

Mediating constructivism, nature and dissonant land use values: The case of northwest Saskatchewan Métis

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Abstract

The basis of environmental-resource conflicts is often attributable to heterogeneous values systems between user groups that share particular landscapes and accompanying resources. A strong case can be made for the construction of these values through a dialectic between the physical landscape and lived experiences within that landscape i.e. environmental values as hybrids of social constructivism and real material environments. Using the benefits of an 'artefactual constructivism' epistemology we highlight the land use and value conflicts between two cultural groups with differing environmental values: state-corporate forest managers and Métis Aboriginal groups in Saskatchewan province, Canada. This paper highlights the value struggle between these groups over the same landscape and examines the impact on Métis traditional land uses, the resulting land management paradigm based on the dominant value system and the detrimental outcome of this power struggle to effect landscape change has had on traditional land users like the Métis.

Keywords: Métis, forestry, Northwest Saskatchewan, land-use conflict, mediated realism-constructivism.

Introduction

Conflicts between Métis Aboriginal communities and state and corporate forest management agents in Northwest Saskatchewan, Canada, are representative of many land-use conflicts between Aboriginal people and proponents of extractive resource industries. The Métis are one of Canada's distinct and legally entitled aboriginal groups; descendants of intermarriages between First Nation peoples and European settlers. They have a history of reliance on local ecosystems

for their livelihood, and their culture has been shaped to a significant extent by this relationship (Shore and Barkwell 1997). Since 1990, conflicts over regional forests have intensified in response to a growing forestry industry presence, and the predominance of state and corporate interests in decisions-making, who tend to prioritize commercialization potential over traditional use values (Adamowicz et al. 2004; Beckley and Korber 1996). Many Métis take issue with this value system, and with the limited influence and benefit that they feel they have been granted in forest management.

This study highlights not only the disconcerting perpetuation of these land use conflicts, but also provides fertile ground for advancing our conceptual understanding of conflicts over nature values. Based on extensive fieldwork, the aim of this paper is to elicit how different knowledges and values of nature within and between cultures contribute to conflict on multiple levels, in the context of a narrative analysis of conflicts over forest resources in northwestern Saskatchewan from a Métis perspective, a cultural group that has received less press regarding land use struggles than other Aboriginal groups. While the topic of Aboriginal land use problems in the face industrial modernity is not novel, the fact that these conflicts persist after decades of critical analysis is concerning. This paper adopts a mediated realism-constructivism analytical approach introduced by Sutton (2004), called 'artefactual constructivism.' As such an approach elucidates, conflicts can emerge in response to rapid changes in ecosystem services that threaten livelihoods of certain groups, but the outcomes of such conflicts are heavily influenced by incongruent values systems held by different groups, and the distribution of decision-making power among those groups. We first summarize briefly the disciplinary standoff between realist and constructivist epistemologies that is pervasive in the social sciences, and more recent at-

tempts at reconciliation. We then present a narrative analysis of the Métis perspective on local land use values and activities.

‘Artefactual-constructivism’ as analytical lens

“What is beyond our own skin actually exists. But the ‘environment’ is largely what we make of it, with all the ambiguities inherent in the word *make*” (Simmons 1993, 3).

The longstanding debate between social constructivists and realists regarding society’s relations with ‘nature’ persists (see 2003; Proctor 1998; Rockmore 2005; Soper 1995), and is an important epistemic nexus for scholars of environmental social science.

Stronger forms of constructivism view nature as a set of social ideas through which nature is reproduced subjectively through the lens of the interpreter (Stoddart 2005). A constructivist view of nature is thus a subjectively mediated one; the interpretive capacities of social agents are limited by the agent’s partial, values-based perspective (Sutton 2004). As such, the role of the physical landscape is eschewed; the natural world in its material state is of little conceptual interest or empirical consequence. Grieder and Garkovich (1994, 2) elaborate, “...landscapes are reflections of cultural identities, which are about us, rather than the natural environment”; and are thus subject to multiple symbolic meanings.

