many of the traditional laws that govern their relationship to the land.

Because perceptions of the environment are first and foremost cultural constructs, it may be overly optimistic to assume that CRRC members who, having been socialized into their own cultural systems, could balance and articulate two distinct ideologies that are in many ways based on contradictory precepts (Lavoie, 2001). Nonetheless, by failing to share a common understanding of the environment, reaching consensus on management issues has proven to be a formidable task. These differences, and the conflicts that often arise from them have become particularly apparent during fish and wildlife planning meetings when the council addresses such controversial issue as commercial game-ranching (bison), wildlife introduction programs (elk), and the implementation of catch-and-release fishing policies. The latter, having been addressed elsewhere (e.g., Twitchell, 2001; Lyman, 2002), represents an illustrative example of how conflicting values can often impede effective management despite the best intentions of all those involved.

For the CRRC, catch-and-release has been an issue of contention since the council's first formation. This issue arose most recently during a Fish and Wildlife Planning Workshop (spring 2004) when community members expressed concerns that road-accessible lakes near Carmacks were being over fished by summer tourists traveling the Alaska Highway. Over fishing, coupled with the potential for confrontation between

local residents and summer tourists, resulted in calls for some type of management action to be implemented by the CRRC. After discussing several options it was once again suggested that all road-accessible lakes within the traditional territory be designated as catch-and-release fisheries only. This would mean that all fish caught would have to be released unharmed immediately after landing. Through such a regulatory designation it was felt that fishing pressure would be reduced which would allow fish stocks to rebound and would minimize potential conflicts. Several community members who were in attendance that day, including the non-First Nation CRRC representatives supported this suggestion. For the non-First Nation representatives the debate concerning catch-and-release centered around two related positions—one being biological and the other financial.

From a biological point of view, the issue of catch-and-release was a simple matter of reproduction and growth. That is, by allowing a sufficient number of fish to reach spawning age, the overall productivity of the fishery would ultimately be enhanced. Based on formulated models of reproduction and growth, it was argued that by managing local lakes as catch-and-release, the fishery would become more productive which in turn would enhance the fishing experience for both local residents and summer tourists. This in turn would enable Carmacks businesses to capitalize on sport fishers from southern markets (Canada and the United States) who would be interested in coming to the Yukon for a unique fishing and outdoor recreational experience. This position was endorsed by a local lodge owner who noted that they only permit their guests to keep 'trophies' and all other fish must be released unharmed.

Notwithstanding the rationality of these positions, First Nation representatives reacted quite strongly to any suggestion that the local fishery be managed for catch-and-release. Rather than a simple matter of reproduction and growth, or an opportunity for economic development, First Nation representatives saw this recommendation as a cultural affront. Believing that non-human entities (in this case fish) share a moral conception with humans, fishing for sport conflicts directly with the way in which First Nation members see the world. In fact, First Nation members continue to observe specific patterns of social behavior to help ensure this relationship is maintained. Some of these norms (Doo'li) include: never touching the eyes of fish; disposing of fishnets by burning if an otter is snared; never putting fish in a dry pot and pouring water over them; prohibiting children from stepping over fishnets; prohibiting the shooting of bears near spawning grounds; always leaving some fish for the bears, eagles and other animals, and above all to treat fish with respect. Representing symbolic gestures, observing these Doo'Li are required for long-term relational sustainability. By allowing lakes within their traditional territory to be designated as catch-and-release, First Nation representatives were concerned that such an action would jeopardize the relationship they share with the sentient world. Of equal concern to First Nation members was that by adopting such

management strategies, over time First Nation youth may come to view this behavior as acceptable and perhaps even founded on Northern Tutchone values. Similar arguments have been made by First Nation representatives in their opposition to commercial game-farming in that such behavior places at risk the relationship First Nation members have long shared with the non-human world. However, because CRRC members perceive the environment in fundamentally different ways – one being benevolent and the other having sentient qualities – consensus among members is often an untenable goal. In these situations both First Nation and non-First Nation representatives have had considerable difficulty accepting the position of the other given the significant differences in their values and cultural experiences. Thus despite continued debate the issue of catch-and-release has gone unresolved and remains a point of contention today—with each being left to believe that their course action is best for the sustainability of the fishery. It is this ongoing conflict, based largely on divergent value systems, that has fundamentally affected council members' capacity for cooperation and has in many ways limited the possibilities for equitable exchange among representatives.

Despite such obstacles some advocates of co-management argue that points of contention are necessary to facilitate creative problem solving. When conflicts occur, points of contention can be negotiated and resolved through a process of joint inquiry (Argyris and Shon 1978). While conceptually promising, simply allowing for multiple perspectives in the management process will fail to reach the desired goals unless fundamental changes occur in the relationships between group members, particularly in relation to status and power differentials. This is particularly true in the case of CRRC, where the distribution of power is central to how individuals think, feel, behave, and react to others in the group. This in turn bears directly on how management issues are approached and how outcomes are ultimately derived.

