GO TO THE RIVER: UNDERSTANDING AND EXPERIENCING THE LIARD WATERSHED

by

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ABSTRACT

This study contributes to an emerging space of interdisciplinary literature that explores the cultural dynamics people and rivers and the associated contestations. A network of rivers in northern British Columbia, all within the Liard River watershed, provides a relevant case study to examine such topics. Data and analysis are presented using a phenomenological approach that employs archival and participatory fieldwork. Through this research, I ask: "why do people go to the river"? In attempting to understand the significance of rivers in people's lives, "Go to the River" addresses questions concerning the Liard watershed, including: how interpretations of rivers are represented in historic maps; the significant transitions during the nineteenth and twentieth century that redefined human-river relations; and how rivers are still experienced through direct lived engagements. I argue that past and present direct experiences with rivers are essential in reframing the dialogue about the future of rivers in western Canada.

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DEDICATION

Jackson Stone Staveley

Know your rivers

1 Chapter: Introduction

Field Notes July 24th 2010

It's 10:00pm – probably later – everything was delayed: the flight in on the floatplane, finding a portage route to the river, even sorting and hauling the gear. But now I finally stand on the bank of the Gataga River, high near its narrow headwaters, some 350 km above where its waters eventually meet with the Liard. Against the backdrop of a rapidly darkening riverscape, I try to find a place to ferry the canoe across the river's bounding water and find a late night camp spot. Stepping into a new river for the first time is always slightly nerve-wracking: "Dinta taga", I say[1]. Trusting the river, I launch the canoe. Once on the river everything makes sense to me: I see the trees sweeping across the left bank, I see the small creek around the first bend, and then I see the eddy and its offer of the sand bank it creates that will be camp for the night.

80 kilometers west of the Alaska Highway is one of northern British Columbia's many river valleys that make up the Liard watershed. The Gataga Valley is a place where echoes are so prominent that chewing peanuts reverberates off canyon walls; a place where wolf scat adds a layer to the stratigraphy of gravel bars. The Gataga is a river that houses a continuous stretch of massive logjams that continue for countless kilometers – some of which cause the majority of the river to be sucked underneath these monumental log structures and then spit the waters out at a lower location. From the viewpoint of western geography and environmental philosophy this is an authentic place: nature, a wilderness. But that is not the reason I am here. I have no desire to navigate its waters for 10 days, dodging boulders, or scouting the river to ensure a clear passage after long climbs

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[1] Kaska for 'hello river'

to look out points above steep canyons, or guessing which river channel does not house a deadly logjam – just so I could experience nature or a wilderness. To be honest, I have no reason why I am here.

Seven years earlier, I was grasping onto the roof of a crowded mini bus, as the driver tightly wound it along a typical New Zealand rural road. My New Zealand counterpart was relaxed and still laughing as the bus arrived at the river. We jumped down from the roof, double checked our river gear and started the walk down a trail that led to the Kaituna River. Rivers are graded in navigation difficulty from a grade one to six (six being un-navigable) and this section of the Kaituna was rated as a five, with a series of three waterfalls– the last falls dropping 23 feet.

I was an aspiring river guide and my New Zealand counterpart introduced himself as Chonk. Chonk had a deep, confident voice and a tattoo-covered physical frame, the size of which would dwarf a university basketball player. While Chonk talked about his water-polo match that he played last night, I nodded at every pause he made when speaking, but I was distracted from listening by a growing concern for my well being as I glanced nervously at the river. Questioning my swimming ability in such waters and weakened from my nerves, I found Chonk's massive stature and long arm reach to be a reassurance. "Yo bro," Chonk stopped walking, "before we step into the river we have to pray". I was in no condition or position to question Chonk about anything, "yes," I said, trying to smile. "This is my family's river and we always sing our prayers to this river". Chonk put his hand on my shoulder and began to sing in Maori.

I have never thought of rivers in the same way again. I was raised in the Rocky Mountains of western Canada where rivers race down deep canyons, across marshlands and through wide deltas – this landscape was only ever presented to me as just one more

mapped geographical feature of Canada's vast physical landscape. For Chonk, the Kaituna River was a vital place for him and his family's lives. The river provided him with peace, courage, guidance and certainty. In a vulnerable moment, Chonk taught me to understand rivers through a new perspective.

When I returned home, I began to see rivers as not just a utilitarian source of drinking water or for generating vast electrical power, not just a place for fishing, or as a stage for the heroic voyages of forgotten explorers. Instead, the river became a place embedded with meaning and thus the river's essence became interwoven with human identity and livelihood. Once I understood that, I did not need a reason to go to the river: I just needed to go.

This thesis is about the significance of rivers in our lives. More specifically, it is about the cultural representations, symbolic expressions and physical experiences that encompass people's relationships with rivers. As a unique aspect of our geography, rivers traverse historical landscapes, flow through diverse cultural imaginations and carry an essential substance without which we as a species soon perish (Worster 1985). Contemporary scholarship often studies rivers through science-based disciplines such as hydrology or physical geography (DeVillers 2003: 11; Smith et al. 2000; Sowry 1977; Speidel et al. 1988). In the public realm, whether as public management policies or environmental organization initiatives, rivers and the related contestation involving water are often studied through 'clinical' models of water management that often diminish human-river relationships to vague notions of 'culture' or 'social' (Bakker 2008, 2010; Strang 2009: 54-83, 252; United Nations 2004). Yet, rivers are a product of culture. They are part of the essence of being human as a "repository for memory and cultural knowledge, and the ground for social identity" (Strang 2009: 129). They are a nexus for

creative engagements within a landscape. Rivers inspire art, maps, place names, myths and stories that establish and construct the, often overlooked, cultural role of rivers. Transcending this concept is a biological reality that causes rivers to be also experienced at a physical level (Strang 2004: 5). Both physical and cultural realities play a significant role in the meaning and significance of rivers (Horbulyk 2007: 205; Strang 2004: 5). For example, rivers and the waters they carry are essential to all living organisms, yet at the same time they can be places of fear as they carry narratives of past drownings (Strang 2004: 4; Strang 2009: 6). These meanings encoded onto the landscape are not imposed from a distance, but emerge from an intimate interaction with rivers involving contact, immersion and ingestion (Strang 2004: 5; Tilley 1993). This process of encoding meanings takes place "within a cultural landscape which is the product of specific social, spatial, economic and political arrangements, cosmological and religious beliefs, knowledges and material culture, as well as ecological constraints and opportunities" (Strang 2004: 5).

The rivers studied in this thesis are the Liard River and its tributaries in the Liard Valley that reach their confluence in its Northern British Columbia watershed. The Liard watershed in Northern British Columbia is a vast network of rivers: an ideal place to study the intersection of ideological representations and the impact of human agency bounded within a unique physical environment. Employing a theoretical framework from environmental anthropology, environmental history and political ecology, this thesis follows my research along those rivers; in the communities that exist along them; and in the archives that document their history in order to illustrate the cultural role and significance of rivers. The research is both a journey into the past and a construct for the present. As such, this research is both a critical examination of human-river relations and a collection

of stories that contributes to the environmental portrait of an understudied region of British Columbia.

1.1 Research Questions

The research objective for this study advances the understanding of human-river relationships while recognizing the historical narratives that have shaped the current cultural meanings placed on the rivers that flow through our landscapes and lives. Through this research, I ask: "why do people go to the river"? In attempting to understand the significance of rivers in people's lives, "Go to the River" answers questions concerning the Liard watershed, including: a) how interpretations of its rivers are represented in historic maps; b) how and why its rivers transitioned from being experienced as working rivers to being represented as part of abstracted space; and yet c) how its rivers are still experienced through direct lived engagements. This thesis contributes to a body of literature that examines why human-river relationships are still of great significance in a society defined by the dynamics of neoliberal economics in which rivers are contested places. Examining the complexity embedded in human-river relationships, I argue that past and present direct experiences with rivers are essential in reframing the conversations about the future of rivers in western Canada.