Realists, in contrast, accord analytical primacy to the material and presumably objective features of social-ecological relations. Regardless of our interpretational limitations, there is a material-ecological substructure inherent to ‘nature’ that is primary (Stoddart 2005; Sutton 2004), and “humans are not free to construct nature just as they please” (Martell 1994 in Sutton 2004, 66). The “real thing” has a hole in the ozone layer, and “...an exclusive emphasis on discourse and signification can very readily appear evasive of ecological realities and irrelevant to the task of addressing them” (Soper 1995, 8).

Recent scholarship critiques *both* perspectives, due to a mutual ascription to anthropocentrism (Curry 2003), and to the reductionistic tendencies implicit in each (one socially, the other materially) (Entrikin 1996). Humans interact with their environments in reciprocal ways, after all, and knowledge, values and ethics develop out of a dialectic between particular social groups and landscapes, through both material and immaterial interactions (Evanoff 2005). Humans both constitute and are constituted by the natural and social environments they inhabit; constructed and material realities intersect; and the perceiver and perceived are interdependent (Curry 2003). Constructions of nature, in other words, can be best understood contextually, through tactile (material) spaces (Carolan 2006; Macnaghten and Urry 1998). When

the material characteristics of regional ecosystems are considered in conjunction with lived experiences and the constructed perceptions of the ‘nature’ of that space, the inter-relationship between the social constructions of nature and the real material nature is revealed (Carolan 2006; Curry 2003; Macnaghten and Urry 1998). In his study of “senses of place” espoused by northern Wisconsin residents, for example, Stedman (2003, 671) concludes, “although social constructions are important, they hardly arise out of thin air: the local environment sets bounds and gives form to constructions.”

Sutton’s (2004) ‘artefactual constructivism,’ referring to the means by which experiences with the material environment influence the construction of values (and knowledge) of nature, appears especially well-suited to operationalization of this mediated constructivism/realism framework. Sutton (2004) describes the means by which physical landscape attributes are transformed into social symbols through ‘particular embedded social practices’ (see also Grieder and Garkovich 1994). Two of these practices are particularly relevant to empirical examination: *discourse* — how people speak of and write about nature; and *embodiment* — the way people sense or experience nature (Sutton 2004).

Difficulties in empirical examination of such concepts result from the fact that such interactions often appear quite subtle and latent to the casual observer. Political conflicts over ecosystem services, however, provide a useful lens in which these embedded social practices are expressed (Stoddart 2005). Contests between social constructions of nature cannot be understood adequately, however, without attention to the role of power in molding the formation and articulation of ecological values and by consequence land use practices, an element that has received scant attention in this body of scholarship.

Métis Land Use and Historical Culture-Nature Relationships

Historic traditional land use (TLU) and harvest of wild-products by Métis in Canada is well documented, as is the influence of these practices on Métis culture (Burley et al. 1992; MacDougal 2006; Pelletier 1974; Pannekoek 1998; Sprenger 1978), a critical inter-relationship that continues to predominate in Métis communities in northwest Saskatchewan (Adamowicz et al. 2004; Tobias et al. 1994). Traditional land uses are considered pivotal to community and cultural health, and have fostered environmental stewardship (Shore and Barkwell 1997). Rapid changes to Métis land use activities in northwest Saskatchewan have occurred in recent years, however, due to the growing prioritization of industrial forestry in regional land management planning (Adamowicz et al. 2004; Dosman et al 2001; Haener et al.

2001). Saskatchewan Environment and Resource Management (SERM) and the local forest management corporation — the two bodies with direct authority over land-use decision-making in the region — employ a “co-management approach” which stipulates the need for consultation with local communities. Both have mandated support for different forest values, including traditional land uses, through integrated land use planning (Adamowicz et al. 2004; SERM website). This is in accordance with the 1995 Saskatchewan Long-Term Integrated Forest Resource Management Plan, which also acknowledges the value of community involvement and local knowledge in sustainable forest management (Saskatchewan Govt. 1995). Despite stated management goals, logging operations have imposed significant changes on local landscapes with direct consequences for wildlife harvests, trapping, and other TLUs (Dosman et al. 2001; Morton et al. 1994). Subsequent declines in access to traditional land-bases and their products have been acute sources of concern among the Métis (Poelzer and Poelzer 1986).