To Foucault (1972) power represents the means by which individuals determine the behavior of others. This includes the communicative aspect of power where procedures of exclusion are used to prohibit the content and performance of speech (Engelstad 2001:17). While the articulation of power can involve the control of financial, institutional, and political resources, for the CRRC this more often involves the determination of whose knowledge is of most value to the management process and how such knowledge is or is not used in decision-making. This includes the representation of reality and the particular ways of legitimizing and delegitimizing systems of knowing. Owing to the structure and formal organization of the CRRC, non-First Nation members tend to define the expectations and norms by which management activities are conducted. This form of power produces a discourse of 'truth' that subjugates the knowledge and experiences of First Nation members (Diaw and Kusumanto, 2005). Because the knowledge held by First Nation representatives' lacks written codification, the contributions (knowledge, experience, insights) of First Nation representatives are not

easily packaged or transferred through formal procedural channels. From a participatory perspective this often results in the muting of First Nation representatives because their knowledge and experiences do not conform to the conceptual categories of non-First Nation representatives. When First Nation members do make recommendations based on prior experiences, their contributions are often treated as anecdotal accounts that, while perhaps interesting, have little relevance to the contemporary management process. Describing a similar situation involving the coastal Sami and Norwegian fisheries managers, Eythorsson (2003) explains how the relational aspects between ethnicity and power have rendered Sami knowledge irrelevant in the management process. Because ethnicity and power are related directly to the visibility of knowledge and its holder, the application of indigenous knowledge to the management process is most often subjugated against the western ontologies. Owing to these conditions, the CRRC has to a large extent failed to capitalize on the cultural experiences of group members and at best has expressed mixed messages about the degree to which the contributions of group members are actually valued.

Discussion

Despite the differences that exist between CRRC members, it is important to note that a shared commitment exists within the CRRC to create an effective management regime for the co-management area. In fact, it was for this very reason that this research was initiated. Thus in order to help enhance the management efforts of the CRRC, it was important that we find a way to articulate our observations in a manner that would be accessible to council representatives. To do so, Douglas' (1982) typological model of social domains was used as an impressionistic exercise to demonstrate the boundaries that exist between CRRC members. Briefly, Douglas has argued that there are four types of relatively stable social domains that are associated with a distinctive cultural bias, or a way of relating to the natural, supernatural, and social worlds. Each of these domains represent a different cultural bias where blame, opportunity, risk, nature, and human agency are all conceived differently, thus representing differences in personal ideology. These four domains represent social configurations that are associated with distinctive worldviews that include fatalist, bureaucratic, individualistic, and collectivist cultures. Used in numerous social science contexts, including morality (Shweder 1982), cognitive differentiation (Witkin and Berry 1975), cultural patterns (Hsu 1983) and values (Hofstede 1980), these four cultural domains can be linked to specific patterns of social behavior.

In general there is a tendency to find more individualistic themes among western cultures and more collectivist themes among indigenous or traditional cultures (Triandis 1993). These differences are often reflected in the way in which the two groups deal with social situations—collectivists valuing in-group harmony and individualists accepting a certain degree of confrontation in their dealings with others. With an emphasis on 'self,' individualists can be characterized as self-reliant and competitive. Valuing personal autonomy, their primary commitments are to themselves (Triandis 1993: 177). In contrast, collectivists tend to be more allocentric and expect social relationships to be more positive and non-confrontational. As opposed to individualists, where the organizing theme is the autonomous individual, the centrality of collectivist behavior is the family or clan (Triandis, 1993: 156).

Based on our observations, non-First Nation representatives demonstrate cultural tendencies consistent with individualistic behavior. As a consequence of cultural heterogeneity, relative affluence, social and geographical mobility, the relationships non-First Nation representatives have with First Nation members remains ambiguous, largely provisional, and under continuous negotiation. With little to no long-term social attachment, non-First Nation representatives tend to emphasize risk taking in the pursuit of short-term goals. This includes an emphasis on economic development over the cultural consequences that might result from those decisions.

In contrast, First Nation representatives maintain strong emotional ties with each other, feel bonded with other First Nation representatives, and share common and intergenerational goals with family, clan and Nation. This collectivist behavior is further reflected in the preference among First Nation representatives to avoid public conflict and in the choices of social equity in decisions concerning resource allocation. That said it would be misleading to suggest that First Nation members represent some homogenous social entity. On the contrary, like all communities there exists a range of ideological positions that are held by First Nation members (Natcher and Hickey 2002). However, in terms of the land, and their continued relationship with it, the collective welfare of the First Nation takes precedence over any individual interests that might emerge. A useful metaphor is that of the Seventh Generation, in that any decision concerning the environment must not be destructive, and must ensure the viability of the land and resources for Seven Generations into the future.