1.2 The Liard Watershed

This research focuses on the Liard watershed within northern British Columbia. I use the term watershed to define the Liard River and its network of tributaries within a specific historic and cultural landscape. This watershed therefore acts as the basis for archival and ethnographic research that allows for analysis of the significance of rivers.

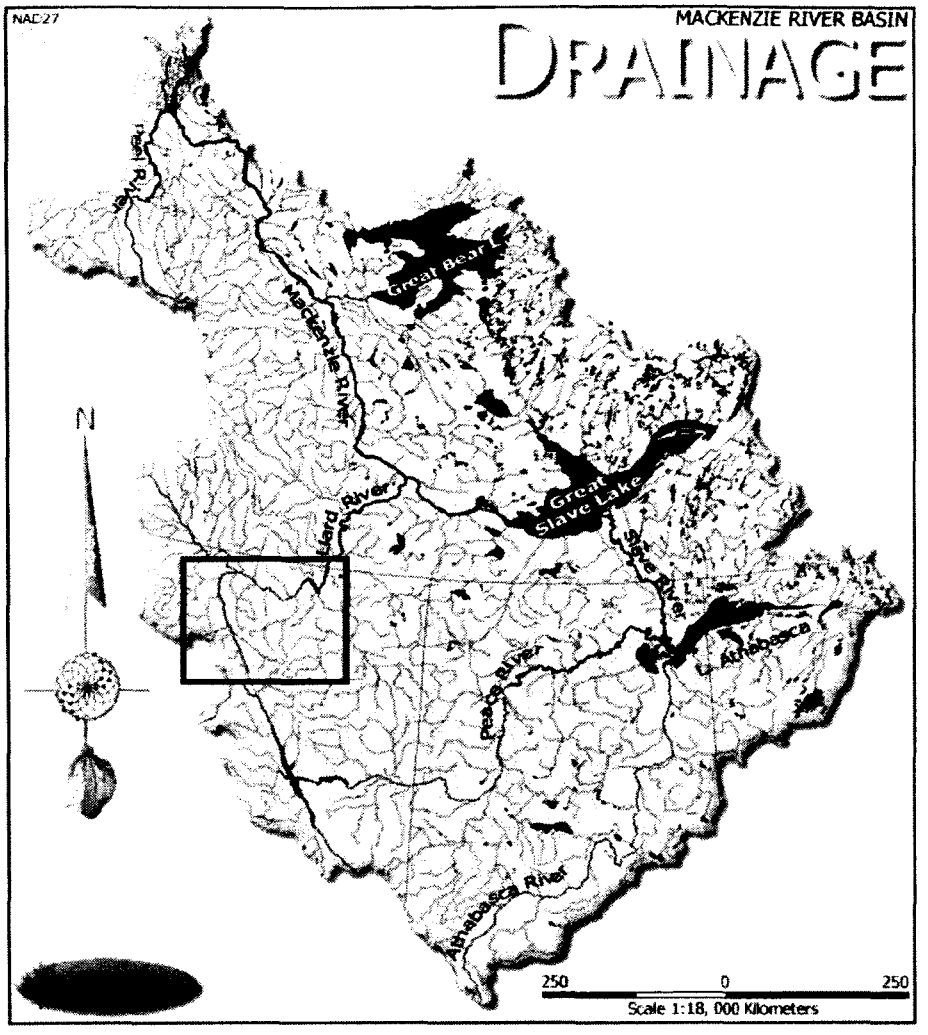

Figure 1-1. Map of the Mackenzie River basin drainage.
Within the Mackenzie River basin drainage, is the Liard River watershed. Identified on the map is the study area within the northern British Columbia (Retrieved from: Mackenzie River Basin Board).

The Liard River flows from its headwaters in southeast Yukon where it meets up with its two major tributaries near the British Columbia border: the Frances and Dease Rivers. The Liard runs parallel with the Alaska Highway in an eco-region known as the Liard Plains where, in downstream order, the Hyland river flows from the north, the Kechika River flows from the south, the Coal River and Smith River flow from the north while the Trout and Toad Rivers drain the Muncho Lake region from the south. The Liard

then picks up the large volume of water from the Fort Nelson River from the south before crossing into the Northwest Territories and eventually merges itself as one of the major tributaries of the Mackenzie River. From the mountains of the southern Yukon to the Mackenzie River, the Liard watershed drains approximately 277,100 square kilometers of the subarctic.

I chose the Liard watershed in particular since it encompasses documented historical interactions with rivers in a region that is both logistically accessible to travel on and recognizable in community-based public discourse. This region of northern British Columbia incorporates a range of rural communities including: the historic mining town of McDame; the contemporary mining town of Dease Lake; the Kaska Dene community Lower Post; tourist operations, campgrounds, cabin resorts; and seasonal hunting camps. In addition, the region reflects contemporary concepts of environmental governance such as the Muskwa Kechika Management area and British Columbia Parks. Figure 1-2 provides an illustration of the specific study area within northern British Columbia.

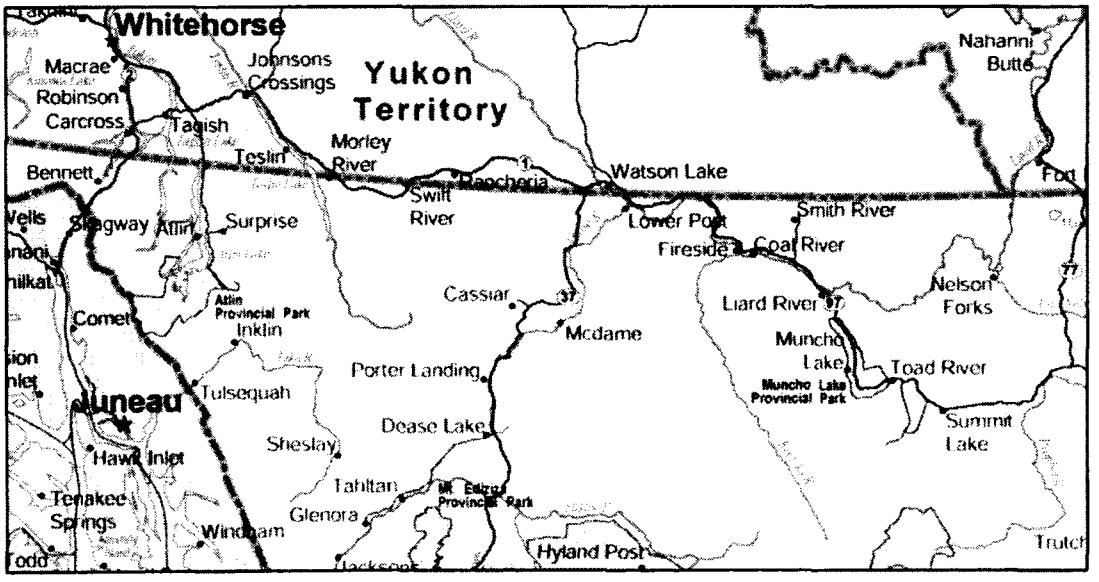

Figure 1-2. Contemporary map of the study area
(Retrieved from Canada-maps.org)

1.3 The Study

A human-river relationship cannot be separated from the economic and political realities through which it flows. In Canada, neoliberal capitalism is a hegemonic force. Concepts of unhindered market forces, global trade and the extraction of material wealth from the economy are profoundly entrenched in Canadian society. During my fieldwork, conversations frequently returned to concerns about the effects of industrial development, and in particular the need for the protection of rivers from hydroelectricity plans, water privatization and environmental deregulation. Countless news articles, including those in local community newspapers, reflect an urgent dialogue about river hydroelectric projects, the Clean Energy Act and other legislative bills, including the abolishment of the Navigable Waters Protection Act. While rivers have been sites of contestation for centuries (see Worster 1985), neoliberal economics has further intensified this discourse about our relationship to water and river management (Bakker 2007, 2010; Strang 2009: 54-86). In addition, a transition has occurred from a government-managed model of river stewardship to a devolved governance model (Bakker 2007: 11; Strang 2009: 62). In a broad sense, governance is defined as who makes decisions and who is held into account. For the purpose of this thesis, I use the term in its manifestation in northern British Columbia linking governance to neoliberalism (see Peet et al. 2010).