These events pose the following questions with relevance to scholarship on socio-ecological relations, and to Métis efforts to protect their rights: 1) How do Métis experiences with and embodiments of nature influence their values? 2) How are differences between the values systems held by the Métis and by forest industry proponents reflected in current conflicts? And 3) what are the implications for social wellbeing of the Métis, and the ecological wellbeing of their traditional territory?

Data and Methods

Data were derived from 66 semi-structured interviews, conducted by university researchers in the summers of 2005 and 2006, in eight predominantly Métis communities in Northwest Saskatchewan. All eight communities are within or adjacent to the 3.3 million hectare Forest Management Agreement area of one industrial forestry company. Researchers targeted Métis participants with direct land use experience, such as trappers, hunters, commercial fisherman, guides, loggers or people who harvest medicinal or food plants regularly. Interviews consisted of twelve primary questions as well as number of probes. However, certain questions pertaining to historic and current use of forest products, activities on the land base and participants views on forestry policies and local involvement in management decisions, gleaned most of the information used in this study. Two of the most fruitful questions included “Has your use of the forest changed in the past decade? If so, how? If yes, you have experienced changes, how do you explain the changes of your use of the forest?” and “How have you attempted to address your concerns, either about the health of the forest, or about

restrictions on your access to the forest? How effective were these efforts?”

Initial interview respondents were purposively chosen by community liaisons, and subsequent interviewees were identified through the use of a snowball technique, whereby participants assist in identifying further interview candidates. Purposive sampling aids in identifying a broad spectrum of respondents, ensuring breadth in age, gender and experience relevant to the research topic (Marshall and Rossman 1999). Nonetheless, some participants may have been more or less divulging than others, and thus researchers went to great lengths to validate findings through cross referencing and triangulation of interview results. Interview data was coded thematically under an initial set of themes pertaining to the research questions, and coding was then expanded to capture themes that emerged from the data.

The Métis and their artefactual values for nature

Constitution of value through experience

Social constructions of nature, as expressed, for example, in attachment and sense of place, are strongly influenced by the activities (e.g. hunting) that are enabled by that landscape’s physical attributes (Stedman 2003). Macnaghten and Urry (1998) use the term ‘taskspace’ to capture this embodiment of social character and suite of activities in a physical landscape, highlighting the role of social time, history and experiential activity as important elements of socio-environmental values. The tactility of the local environment combined with the lived experience and ‘muscular memory’ emanating from land-use activity lend themselves to the development of particular meanings of nature (Sutton 2004).

Many interviewees’ narratives emphasize how values toward the forest are *expressed* through material practices. One respondent captured this sentiment when she stated that people who lived off the land were the best stewards, but emphasized that “You’d have to live in the bush to experience what it’s got out there.” Cultural interaction with the land plays an important role in nature values, with 50/66 interviews making reference to Métis cultural relationships with the land. Traditional food harvest, recreation and cultural/spiritual activities were overwhelmingly common amongst interview participants. Statements referring to how activities on the land have encouraged high levels of value and respect for nature were common (referenced in 37/66 interviews):

From beginning of my time I grew up in the old traditional way of living in our society which is subsistence hunting and living off the land. Utilize the forest in every imaginable way. I used to go out on

a trap-line with my grandfather, he'd take me to the cabin and he'd show me his way. He was a medicine man so he even utilized the forest more than what he showed me. You go out into the forests, he can teach you all these things in the traditional way...but it's more a spiritual aspect of things, how you ground yourself once again from living this life over here, trying to bring you back to where you actually come from, you're part of Mother Earth, you're part of the big picture and if you destroy something within that big picture you're going to be in debt at the end of the day.

But, you know, we still use the land. The land is important to us because it's important to our ancestors and my grandfather, my dad...it's important to them so it's equally important to us.

Clash of Values

The introduction of land uses like industrial forestry, tourism and modern transport represents a simultaneous intrusion of new value systems. There is strong evidence of discrepancy between Métis valuations of nature and the rational-instrumental view of nature embraced by state and corporate actors promoting industrial development, the latter of which view ecological integrity and traditional land use practices as sources of economic loss and inefficiency. Respondents often pointed out how their views differed from those in government or land management authorities. One interviewee recapped his attempts to convey his views to a government representative:

I said, "Northern Saskatchewan is heavily populated because you can't only look at people. You've got to look at the environment, you've got to look at the forestry, you've got to look at the animals, you've got to look at all these things, the fish, everything else."