While neither collectivist nor individualist cultures have proven more successful than the other in managing resources, research has shown that when management institutions fail to develop a collective or group identity their ability to resolve conflict is often limited. In fact Ostrom (1992:348) maintains that any arrangement that fails to create a sense of group identity among members will in the long-run fail to be effective. According to Cox (1993) group identity will form when members come to share certain worldviews, norms, values, and socio-cultural heritage. These cultural patterns are then shared through communication styles, codes of conduct, rules, and shared meanings, which may or may not be recognized by others outside the group (Alderfer and Smith 1982). Although group identity is socially constructed and thus dynamic, Douglas (1982) argues that it is the measure of shared experience that ultimately ties a group together.

Thus in cases where group identity is attained, individuals not only spend time together, but more importantly, assign value to interacting with others in the group. Conversely, when interaction is minimal, as well as optional rather than normative, cohesion within the group will be limited.

While the CRRC currently lacks the above criteria, this does not preclude the formation of a group identity in the future. Rather, group identity can still be created through cooperation and a shared commitment where members agree on rules that they consider to be fair and effective for solving specific problems. Through a shared and agreed upon commitment, individuals can create a group identity where collective interests supercede individual desires. In this way personal identification within the group may encourage CRRC representatives to prioritize collective interests over those of the individual. If accomplished, a sense of obligation to live up to the standards and expectations of the group can be created (DeCremer and van Vugt 1998:3). This group identity will then be reinforced each time CRRC members place the collective welfare above their own self-interests. If a sufficient level of trust can be established between CRRC members, agreements and personal promises can be made that can alter an individual's reputation as someone interested only in personal gain, thereby making reciprocity an even more beneficial management strategy.

That said, forming a group identity among CRRC members will be no easy task nor happen overnight. Because CRRC members have been socialized into using specific cultural patterns, for example individualistic elements, switching to collectivist behavior will require the suppression of socialized tendencies. It is important to remember that co-management arrangements can only support new relationships: it is the level of personal engagement and trust that ultimately make the benefits of co-management actually materialize (Pinkerton 1989:8). Therefore, if group members fail to legitimatize the contributions of others—including knowledge and experience that is linked to their cultural identity—its is unlikely that members will feel committed to the process and may withdraw from social interaction. However, if members feel their contributions are valued by others in the group, a heightened sense of group identity can be created which can then lead to enhanced social learning and trust, both of which are fundamental to the success of co-management arrangements.

Conclusion

In this analysis we set out to identify how the cultural distance that exists between CRRC representatives either enhances or detracts from working-group effectiveness. By identifying elements of cultural diversity that may be influencing the management efforts of the CRRC, it was hoped that a more equitable relationship between CRRC members could ultimately be reached. Further, by identifying the cultural biases of council members, we could better evaluate the success or failure of the CRRC over time. While the formation

of the CRRC holds promise for constructive engagement, we have found that historical and continuing conflicts, based largely on cultural differences and colonial histories, continue to limit the overall effectiveness of the CRRC and equitable collaboration has yet to be achieved. Having been advocated on grounds of efficiency and socio-political equity, co-management in the Yukon was heralded as an institutional process by which First Nations could be empowered through their equitable representation in the management process. Despite this reorientation, co-management arrangements continue to function within complex socio-political environments where the potential for conflict is high (Pinkerton 1989). As shown above, many of these conflicts are a result of cultural differences, for it is culture that forms perceptions, guides group behavior, and ultimately implements management decisions. It now seems clear that the ultimate success of the CRRC will depend on members' ability to engage rather than subvert differences in knowledge and cultural experiences. Because cooperation and communication are fundamental to the success of co-management arrangements, managing the multicultural interaction between CRRC members will be an issue of primary importance. However, by failing to manage group interaction effectively, it is likely that intergroup tension, competitiveness, and distrust will result in the perpetuation of historical conflicts thereby impeding future management efforts.

In research such as this, which attempts to understand the significance of cultural diversity in resource management institutions, a cultural perspective has proven particularly useful. It has allowed perceptions of the environment, and our place in it, to be understood as corresponding differences in social organization. Having both theoretical and practical advantages, this approach has enabled us to measure the social proximity among CRRC members and to examine the transitivity of their social interaction. Used in this context, existing premises supporting co-management have been challenged and new insights have emerged. While situated within a specific case-study, we have drawn from existing theory in order to extract possible generalizations about cross-cultural performance in resource management in a way that can lead to positive change. Representing a hallmark of anthropological praxis, these new insights are now being used to promote positive change within the CRRC in a way that can lead to more equitable and sustainable approaches to cross-cultural resource management in the future.

Notes

[1] For instance, the comprehensive Bibliography of Common-Pool Resources at the University of Indiana Bloomington contains thousands of references that address resource co-management.

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