The governance model results in the communal responsibility and regulatory power, previously embodied in state and local governments, being devolved to new regional bodies and stakeholder groups (Bakker 2007: 3-4; Strang 2009: 62). Researchers demonstrate that these newly formed agents tend to be significantly influenced by the advice of their selected advisory groups who are often comprised of industry sector representatives and in-house scientists (Bakker 2007: 4; Strang 2009: 63-64). The change from government to

governance is reflective of neoliberal forces and free-market ideologies that inevitably effect how we utilize rivers (Bakker 2007: 3-4; Strang 2009: 63-65). These forces have had the effect of transforming our relationship to rivers and have created a powerful new narrative. The Canadian narrative that once included profound stories of work, belonging and travel along these rivers is increasingly being replaced with a narrative of industrial dialogue focused on economic benefits, environmental mitigation or ecological damage.

As all these forces collide with pre-existing relationships to rivers, political ecologists urgently draw our attention to issues about rights to and ownership of water and rivers stating that the debate surrounding water must be "reframed" in order to accommodate a profoundly complex issue that transcends ecological, biological and spiritual realms (Bakker 2010: 14; Matthews et al. 2007: 335). Furthermore, environmental anthropologists, environmental historians and political ecologists agree that rivers are frequently the nexus for social processes that conflict with ecological processes (Strang 2009; Ward 1997: 32; Williams 2001: 429). The control of water is a critical element of societal power in which "the control of water is inevitably control of life and livelihood" (Ward 1997: 32). When the sense of ownership of a river becomes manipulated and exploited under a resource concept so do the people living along it: there is a direct parallel to, and long history of, the mistreatment of rivers and human inequities (Buhler 1998: 60-77; Evenden 2004: 170; Johnson 2002: 271; Josephson 2002: 17; Strang 2009: 2; Williams 2001: 427; Worster 1992: 19-22). Insight into human-river relations can help reveal not merely the manipulation of a physical resource, but the manipulation of an individual's perspectives of stewardship, responsibility and sense of experiential belonging (Angèle Smith 2010, personal communication; Strang 2004: 21).

In a region where the activities of multi-national resource companies as well as private hydroelectric developments are expanding, a diverse range of issues are being raised concerning social and ecological responsibilities (Pembina Institute 2008: np; Douglas 2007: 1-5). In the political and economic move from government to governance, multi-national resource companies seek to accumulate and exploit mining and oil and gas resource capital. In doing so, there is contestation and polarization found in the current environmental debates about rivers. This dialectic debate positions the river as an objectified place: either as a 'resource to be developed' or a 'vital piece of a vanishing wilderness to be preserved'. For each side of the debate, there is a profound mix of perspectives about economic values and a sense of responsibility to both the community and river ecology that fiercely fuels the arguments on both sides of the contestation.

However, the debate surrounding the neoliberal contestation is ignoring a profound understanding about how deeply a river actually reflects the way in which we belong within our world. Whether we decide that the Liard River is a site for a hydroelectric operation that fuels mineral extraction or is Net'ih Tuè – "a place that leads to steep mountains where goats and sheep can be trapped and their substance and nutrition can be easily received and shared within family" – is a societal decision (see Moore 2000: 190). Neoliberal economic structures and their related dialectics can disassociate us from the essential river narratives that have traditionally fastened the dynamic relationship between human interpretation and the landscape in which we must live and thrive. Reinforcing this dissociation is a model of watershed governance that follows an 'environmental management' model and ignores the ethical and cultural ecologies embedded within water and rivers (Bakker 2007: 15). Anthropologists, historians and geographers need to reframe the conversation about water and rivers by defining and incorporating human-water relationships: we need to manage

ourselves as part of the environment (Bakker 2007: 15; Matthews et al 2007: 335; Strang 2009). This thesis aims not only to provide a contextual and historical portrait of an understudied region, but also engage in an innovative conversation about rivers and contribute to an emerging space for reframing human-river relations.

1.4 Liard Essays and Reflections

To provide ethnographic depth and a self-reflective analysis, each chapter is introduced with a narrative from my field notes. These narratives are intended to be reflections from the fieldwork experience that illustrate how each chapter has been profoundly influenced by that fieldwork. The field note narratives are honest interpretations of the realities of fieldwork that shape the collection of data and the analysis that follows.

In chapter 2, I provide a brief overview of the major bodies of literature that emerge out of discussions of human-environment relations. The chapter focuses on specific literature in the disciplines of environmental anthropology, environmental history and political ecology. This chapter also recognizes that there are fundamentally different reasons for why people 'go to rivers'. In order to understand the cultural meaning of rivers, the chapter contextualizes the interwoven nature of river interactions and representations of rivers. To provide context and background for my methodology, chapter 2 also discusses the origins, significance and relevant position of a phenomenological research approach.

Chapter 3 establishes the methodological foundation of my study. Reflecting the interdisciplinary vision of this thesis, I employed three key methods: primary source review, archival research and participant observation-based fieldwork. Chapter 3 describes how a phenomenological approach supports the research process including the research

plan and methods that I employed. I describe how my fieldwork and research process works together to produce the self-reflective narrative and creative synthesis.

The content for this thesis is divided between the next three chapters. Chapter 4 explores the significance of two nineteenth century river maps in northern British Columbia; one of whose routes I directly experienced by retracing the journey it represents. The river map from McLeod's 1834 journal is used to illustrate historic representations of, experiences with and relationships to rivers. In doing so, the chapter seeks to demonstrate how historical maps illuminate rivers as archives of a dynamic human experience.

In chapter 5, I examine significant transitions throughout the nineteenth and twentieth centuries that redefined human-river relationships. I consider cultural values and acts of human agency that have worked to shape the role and significance of the rivers within the Liard watershed. Using photographs and illustrations to support my discussion, I argue that through a series of significant transitions, a discourse about rivers has changed resulting in rivers being viewed as abstracted spaces.

In chapter 6, I use participatory fieldwork and interview methods to examine the significance of experiential knowledge. Following my fieldwork experiences both on the river and in their communities, I ask how river experiences link concepts of place and identity with perspectives of stewardship and responsibility. The information collected from my fieldwork is presented in a creative synthesis that searches for an experienced-based source to a moral relationship with rivers.

Keith Basso states that, "the past has a way of luring curious travellers off the beaten track" (1996: 3). Throughout my fieldwork I encountered an intensely humbling environment with unmarked obstacles, unexpected bends and unforeseen occurrences: forest fires, floodwaters, dangerous logjams as well as a sense of awe, fatigue, exuberance

and fear. Retracing a canoe route that was mapped by indigenous fur traders and McLeod's detailed written encounters was a privilege. To journey into the past is, in the words of William Chapman, "at its best when it takes us to places that counsel and instruct, that show us who we are by showing us where we have been, that remind us of our connections to *what happened here*" [emphasis in original] (1979: 46). Journeying into the Liard Valley's past uncovered cultural choices that differ from those we may experience in the present. While governance in a neoliberal capitalist society attempts to redefine human-river relations through a neoliberal river ecology model, these cases from the Liard watershed are my way to lure the reader off the beaten path as a way to transcend the ideologies of neoliberal governance entrenched in our society and reconnect with the physical and symbolic engagements that rivers provide.

2 Chapter: Theoretical Framework for Human-River Relations

Field notes May 22nd 2011,

A Liard Riverscape: The Liard River Valley is an intensely humbling environment. In spring runoff, muddy waters race past massive rock outcrops, crash over immense boulders and slide down great slabs of bedrock producing waves and holes the size of mining trucks punctuated by whirlpools spinning like jet turbines. The long daylight melts the snow and the Liard's tributaries quickly swell, engulfing burnt logs, jamming up channels and flooding portage trails and highways alike. Each summer, the headwaters of the tributaries fill with moose, elk and sheep among the scattering of lakes and creeks that meander into any one of the Liard's many tributaries. The now slower tributaries carve their way through beaver habitat and old trapper cabins that are poised to fall into the river from an ever-eroding bank. The river surges during an early fall rainstorm, washing away the grizzly bear tracks as nearby countless recreation vehicles return south along the Alaska Highway. The river settles and slows itself down for the winter as small caribou herds cross the newly formed ice and the first heavy snowfall buries the flattened remnants of Hudson's Bay Company posts which whisper of a different, yet connected past.