The following statements elaborate on this clash of values:

Look at the trappers you know, sometimes the areas that are burning the government sees them as diseased areas or areas that are nonproductive in terms of timber, in terms of things they see as value-added. But in terms of the Aboriginal people, in terms of the Métis people those areas are rich as any gold mine or uranium mine because of the abundance of animals, the plants and herbs and stuff that they can gather from there.

And we actually have had people come very close to the community as far as the forest industry goes,

and leave a mess behind. You know, because there's not that fundamental value there to them, or a traditional value to them. They're a large company; the people who are delegating or giving direction have probably never been here. Nor do they see what's left behind when the company leaves.

Existence, presence and experience are integral to Métis values for nature, as expressed by this interviewee, when asked about outfitting and guided hunting services:

...in our heritage, I don't think you're supposed to make a dime off of animals or off of the land...the creator gave it to us for a certain reason and that's to live off of it, not to sell, you're not supposed to sell, to go and play with the land, eh?

Some have attempted to accommodate both social constructions on the land base, by promoting a forest management regime that supports diverse values:

On one hand we're saying here, "Do we have enough wood?" And the question we're saying is, "Yes, we have enough wood to harvest 260,000 cubic meters on an annual basis." And then, you know, the forest will sustain itself but we have to make sure that reforestation happens and buffer zones are set up by lakes, rivers whatever... and there's access for game, the fur-bearing animals and the water doesn't get too hot for the fish and then they'll start dying. And we'd also like to see some areas preserved...sites and burial grounds and traditional lands where people harvest their medicines and berry picking or whatever, you know, and we're trying to identify as much natural land as possible.

But such efforts appear to have had limited success.

A lot of times there's areas within our fur block here that we've campaigned to the government, to the lumber industries, saying "you know maybe you shouldn't go there and cut those big timber that are in there, because it's a calving area, it's a breeding area for animals such as caribou and moose and if you destroy those you're destroy the populations". You know but industry oversteps the small man all the time...the government has one edge on us that keeps people away from getting up and being vigilant in terms of what they see as theirs; what they believe.

Threats to traditional value systems

"I feel quite strongly that there are better ways of utilizing our forests, you know." (Interview Respondent 2006).

The most direct threat to traditional value systems are the industrial activities that result in an immediate loss in opportunities to practice Métis traditional land uses. Changes to the landscape alter the basis of attachment to the environment and its valuation. A majority of Métis respondents referred to how the large cut blocks and forest access roads had damaged or negated their trails, trap lines, cabins and hunting and harvest areas (referenced in 39/66 interviews):

[The Forestry Company] approached me. One of their guys approached me and showed me a map. "Is this where you trap?" they told me. I told him exactly where I trapped. And, "Okay, we're going to take a little plot here, another little plot here, and another little plot here." "Sure, no problem with me....As long as you keep my trail open, I told him." I go there a week later, there's one spruce tree standing up. It's clear cut. So far. It's clear cut, my trap line. I just about cried.

Differing constructions of the natural world imply different and potentially mutually exclusive land use practices. When such conflicts emerge, power structures tend to dictate the outcome, with prevailing value-constructions and ideologies prescribing land use and management regimes (Soper 1995). The granting of tenure over traditional Métis territory to state and corporate entities poses a direct threat not only traditional land use practices, but also to traditional value systems. Concerns about the resulting impacts on Métis residents saturate the data. Statements such the following were common:

...so every tree they cut down they make a pile of money, but in turn we're gettin' hurt and they're laughing...

Q: So what's the biggest threat to livelihood up here then?

A: Well, I guess, you know, forestry to us, you know, like, by the time they finish cutting everything.