Figure 2-1. Fall in the headwaters of the upper tributaries of the Liard watershed.
(J. Staveley, 2011)

This chapter considers understandings of rivers and the literature on human-river relations. Recognizing the interdisciplinary breadth of this research, studies of human interaction with rivers requires correlation with the works from environmental anthropologists, environmental historians and political ecologists who have written extensively and continue to add to the literature dedicated to narratives about people and rivers. This chapter also recognizes that there are fundamentally different understandings of rivers and their waters (Strang 2009: 88). Finally, to provide context and background for my methodology, this chapter examines the origins, significance and relevant position of a phenomenological research approach.

2.1 Interdisciplinary Framework

This research draws on three separate bodies of literature, particularly the literature that emerges out of postmodern concepts of human-environment relations. This research first draws on much of the existing literature within environmental anthropology that explores the contested nature and cultural meanings of landscapes in general (Basso 1996; Bender 1998; Chidester and Linethal 1995; Ingold 2000, 2007; Johnson 2000; Soja 1989; Smith 2008; Strang 2009; Tilley 1993, 2008). Environmental history, the second body of literature, has been at the forefront of current research that specifically focuses on the examination of rivers (Armstrong et al. 2009; Evenden 2004; Haslam 1991, 1997, 2008; Josephson 2002; Mauch and Zeller 2008; White 2001; Worster 1985). Political ecology, the third body of literature, has provided a series of relevant and recent works about water governance and management (Bakker 2007, 2008, 2010; Peet et al. 2011; Peet and Watts 1996: 1-45).

Environmental anthropology examines human interaction, dynamism and interconnection with the environment (Ingold 1993; Johnson 2010; Strang 2009: 29; Tilley

1993). Environmental anthropologists are concerned with understanding human action and agency as they shape the environment and the cultural meanings that become represented in the environment (Layton and Ucko 1999: 1). Further, this scholarship is often expressed in landscape studies. Landscapes, for the archaeologist or anthropologist, "are particular ways of expressing conceptions of the world and they are also a means of referring to physical entities" (Layton and Ucko 1999: 1). Furthermore, landscape studies acknowledge particular cultural spaces or 'habitus' (Bourdieu 1977), creative engagements (Ingold 2000; Strang 2004), and meaning that are imposed upon particular aspects of the environment (Geertz 1973; Tilley 2008). From these viewpoints, culture and nature are not seen as distinct and separable externalized phenomena, but rather as constructed, imaginative aspects of human existence (Strang 2004: 4). Environmental anthropologists have also asserted that understanding the environment reveals power relationships whereby the physical manipulation of the landscape is intrinsically linked to the manipulation of people (Smith 2001; Tilley 1993; Wolf 1999).

Broadly defined, environmental history aims to understand human interaction with, and modification of nature over time (Hughes 2006; Simmons 1993). Environmental history can be further understood along three general categories of inquiry: 1) how environmental factors have influenced human history; 2) how human actions have changed the environment and the effect of those changes on human societies; and 3) how people have historically thought about the environment including their attitudes and emotions that "have motivated actions that affect the environment" (Hughes 2006: 3). To pursue one or more of these themes, environmental historians access a variety of primary sources such as diaries, journals, art, science or literature (Merchant 2005: xiii). In the *Columbia Guide to American Environmental History,* Carolyn Merchant provides a framework for inquiry

(2005). Merchant outlines a series of topics that environmental historians explore in their questions, and identifies five areas of focus for the application of environmental history (2005). As the most applicable focus for my research, the body of literature examined here is limited to Merchant's concept that narratives tell us how to interact with the world (Merchant 2005: xv; also see Cronon 1992). As Merchant states:

> Environmental historians write narratives that are both progressive and declensionist, comic and tragic, intricate and bold. Nevertheless, the stories have a message. They explain the consequences of various past interactions with the natural world and warn us of potential problems as we form policies and make decisions that affect our lives and those of our children. (Merchant 2005: xvii)

Political ecology examines the dynamics about human interactions with rivers and water. In *Land Degradation and Society,* Blaikie and Brookfield state that political ecology "encompasses the constantly shifting dialectic between society and land-based resources, and also within classes and groups within society itself" (1987: 17). The confluence of politics and ecology into a single discipline originated in the 1970s when anthropologist Eric Wolf (1972) coined the term as a way to understand how power relationships, such as control and ownership over resources, interact with human-environmental relations (Biersack 2006: 16; Peet and Watts 1996: 6; Wolf 1972: 201). Peet and Watts state that political ecology replaces 'culture' in cultural ecology with a broadly defined "Marxian inflected political economy" (Peet and Watts 1996: 41). Central to political ecology is the concept that environmental problems, contestations and environmental disasters are, in origin and definition, social and institutional. Furthermore, political ecologists use history as a way to explain and provide context for the dynamics, contestations and issues of the present (see, for reference, Bakker 2010: 52-77; Harper 2008).

Addressing the effects of global neoliberalism and the material economic system is a priority for political ecology (Peet et al. 2011: 11-24). The effects of neoliberalism are

demonstrated in the alienation from nature that has arisen, the valorization of commodity goods, the effects of globalization in its deindustrialization of the 'first world', and corresponding industrialization of the 'third world' (Peet et al. 2011: 11-23). However, political ecology also aims to employ a critical approach emphasizing that environmental degradation is not merely a symptom of the advance stages of capitalism, but is an essential part of that economic system (Peet et al. 2011: 26). As such, political ecology recognizes and questions how ecological knowledge is selected, validated, and how certain human-environmental relations become hegemonic and carried out in mainstream society (Peet et al. 2011: 41). Political ecologists recognize that to understand human-environment relations we must first understand how people internalize, narrate, structure and explain the world around them (Peet et al. 2011: 41).

2.2 Why People Go to Rivers

Various social and economic groups, and the cultures within those groups, have different perceptions and ideologies of why they 'go to the river'. Environmental anthropologist Veronica Strang examines different groups of river users in Australia's Brisbane watershed. In her study of agriculturists as a user group, she identifies how changes in the cultural landscape and the involvement in a global economy have shifted the way Australian farmers engage with water (Strang 2009: 124). Strang identifies that pre-colonial and early European water usage included sustainable methods in contrast to specialized contemporary methods in which water is commandeered to produce only certain crops and animals for an ever-intensifying global demand (2009: 124). For Strang, the agriculturist is embedded in culturally positive imagery and societal belief systems in which farming is seen as a sacred process (2009: 122-123). This positive imagery and belief system suggests that agriculturist groups 'go to the river' as part of a sacral process

of feeding a community, a society, or a nation. Recognizing the disconnect between public perception and lived realities, Strang suggests that the agriculturists and their related water usage are in fact less driven by the need to provide food, but is instead entangled with the forces of globalization (2009: 127). The contemporary agriculturalist, while believing something different about their motivation, actually 'goes to the river' as a result of neoliberal forces and the way in which those forces posit a relationship to the river as a resource.

Strang's Brisbane watershed study also examines industrialists as another group of river users. Industrial users include mining industries (precious metals, copper mines), extractive industries (gravel and stone operations) and manufacturing extraction industries (oil refineries, pulp and paper) (Strang 2009: 166). Strang views the industrial process as a form of 'postmodern alchemy' in which water is effectively transformed into gold (2009: 181). This postmodern alchemy consists of essential resources such as water being turned into a wide range of cultural artifacts that are "valorized as positive contributions to economic and social life" (Strang 2009: 181). The power given to industrial activity to determine water usage is derived from the neoliberal imperative that resources are to be used to improve the material well being of the individual (Strang 2009: 182). Consequently, industrial users interpret ideas about environmental management primarily from the application of sustainable development theories (Strang 2009: 180). Concepts of sustainability are also inevitably qualified with the essential requirement that such sustainability should not be allowed to compromise the industrial user's levels of economic activity (Strang 2009: 181). Thus, the industrial user 'goes to the river' to create the material objects demanded by consumers. As such, to achieve their required access to and

control over water, industrial users have politically reoriented themselves to be in a position to influence water policy (Strang 2009: 180).

Similar to Strang's work, scholars in Canada have also examined how representations of rivers embody concepts of development or resource use. In the article "Mobilizing Rivers: Hydro-Electricity, the State, and World War II in Canada" (Evenden 2009), Evenden examines broad narratives used to describe hydroelectricity development and Canadian policy during World War II. He recognizes the environmental consequences of global warfare and Canada's role as an aluminum supplier for the Allies (Evenden 2009: 845). Evenden's "Mobilizing Rivers" serves as a case study in which cultural ideologies, such as the development agenda, create a prevailing representation of rivers based on a relationship embedded in development and rivers as a resource (2009: 848). In this context, people 'go to the river' to establish a relationship based on resource development and economic authority.

Yet the narrative of neoliberalism, resource usage and economic development is not the only reason why people 'go to the river'. In northern British Columbia, Gitskan culture illustrates how physical interactions with rivers and their cultural representations are interwoven. Unlike most Western European societies, Gitksan society did not focus its social and economic livelihood on the ability to establish agriculture. Rather, Gitksan culture established a successful society based on the fauna that use the river, such as salmon. For environmental anthropologists, aboriginal interactions with water provide a counterpoint to the dominant scientific, technical and utilitarian worldview of water (Strang 2009: 87). In this perspective interactions with water do not separate human existence from the physical world (Strang 2009: 89). Instead, the river is understood as being fully interconnected in both its physicality and its representation: water is symbolically and

physically linked to all living life (Strang 2009: 89). In Gitksan, the term for, what we now call in English, 'the Skeena River' is Xsan (Johnson 2000: 304). Simplified, Xsan translates as 'the lifeblood' (Johnson 2000: 304). Xsan, or 'the lifeblood', is interwoven into the essential narratives and representations that establish Gitksan identity: the Xsan is not a provider to the people through a means of producing agriculture or by cultural artifacts such as copper, but is directly the provider to the people (Johnson 2000: 305). It might be said that the Gitskan 'go to the river' to establish physical, social and symbolic substance from the river's ecological attributes.

At an individual level, in contradiction to the neoliberal perspective that rivers are merely resources to be exploited, we also 'go to the river' because we have a connection to the physical landscape and a profound relationship to certain features of that landscape including rivers. Therefore, human-river relations must also include an understanding of the interaction between direct experience and an individual interpretation of Place, as described by anthropologist Katherine Platt:

> Places capture experience and store it symbolically. Its collective meanings are extractable and readable by its later inhabitants. This symbolic housing of meaning and memory gives place temporal depth. But not only do places of experience store meaning about the past; they also are platforms for vision and plans about the future. Places of experience provide us with identity to venture forth out of this place into less certain or orderly spaces. Places of experience provide categories for managing new adventures and new cycles of old adventures. Places of experience connect the past to the future, memory to expectation, in an invigorating way. Places of experience give us a sense of continuity and energy (Platt 1996: 112).

A western representation of this experiential relationship to the physical landscape can be seen in an artist's rendition of a river as a "riverscape" (see, for reference, Hoelscher 2008: 150). This artistic concept of riverscape is well illustrated in the works of Claude Monet. His impressionist work often incorporates the elements of urban aesthetics with the ecological properties of river environments (see for example, "On the Bank of the Seine",

1868). Other Canadian examples include the works of A.Y. Jackson, Emily Carr and Bill Mason who incorporate river environments as unique cultural symbols and experiences to produce renditions of riverscapes. In these works, the elements of the painting – the landscaping, the selection of perspective, the people and their relationship – are fully integrated. The artists do not purely depict the 'natural' course or physical elements of a river, but a riverscape in which cultural meanings, representations and symbols are reflected and encapsulated in their riverscape portrayals. This personal human agency that connects us to the riverscape also plays a role in defining our personal and cultural identity. In *The Riverscape and the River,* Haslam explains how a riverscape defines meaning in the larger landscape through both ecological and cultural processes (2008: 2-4). Within Haslam's riverscape, even as the banks and course of the river change over time, the river continues to be central (2008). Haslam contextualizes the riverscape as a place where the river is therefore central to its surrounding landscape and in creating an interconnected relationship with that landscape, creates a sense of belonging (2008: 4). While Haslam considers the riverscape relationship as separating people from the physicality of the river itself, she acknowledges that rivers encompass human agency as being intrinsically interconnected with the river.

Of equal significance, such riverscapes also need to be portrayed within a historical context. The representations and meanings symbolized in a riverscape are the product of human encounters with a river over time. Katrine Barber's book *Death of Celilo Falls* studies specific sections of the Columbia River and demonstrates the concept that history forms part of what we understand as a riverscape (2005). Barber uses this historic approach to riverscapes to discuss and better understand significant changes and transitions

during particular time periods (2005: 35). In this sense, we also 'go to the river' because there is a history embedded within the riverscape and we feel connected to that history.

However, riverscapes should not be seen as just fossilized cultural expressions of aesthetic meanings on an artist's canvas or catalogued in archived scenic photographs. Riverscapes reflect and represent a profound and intensely ongoing lived personal relationship. We 'go to the river' because it can renew our identity, renew our connection to the past and create a sense of our own human agency. Historically, non-visual artists are examples of individuals who have been inspired to express their direct lived experience with rivers: from poets such as Jonathan Swift, to prose authors such as George Elliot in *The Mill on the Floss* (1860) (Haslam 2008: 11). Examples of this expression of lived experience can also be seen in the Liard watershed where creative engagements with riverscapes make up an essential aspect of the cultural landscape that continues to shape the community identity of the area. Contemporary poet Melanie Siebert's book of poems, *Deepwater Vee,* is a collection of poetry about travels along Canadian rivers (2010). Siebert's poem about a tributary of the Lower Liard, the South Nahanni River, illustrates that people go to the river for a profoundly personal experience of renewal and re-connection:

> The Splits
> 61° 07' 25"N
> 123° 36' 31"W
>
> Last camp before the mountains fall behind.
> Figure on the river's shifty nature, slipshod delta
> Weave, dragonfly, but with the big shoulders and a janitor's
> Jangling keys. River splits into its dicey nighthawks
> Strumming warm air rising off cobble beaches.
> Braided, settling, river still teethed
> to undercut the outside bank.
> All our wet clothes hung on willows.

The loose lug nuts of a fall wind.
Waterline dropping.
The Butte's got its squat woodstove stoked,
the spiny fins of the front range zipline away.
Peter throttles down and waves,
headed upstream for a moose, packed light,
thermos, gun, and a couple gas cans,
he'll sleep in the bottom of his boat.
We're one day from flying out.

- South Nahanni River (Siebert 2010: 80)

There are other dimensions as to why people 'go to the river' that are identified in scholarship including recreation, environmentalism and scientific inquiry (Evenden 2004; Strang 2009). It is beyond the scope of this thesis to examine them all. However, the literature indicates that there is a complex and varied set of human relationships with a river, which have their roots in both historical and contemporary contexts. Cultures, stakeholders and individuals all have different ideas of why they are using the river and each of these varied perspectives are interwoven with physical interactions and cultural representations of rivers. As people 'go to the river' they employ their representations, ideas and values about how the river is used and rivers inherently become contested space. By examining why people go to the Liard watershed, we can better understand human agency embedded in river interactions, the representations of rivers and manage this contestation.