Those who live around contested landscapes struggle to reinvent their values *vis-à-vis* the dominant value system (Baldwin 2003; Curry 2003). Grieder and Garkovich (1994, 2) write, "...when events or technological innovations challenge the meanings of these landscapes, it is our conceptions of ourselves that change through a process of negotiating new symbols and meanings." Individuals within a cultural group can process this struggle in very different ways, in some cases creating sources of internal conflict. Examples of this struggle are evident in this research:

[Some people said] "Well, forestry here, once again, government's going to push it and if we don't grab on to it we're going to lose it. So we are going into forestry." People said, "Okay." First thing that came to their mind was the least impact. Let's not destroy everything just to get a dollar out of the bush. So the older generation recommended selective cutting. Big industry, as usual, opposes.

The sudden incursion of transportation technologies enabling increased accessibility and rapid motorized movement within a landscape entail an additional source of contention. As expressed by Macnaghten and Urry (1998, 168): "suddenly paths...are overwhelmed by instantaneous routes which literally seem to carve through the landscape, killing trees, paths, dwellings and existing taskscape." Some respondents use various forms of modern transportation to access the land, but insist they do so in a manner viewed as more respectful. Others viewed rapid technological access as 'promiscuous', lacking the effort required to develop a muscular consciousness and create a sense of intimacy with nature. Older interviewees in particular expressed the sentiment that ease of access results in a loss of knowledge about, or feeling for, the land, and in some cases can be disrespectful or abusive toward the land:

For the clear cutting they use four wheelers and skidoos now too instead of walking for, you know a couple hours a day, they don't do that, they just use skidoos instead of walking. It's the easy way to do things now.

You don't grab a paddle and start paddling around the bend and go make little a camp fire somewhere, you jump into your nice fancy boat and start the motor and you go, you know? That's what hurts your way of life.

The newly-imposed dominant value system also represents a prioritization of values and activities that may conflict with traditional values, legitimizing some activities while eschewing the importance of others that hold relevance for locals (Baldwin 2003). Many respondents felt that their values were overlooked and considered less legitimate in comparison to the measurable and manageable units of value employed by authorities. Some respondents believed that authorities were planning to curb traditional land use and access to resources as a means to hold sway over Métis lifestyle and activity, by purposely burning cabins or destroying trap lines, for example. The validity of this claim can certainly not be ascertained from this research, but the strength of this belief amongst certain residents is pronounced:

There's trap lines that are being, you know, destroyed. The excuse that they use, "Well, you know, trapping is a thing of the past. It's more or less a hobby nowadays." No, it isn't a hobby!

Some respondents provided examples of the means by which their traditional knowledge is disregarded, or given only superficial acknowledgement:

...the stuff that they do today isn't... they don't rely on the traditional knowledge of our people. It doesn't mean anything. They'll respect it in a meeting, you know. They'll be smoking a pipe with you or sharing a gift or sharing bannock or whatever it is. They'll respect it. But once you're out of there, it's just like the line's drawn again, a battlefield all over again.

I have a lot of good ideas about what should be done here and there, a lot of good ideas about the resources and that...we're not listened to, you know. That's why it's bad, yeah.

Internalization of conflict

Despite concerns regarding industrial activities, many Métis also feel the need to participate. Interviewees described how the loss of traditional land-use access had created the economic necessity to engage in the very activities and technologies responsible for this loss. A cognitive dissonance was evident in almost half of the participants (30/66), who perceived the need to engage in industry and consequently endorse dominant industrial values: not only was access to the land threatened by industrialization, but the subsequent need to participate in the resulting wage economy reduced the time available to engage in traditional activities.

I had my own logging outfit, and I liked it at first a lot but then something drove me back to my back-ground, I wasn't really into the logging part of it. I felt kind of bad because of my traditional way of life, my culture, that I was harming the forest, cutting down forest.

Well, the tree cutting part, yeah, I didn't like it at all. Being a trapper first of all, a traditional land user, and then going to the logging aspect of it, it didn't seem right at all, my spiritual being and everything. Yeah, and it kind of touched everything.

The desperate need for income is nonetheless prevalent, leaving individuals torn between the economic benefits of wage employment in industry, and strong traditional values for the land:

So they've [Métis] been kinda torn between do we do this to make a living, or do we do this, or not do this to ...to sustain the traditional use.