2.3 Human-River Relations

The term human-river relation is a sub-theme of the broad interdisciplinary discussions of human-environment relations. In placing the diverse set of interactions with the land and its resources into an analytical framework, Veronica Strang identifies human-environment relations as "dynamic intellectual, emotional and physical engagements with the material world" (2009: 28). Scholarship on human-environment relations first and

foremost asserts that humans do not merely interact with a 'natural' world, but 'the environment' is a creative product of culture (Strang 2009: 29; Wagner 1981: 71). Strang asserts that 'Culture' as an integrated pattern of human knowledge, belief and behavior cannot be separated from the environment. In the *Invention of Culture*, Roy Wagner further points out that the term culture derives from the Latin verb colere: to cultivate (Wagner 1981: 21-71; see also Strang 2009: 29, 52). 'Culture' can associate some of its meaning from our ability to utilize and engage with the landscape within which we live. Research on human-environment relations must therefore recognize "humans and their activities are intimately bound up with, and part of, multiple biological and ecological material processes" (Strang 2009: 29). Across multiple disciplines including environmental anthropology, environmental history and political ecology scholars recognize that humans do not just adapt to environmental pressures, but have considerable agency: we act within nature not upon its stage (Descola and Palsson 1996; Ingold 2000; Tilley 1993).

Even though there is increasing scholarship examining people's relationship to rivers, the term human-river relations is seldom used and its nuances are not thoroughly explored. Mauch and Zeller allude to the term in their introductory chapter "rivers in history and historiography" (2008). They were among the first scholars who asserted that rivers should not just be understood as physical elements of the environment but also be understood as a product of culture similar to other elements within human-environmental studies (Mauch and Zeller 2008: 3). In other words, a river cannot be understood exclusively as a product of culture or solely as a physical component of the hydrological cycle (Mauch and Zeller 2008: 3). Mauch and Zeller use an example from the American West during the fur trade where they describe that human activity not only manipulates the water quality but also redirects the course of the river itself. The authors state, "by

drastically reducing the number of beaver dams, the fur trade increased sediment transport, which, over time, changed the paths of many rivers and streams" (Mauch and Zeller 2008: 2). Other scholars have acknowledged the interconnection between humans and rivers by examining data such as city sewers and water pipe maps (Backouche 2008: 26). In such works, rivers are altered based on political ambitions, economic incentives or cultural values such as the importance of city parks (Backouche 2008: 26; Girel 2008: 78). In Jacky Girel's discussion of the upper Rhone and Isère River valleys, the rivers were transformed from a "volatile braided-channel system into a diked single-thread waterway flowing through the center of rich farmlands" (2008: 79). These authors, amongst others, support the understanding that rivers embody cultural meaning and such meaning is a reflection of how a river provides for the people who rely on it for their livelihood and life (Williams 2001; Strang 2004).

This connection between cultural meaning and direct experience with a river is dramatically exemplified in discussions about large-scale hydroelectric projects (Evenden 2004; Evenden 2009; Josephson 2002). As an example of this, Evenden's volume *Fish versus Power: an Environmental History of the Fraser River* focuses on the environmental debates surrounding hydroelectricity and the role of science in policy decisions (2004). Evenden asks the question why, unlike so many other rivers in North America, have fish "triumphed" over hydroelectric dams on the Fraser River (2004: 3). This questioning leads Evenden to examine the effects of human agency within the context of the conservation groups supported by the commercial fishing industry and the emergence of ideologies embedded in debates surrounding hydroelectricity development.

Human-river relations are also discussed as a way to examine human inequalities. Brett Williams' study focuses on the historical depth of social inequalities associated with

the Anacostia River in Washington, D.C (2001). For Williams, the Anacostia River is embodied with the conflict between individual livelihood and hegemonic politics of economic development (Williams 2001: 429). Her study illustrates that examples of injustice are consistently present when examining such socially constructed human-river relations (2001: 429). Following a similar anthropological approach, Shaylih Muehlmann examines the Colorado River Delta in her work entitled "How Do Real Indians Fish? Neoliberal Multiculturalism and Contested Indigeneities in the Colorado Delta" (2009). In Muehlmann's study of the Cucapà people, the Colorado River is a place that is profoundly contested and where environmental narratives have led to misunderstandings, stereotypes and conflicting agendas (2009). Muehlmann explores the Cucapà's expulsion from the Mexican fishing industry while identifying contested notions of indigeneity and the social inequalities that emerge from environmental rhetoric (2009: 477). In a discussion of the historical discourse of the Columbia River, scholarship recognizes that "racism has played an undeniable role in the history of northwest dams" (Johnson 2002: 271). With the construction of mega dams, the resulting resettlement of indigenous people, and destruction of the highest salmon-producing river in North America, the Columbia River is regarded as one of the world's most profound examples of irreversible environmental and human manipulation (Josephson 2002: 17). The implementation of 31 dams displacing countless communities and annihilating a vital food source that acted as the cornerstone for First Peoples' culture, the Columbia River was a means of indigenous removal (Josephson 2002; Johnson 2002: 271). Thus cleared from the land, Columbia River indigenous communities today have poverty rates between 27% and 44%, unemployment rates between 19% and 26%, and death rates that are "20% higher than comparable non-indigenous communities" (Johnson 2002: 268).

Karen Bakker is a leading political ecologist dedicated to understanding the politics and cultural dynamics of water resources, which is applicable to my research concerning rivers. In *Privatizing Water: Governance Failure and the World's Urban Water Crisis* (2010), Bakker challenges the debate of public versus private ownership of urban water supply by closely examining the conflict that inevitably surrounds water in general. The book is grounded in the notion that both government-controlled and private ownership models of water supply systems have serious flaws (2010: 14). Furthermore, Bakker recognizes that since water is a profoundly complex issue that transcends ecological, biological and spiritual realms, the debate must be "reframed" in order to accommodate such complexity (2010: 14). In doing so, Bakker analyzes multiple case studies and provides rich historical narratives to explore her core concepts. She deconstructs the dichotomy of private and public water control systems, recognizes the historical context that has led to water privatization, and also problematizes protests that structure an argument around a 'human right to water' (Bakker 2010: 5-10). In her work, Bakker conceptualizes the ideological context in order to "reframe our understanding of the involvement of governments, communities, and private actors in water supply as a means of suggesting new ways of thinking about – and eventually formulating solutions for – the world's urban water crisis" (2010: 8).

Additional literature examining human-river relations is often a byproduct of policy reports. One such example is *The changing value of Australian tropical rivers* where Jackson et al. report on their recent study completed for the Australian Statutory Research and Development Corporation (2008). In the report, the authors examine and assess the social and economic values associated with tropical rivers derived from a series of focus groups (Jackson et al. 2008). They suggest that the cultural values associated with the

tropical rivers of Australia have profoundly changed throughout the recent decades (2008). The article identifies and analyzes emerging trends in the values held about tropical rivers in a post-industrial era, as well as other contested societal values that the study revealed (Jackson et al 2008: 286). The analysis suggests that the values which once created a positive attitude towards agricultural runoff and large-scale hydroelectricity projects have been replaced with a more complex, broadly defined range of values including: river health, wetland rehabilitation, indigenous values and development visions (Jackson et al. 2008: 287).

Finally, as mentioned previously, the most prominent scholar who specifically examines cultural engagements and experiences with rivers and water is Veronica Strang. Her two books, *The Meaning of Water* (2004) and *Gardening the World* (2009), examine the cultural meaning of water by employing archival, participant observation and ethnographic interview methodology. In *The Meaning of Water,* Strang focuses on the River Stour in the town of Dorset, England in which she contextualizes the cultural meanings "encoded in water" and describes how water becomes a metaphor for human existence (2004: 5, 134). *Gardening the World* examines two watersheds in Queensland, Australia, the Brisbane and the Mitchell, in which Strang focuses on the human demand for water as well as the intensification of water usage and associated development agendas arising from economic globalization that has produced increasing contestation over the ownership of access to water (Strang 2009: 9). She argues that "water lies at the heart of all development; indeed, little can happen without it. It is integral to people's abilities to have agency, to generate wealth and to direct social, economic and political events" (Strang 2009: 2). Importantly, Strang consistently avoids an epistemological model whereby water and the rivers that carry it are understood as separate and external to human existence

(2009: 87). Water is not referenced either as an externalized object or as a purely internal symbolic concept, but instead is understood as being fully interconnected with human agency and part of a dynamic physical/symbolic process (Strang 2009: 89). While both of Strang's books are immensely insightful and applicable to my research, literature examining rivers as a unique aspect of human-environment relations is limited. For example, there is limited scholarly examination in western Canada of the phenomenological-based relationship people have with rivers such as movement along rivers, working on a river, or a sense of stewardship towards it.

2.4 Phenomenology: Experiential Theory for Human-River Relations

In order to successfully implement research on human-river relations, an appropriate methodological approach must be applied. One applicable approach is phenomenology. A phenomenological approach stands in stark contrast to the positivist empirical approach (Jackson 1981: 301). Working from an epistemological position of scientific positivism, studying a feature of the environment, such as a river, the researcher has accepted the philosophical concept of an externalized (that is, externalized from the human subjectivity), verifiable, and observable 'Truth' that is separate from the experience. This perspective fragments human interaction to a series of isolated, physical events (Soja 1989: 122-123). For instance, when we apply the 'Truth' of the empirical or positivist methods, then the landscape becomes so many coordinates on a map, or an external objectified backdrop to human interactions (Soja 1989: 122-123). In this perspective, a river is an essential part of the hydrologic cycle. Its water is a product of precipitation, surface runoff, a spring or a melting snowpack and is confined by a channel that includes a streambed and a floodplain. Rivers can be classified by a variety of ways including its bedrock formation, the channel pattern, age or the waters interrelation with its surrounding

ecosystem. An examination of the cultural meanings and other essential, creative human engagements with the environment that reveal aspects of reciprocal interactions with rivers is often missing from the scientific, positivist tradition (Ingold 2000: 172; Soja 1989: 124). Given my research objectives, the collection and examination of data through a series of positivist quantitative or analytical models, while important in its own right, is not the appropriate methodology for this thesis. In contrast to the positivist approach, a phenomenological methodology incorporates and emphasizes the exploration of individual narratives and direct experiences from which meaning and action are constructed.

A phenomenological approach also works particularly well with research that cannot be separated from indigenous history, epistemology and ideology (Jackson 1981: 301). In *Indigenous Methodologies,* Kovach problematizes such fundamental issues of research methodologies by illustrating that there has been no space created for indigenous methodologies in academia (2010: 39-40). The tensions between researcher and subject can easily be understood as a new form of colonization (Ermine 2007: 199-200; Kovach 2010: 75). The hierarchical power that is inherently embedded in research is amplified by how much structure and control the researcher has within the chosen method (Kovach 2010:125). In order to overcome the potential for a power relationship becoming exploitative, Kovach and others assert that researchers must move outside the cultural limitations that have traditionally defined academic research, and adopt a non-positivist approach (Ermine 2007: 199-200; Kovach 2010: 75). Kovach's discussion especially emphasizes that subjectivity must be fully accepted in order to anchor knowledge with experience (2010: 39-40, 111). For Kovach and many others, a phenomenological approach can act as a starting point for inclusive, innovative and decolonized research (2010: 39-40, 111).

A subjective experiential approach without context and discipline contains many risks for a researcher. Fortunately for the researcher, a particular stream of philosophy has, for over a century, prioritized experience over analytical models by emphasizing the importance of the living human subject (Moran 2000: 5). Phenomenology is best understood as an anti-traditional style of philosophizing and as a way to describe phenomena as it presents itself to the experiencer (Jackson 1981: 301; Moran 2000: 1,4). Phenomenology allows "one to delineate carefully one's own affective, emotional, and imaginative life, not in a set of static objective studies such as one finds in psychology, but understood in the manner in which it is meaningfully lived" (Moran 2000: 5). When the phenomenology movement was first introduced in 1901, it was a radical, bold attempt to refocus philosophy away from abstract speculation and towards concrete lived experience (Moran 2000: xiii). Certain philosophers, notably Heidegger and Merleau-Ponty, provide a foundational conceptualization for phenomenology as a counterpoint to positivist philosophical underpinnings. In *Being and Time*, Heidegger examines the core existential and ontological question of an individual as a Being (Heidegger 1978: 21-35). In an essay about human experience Heidegger states that the world 'is'. The "world' has no objective description beyond that which we as existent human beings provide it. If we step back from our assumptions, prejudices and objectifications, we exist at our most basic core state of being, which Heidegger terms *Dasein* – which in German literally means 'being there' (Heidegger 1978: 21-35). For Heidegger, building partially on the work of Husserl, to be human is simply an act of being: *Dasein* - existing in a world that simply is (Heidegger 1978: 21-35). Heidegger searches for a starting point for such a fundamental human state of mind and illustrates this starting point by stating that we are "thrown into the world" (Heidegger 1978: 21-35).

Merleau-Ponty's approach to phenomenology elaborates further on Heidegger's work by explicitly taking exception to the idealist position that there is a knowable truth external to the person who is just 'being' (2002). He argues that the existence of an external world is not separate from the person experiencing it, but is a product of their experiences and how they construct it (2002). This insight leads to the concept of what Merleau-Ponty labeled 'essences' (2002: 64). Essences are an individual's direct perceptions of the external world experienced through the senses that are entangled with the individual's constructs (Merlau-Ponty 2002: 64). These essences themselves are not neutral or objective but entirely bound to the world through human intentions: we act, speak, reflect at this level of 'essence' with some specific intention that we have directed towards an external world (Merlau-Ponty 2002: 64). For example in relation to my research, how we identify a river, describe it, name it, or rank its importance is solely a result of our intentions towards that river. These intentions, upon which we may ultimately act, might arise because we wish to drink its waters, to use the river to move from one place to another place, or see it as a source of energy for industrial usage. Identifying and recognizing these essences of the human-river relationship has the potential to uncover the core of the discourse, identity, belonging, sense of place, and often contestation associated with human-river relations.

Merleau-Ponty emphasizes that there is a state of mind that is directly attainable, which exists before we actually begin the process of constructing 'essences' (2002). A fundamental requirement of phenomenological methodology in research, therefore, is to attempt to attain a 'pre-perception' state of mind (*Dasein*) by setting aside previous social constructs and intentions during the research process. Phenomenology consistently emphasizes that to truly understand an experience we must experience it first-hand (Jackson

1981: 301; Van Manen 1997: 10). For a researcher, the goal of a phenomenological approach is first and foremost experiential – the researcher must directly perceive the subject matter of their research: "The world is not what I think, but what I live through. I am open to the world. I have no doubt that I am in communication with it, but I do not possess it; it is inexhaustible" (Merleau-Ponty 2002).

3 Chapter: Methods and a Phenomenological Methodology

Field Notes August 26th 2011

With journal and map in hand, Mesdhi and I retrace John M. McLeod's 1831 river voyage to its final destination. As we load the canoe and prepare to cross the lake, I stop to read an excerpt from McLeod's journal, "We landed on a small island on the north end where we found a deposit made by some of the natives of part of their property". "That must be it; that must be the island!" I say. As we catch our breath after the portage, I read on:

> *During our short stay on the island, the interpreter topped the branches of a high pine tree in which I cut my initials, day and date, number of my crew and date of my departure from Fort Simpson H.B.Co. and by the request of my crew named the spot McLeod's island, after thanking my crew for their uniform good conduct, and eagerness in bringing the voyage to a satisfactory close, which I now considered fully accomplished, and I hope to the satisfaction of my honorable employers, we embarked with the three cheers, and began to retrace our steps back. (HBCA B.200/a)*

"Do you think those trees are old enough? Could there still be markings?" I ask excited and eager to get in the canoe. After all, this was the final destination for an epic exploratory river voyage where McLeod and his crew traveled over 800 kilometers, through grueling portages, terrifying rapids and deep canyons. But something else rings deep in our minds as we canoe across the lake. A week earlier in the community of Watson Lake we were told that "islands, the elders say, should always be avoided... powerful medicine men are always buried there along with an offering. This keeps their power contained and so that they cannot be disturbed as they transition to the next spiritual world" (Jane interview 2011). We paddle closer to the island and within five meters we both stop paddling while we just drift on the slow windblown water. We steadily drift along the shore of the island, hesitating to step foot on its dry land, when directly in front of the canoe, we are both simultaneously drawn to the sight of a full grown Golden Eagle perched

on a bent spruce tree staring directly at us. Startled and slightly intimidated by its asserting presence we both instinctively paddle backwards. Above us, another eagle and two hawks circle the island, keeping a weary eye on their intruders. Despite our imaginations and ambitions we never set foot on the island. We accept that we are visitors at this corner of the lake and turn the canoe around.