The adoption of land use practices prescribed by dominant industrial values is neither a subtle nor an individualized process, as when the Métis communities were placed in the culturally reprehensible position of being offered continued tenure over their traditional land base, but only if they adopt an industrial forestry regime. Resulting conflicts among the Métis were inevitable; not only were the communities forced to contemplate such a bargain, but the communities were also forced to identify a single community to house the proposed sawmill. As one interviewee recounts:

Initially what we wanted to do was to leave the forest as it is. That's why the group of communities got together and then told the developer that we felt we were ready to develop. And government's sort of pushing us and saying, "Well, they got a timber supply license and if we don't use that, then we're going to have to allocate it to somebody else." Those kind of policies are hindering us from holding on to that land and really evaluating our land mass and say, "This is the best way to develop it," and some communities say, "Well, we'd like to have a sawmill operation in Pinehouse or Beauval or Ile la Crosse," and the government is saying, "Well, I don't think those are viable. Maybe the one mill in Beauval would be better." So the government's sort of dictating a little bit to us, and sort of saying, "Either you use it or lose it." And we'd like to use it differently and allocate the wood differently but they sort of keep pushing us.

The social and ecological costs of value re-construction

Thus far, we have discussed the means by which valuations of nature tend to evolve in conjunction with material practices and how these mutually supportive elements underpin land use conflicts. We now elaborate upon this dialectic with an important caveat: While the relationship between values and material practices can be seen as dialectical, this relationship is by no means direct — individuals faced with the compulsion to engage in land use practices that are not supported by resonant constructions of the natural world struggle with this conflict, with both individual and collective repercussions. The loss of control of the Métis traditional territories as a result of corporate and government management decisions has imposed a renegotiation of values and practices upon the Métis people. The decline in traditional land uses, creation of dependency upon wage labour, combined with the

continued marginalization of Métis traditional knowledge and worldviews have culminated in identity struggles and community conflict, and social anomie. The following interview excerpts illustrate how social constructions of nature are deeply embedded in community identity and wellbeing, and how the inter-generational transfer of traditional knowledge and values is dependent upon intact community structures. One participant relayed local reactions to landscape changes incurred through industrial forestry, in this instance conveyed by a trapper in her family:

A: He comes home sometimes and he will tell us these stories of how...what would be the word? Just, he comes home really sad, and full of sorrow because the land has been ripped apart. You know with the logging, the trees being cut down...you should see that there's great big bald spots all over the place.

Q: The, the clear cuts?

A: The clear cuts.

The reduction in opportunity for Métis to practice traditional land uses leads to cultural disempowerment and loss of control over their traditional land base. Participants expressed concern over a reduction in traditional access to and control over natural food harvests and experiential activity in the forest:

There's a lot of community members that rely on our traditional foods, so in that sense, I'm kind of worried when big companies come in and clear cut our forest.

It's not even nice to go to my camp anymore. There are no trees left. There's no — all you hear is equipment all day and all night, you know.

When lamenting the loss of trap-lines in the cut-block areas another respondent made this comment about the experiential value of traditional land-based activities:

This is how I raise my children and grandchildren, you know. This is my schooling where I teach my children and my grandchildren about forestry² and everything else that comes with it. And now it's gone.

If we didn't have forests where we live, I think our people would die. We've had many people that have moved out of our community, because they couldn't see the trees or any moose, there's fewer moose back, you know. They just didn't feel that comfort.

Some participants stated that the values prescribed by gov-

ernment agents, as reflected in management policies, were responsible for a decline in traditional land use and increase in social problems, as mentioned by this respondent:

And they [Métis] were active people but now that activeness is gone and they sit like a mould buildup and they get sick and diseased, and the system takes care of them in every way but it's only for a reason, and the reason is now the government can extract anything they want, you know they hold us tied down, they sew our mouths together you know and then our people are getting caught in a fight now, all of a sudden there's maybe 60% of them that back government because government gives to them to survive and they're still 40% over here that speak against government policy, against all the things that are going on in the communities saying, you know "is that what we want? Is that the kind of life we choose for future generations" you know, for myself, I say no. That's why, you know, every chance I'll get, I speak out because I believe if I don't speak out then that 60% increases to maybe 70% you know.

Stedman (2003) writes that it becomes more difficult to hold onto place meanings when the physical environment changes and as the gap between the constructed meanings and the real characteristics of the physical environment widens. To maintain these meanings and constructions of the environment, the role of memory is often used. Recalled experiential phenomena continue to shape the current meaning and construction of the environment. This historic reflection was common amongst research participants (48/66 interviews). They would often recall how land-use used to be 'better', 'easier' or how the Métis used to enjoy more autonomy over their livelihoods and land management in accordance with their values. The recall of more favorable periods of Métis interaction with the land and autonomy of constructed environmental values can also be viewed as a means to preserve some cultural agency. Statements such as these were common and would often included phrases like:

Well, for me, initially everything was good.

We lived quite freely in the north prior to any government policies coming into the north.

...it's a different world for us now.

In support of historic recall, Macnaghten and Urry (1998, 168) write, "People imagine themselves treading the same paths as countless earlier generations. Simply redirecting a path, let alone eliminating it, will often be viewed as an 'act of vandalism' against that sedimented taskscape, that com-

munity and their memories". This assertion resonates with our research findings:

...we grew up in areas that have never been logged...well they used to log it, for years they used to log, but they would be selective logging, you know they took a few trees out of the bush and you'd never even notice, but now it's all clear cutting and that's what really hurts I think.

The loss of decision making power over their forest resources may serve to reinforce a weakened identity and weaken the knowledge base, which is transferred orally through social networks. In this case the omission of the traditional ecological knowledge of the elders may serve to reinforce the belief that their knowledge and values are insufficient, inapplicable or worse, invalid. This negative reinforcement is highlighted by Gaventa (1980), who describes the extent to which the powerless see themselves as not having enough knowledge to compete or influence decisions:

The respect that our elders are getting right now, basically, is [the forest company] will set up a meeting in Meadow Lake to have a forum for elders. They'll give them each a couple of hundred dollars. They'll transport them down there to feed them. But it doesn't go anywhere from there. So they get used. They get used and then our people here get frustrated at the elders. They say, "Well, you guys don't know anything. You guys are outdated."

The loss of land use activity, disempowerment from resource based decision making and loss of a sense of agency more broadly converge to threaten Métis cultural vitality. Many interview respondents attribute to this loss of cultural vitality numerous social problems that inflict not only their own communities, but many aboriginal communities across Canada, including systemic poverty, high levels of drug and alcohol abuse, teen pregnancy, and violence, many of which were mentioned by our interview respondents.

Discussion

The current study offers support for a mediated constructivist approach, recognizing the dialectical relationship between environmental values and experience, praxis and culture. There is strong evidence in the case study that land use conflicts between the Métis and forestry operators and government emerged in response to incursions on the land base that have been detrimental for regional ecological services and consequently have threatened the wellbeing of Métis. The failure of this injustice to be recognized and addressed, however, is in large part due to different socially

constructed values of nature, which when combined with the inequitable distribution of decision-making power, prevents deliberative resolution. Métis values have evolved in conjunction with local and traditional land uses over generations that have influenced cultural norms, values and beliefs, and on the other hand resource authorities have developed values aligned more with commercial instrumentality for forests. Because social constructions of the natural world are both borne out of and prescribe actual land use practices, the tendency for one construction to be accorded primacy has direct consequences on the types of activities the land base will support, with direct repercussions for the land itself and social communities. Local communities cannot simply be wrenched from historically evolving value systems without threatening the social fibre upon which those communities rely, and the land base will be materially redefined as it is subjected to the prescriptions of the prevailing value set.

The ensuing contest, as are all contests with implications for privileged access to a limited pool of valued resources, is integrally tied to another form of social construction, that of the distribution of power. We urge researchers not to lose sight of the structural character of land use conflicts in our attempts to understand better the socially-constructed attributes of nature, a call already made by Proctor (1998, 361), who argues that "the epistemological question, 'which truth-claim is more adequate?' is joined by the ontological question: 'what kinds of historical/geographical structural relations and contingent conditions have combined to result in this diverse set of truth claims?'" Examples of inhibited decision making and action by local community members due to government and corporate managers are a clear outcome of power differentials, and have been noted elsewhere (e.g. Beckley and Korber 1996; Evanoff 2005). As expressed by Grieder and Garkovich (1994, 17): "In the context of landscapes, power is the capacity to impose a specific definition of the physical environment, one that reflects the symbols and meanings of a particular group of people."

Exclusion from formal decision-making processes represents just one form of power expression in land-use politics, however. Decisions by those in power that alter the environment serve not only to inhibit material access. The examples above describe the de-legitimation of the value systems of the 'powerless' and force a re-negotiation of values by the Métis. Manipulating the land base upon which a social group depends is an effective and commonly exercised means of exerting power over that groups, with repercussions far beyond the concentration of wealth (Gaventa 1980); it asserts psychological control as well, by inhibiting the expression of traditional worldviews, and preventing powerless peoples from engaging with the land in a manner that ensures the autonomous pursuit of livelihood in a manner consistent with

their values and culture: "Man's power over Nature turns out to be a power exercised by some men over other men with Nature as its instrument" (Sachs 1999, 191).

Conclusion

"It cannot be determined in advance exactly how different cultures will work out their own guiding visions for the future. These depend upon the interaction between two variables: the *objective possibilities provided by environments* and the *subjective aspirations of the people inhabiting those environments*" (Evanoff 2005, 69, *emphasis added*).

This paper has laid out, with the benefit of an analytical lens employing 'artefactual constructivism', the following contributions:

- 1) Empirical confirmation of the dialectical relationship between environmental values (constructions) and the bio-physical world. These values are constructed by the experiences and activities that are typical within a culture and the traditions and forms of knowledge that culture evolves.
- 2) The role of power relationships in defining and controlling experience in the landscape is critical. Social power hierarchies determine how physical 'nature' is managed and altered according to the dominant set of social values within the hierarchy.
- 3) A loss of power to affect landscape change has detrimental social effects in cultures that feel a strong historic affinity to ecological values and traditional land uses.

Aboriginal cultures evolve continuously, and in many instances Aboriginal groups selectively incorporate aspects of western culture and modernization into their worldviews and practices. Cultural wellbeing is not measured by the extent to which such cultures are preserved in some original form, but rather by the degree of autonomy with which such cultural evolution processes are engaged. Critical values and traditions are an important foundation and yardstick with which communities measure their social well being, sense of efficacy and sense of pride in greater society.

In managing landscapes that are the scene of social conflicts, it may be important to bear in the mind that landscapes are real places that *imply* contextualized meanings, not only generalizable values and processes. Natural resource managers must be sensitive to the fact that rapid incursion of heretofore alien constructions onto a particular tactile space and its inhabitants is likely to have a disruptive effect on both. Natural resource management needs to address social constructions in addition to scientific prescriptions for management. Management policy typically adopts a utilitarian construction of nature and emphasizes economic relations over

political and social relations (Williams and Patterson 1999). Incorporating 'other' constructions of the contested space could avoid the conflicts illuminated above and aide in making sense of what Proctor (1998, 363) describes as, "...the personal ironies and messy contingencies that play such a major role in conflicts over nature".

Future research may serve to, "...identify 'inventoriable' environmental properties that characterize important aspects of human-environment relationships" (Williams and Patterson 1999, 149). In so doing various local environmental features, spaces and activities can be acknowledged as physical attributes but can also be imbued with qualitative meaning by concerned parties and stakeholders. A resulting inventory of local spaces or features can hold important constructed values and be used in policy and decision-making.

Acknowledgments

We would like thank all those whom made this research possible or who helped in its collection and synthesis, particularly the Métis communities of the northwest and the community liaisons who assisted us; Naomi Krogman, Samantha Song, Bryn Politylo, Leanna Parker, Frank Tough. Funding provided by the Canadian Social Sciences and Humanities Research Council.

Endnotes

1. joubert@ualberta.ca
2. In the local context the word 'forestry' often refers not necessarily to commercial industrial logging and silviculture but is often used to refer to forest-based activities and knowledge of the forest-nature.

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