There was no doubt that this was the same island mentioned by McLeod. The journals and stories from McLeod's river exploration only began to make sense through our act of journeying and being there. The warnings from the elders and the intersection of two cultures on a solitary island in a lake only began to make sense by paddling towards the island. It was clear that McLeod, like us, was a visitor on this island. It certainly wasn't his island before he arrived and it never was after he left.

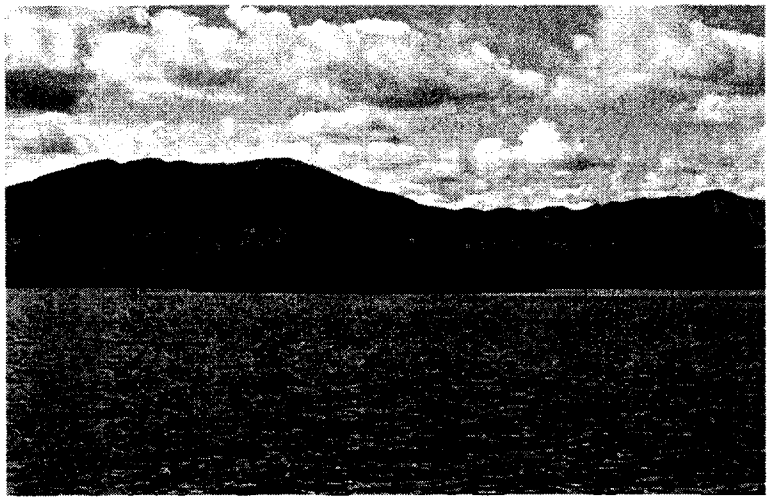

Figure 3-1. Island on Simpson Lake.
(J. Staveley, 2011)

Donald Meinig advises that research pursued through a sort of 'archival fieldwork' involves reading the landscape as "a humane art, unrestricted to any profession unbounded by any field, unlimited in its challenges and pleasures" (1979c: 236). Meinig further suggests that reading the landscape requires not only a reflective, holistic analysis but that

the researcher also needs to balance seeking specific details with an interpretation from a "keen sense of cultural history" (Meinig 1979c: 233). The research supporting this thesis was conducted over one and a half years between the Summer of 2010 and the Winter of 2012. Included in this time was a lengthy period of fieldwork based out of Whitehorse in the Yukon during which several trips were made to the Liard watershed in northern British Columbia and southern Yukon. Reflecting the interdisciplinary vision of this thesis and applying a phenomenological approach, I employ three key methods: primary source review, archival research and participant observation-based fieldwork. This chapter describes these three methods and how they are underpinned and supported by a phenomenological approach.

3.1 Research Methods

With a limited body of academic literature specifically focused on human-river relations, the design of an appropriate set of research methods benefited from the interdisciplinary nature of this thesis. Environmental historians and historical geographers, such as Matthew Evenden, who focus on historical human interactions with rivers employ extensive archival research as well as primary and secondary literature reviews (Evenden 2004). Cultural and social anthropologists who explore human interpretations of rivers, such as Franz Krause, select methods that utilize mapping techniques to produce data in conjunction with ethnographic interviews (Krause 2010). Political ecologists, such as Krista Harper, who discuss rivers as sites of contestation and inequality implement a methodological framework that incorporates literature reviews with interviews and participant observation-based fieldwork (Harper 2005, 2008).

I have extracted specific methods from each of the disciplines of environmental anthropology, environmental history and political ecology. My research model therefore

involves a) a primary source review, b) archival research and c) participant observation based fieldwork which includes ethnographic interviews. Similar to my selected research methods, anthropologist Veronica Strang, who contextualizes the cultural meaning of and human relationship with water, also implements the same three core methods in her research (Strang 2009). While Strang's two books are comprehensive studies (i.e. significantly larger than this project), her work effectively illustrates how these three core methods can work together. Thus I parallel Strang's research method design while also following a phenomenological approach (Tilley 2008; Van Manen 1997). In doing so, I draw from and acknowledge the way each discipline contributes to our understanding of human-river relations. Perhaps more importantly, in applying a phenomenological approach, each method does not stand alone in isolation. The three methodological components inform each other through dynamic interactions.

3.1.1 Primary Source Review

I conducted a broadly based secondary literature review of a wide range of related topics including theories of place and space; human mobility; rural community development; water policy; and theories about wilderness preservation ideology. I also conducted a focused study of primary sources as part of the methodological process to isolate specific information relating to my research questions. The primary sources collected in this section are both historic and contemporary in nature. In this section, I discuss only the primary documents that relate to the Liard watershed in northern British Columbia and include maps, text and photographs. I also conducted a primary archival research, which identified a different set of documents (see method section 3.1.2).

Following a phenomenological approach, in particular the technique of setting aside one's assumptions and prejudices, the primary non-archival document review was a

dynamic and fluid process. For example, in addition to general searches of material and themes, I also reviewed specific documents in preparation for and related to specific interviews (eg. with water management organizations, etc.). On other occasions, I was directed towards specific primary documents during an interview or encountered documents as a result of having spent time in a certain community. A positive result of adopting this phenomenology-based process was that I was able to discover some specific documents that I would otherwise not known about or that had been previously unavailable to me. A prime example of this was when I was directed towards the Kaska Noun Dictionary (located in the Kaska Education Centre), which assisted me in a deeper understanding of the meanings of certain place names attributed to points on various rivers (see Kaska Elders 1997). The risk in such a dynamic process to data collection is that it can quickly lead to an overwhelming collection of primary sources. In order to refine and mitigate this effect, it was necessary for me to filter the documents to only focus on those that were based on specific concepts, themes and topics defined by my research goals. The primary document review was divided into three thematic areas of focus:

1. Documents relating to hydroelectric development in northern British Columbia including water/river management and policy reports; British Columbia Hydro documents; government bills relating to water management; legislative assembly records; mining surveys and maps.
2. Sources pertaining to river conservation, heritage and stewardship such as environmental reports from river activists; rivers and land management initiatives such as the Muskwa-Kechika management strategy plan; material from Parks Canada and British Columbia Parks; newsletters from organizations involved in river stewardship; newspapers articles; photographic books; art exhibits; and internet-based discussion pages.
3. Recorded river narratives and river place name documents such as recorded oral traditions; the Kaska Noun Dictionary; published place name maps; river guidebooks and published river trip notes, maps and accounts.

Relevant information within these documents was isolated and analyzed following the methodology laid out using content analysis (see section 3.1.3).

3.1.2 Archival Research

I applied archival research methods in order to isolate information about past human-river relations within the Liard watershed. The archival research method involved reviewing primary resources that have been collected and organized for the dates between 1800 and 1940. In order to understand the individual interpretations of the past, a document must be viewed in its entirety (Furay and Salevouris 2000: 17). A review of primary documents in their entirety allows the researcher to reflect on the subtleties that would have otherwise been missed if the researcher only examined excerpts from archives (Binnema 2010: np). Accordingly, in conducting the archival research, I took care to ensure that I reviewed the whole of the available materials and not merely excerpts or partial selections.

After conducting a preliminary search and review of the available archival material relating to the Liard watershed in British Columbia, it was apparent that the most applicable data were contained in the Hudson's Bay Company Archives. During the nineteenth century, the Hudson's Bay Company established a network of trade in the Liard watershed through the development and acquisition of a series of trading posts (Karamanski 1988: 87). Every Hudson's Bay Company post was directly located on the bank of either the Liard River or one of its main tributaries and most were located at the confluence of the Liard's tributaries. Indeed, some of the former Hudson's Bay Company posts are still villages today, such as the northernmost British Columbian community of Lower Post. As a result of the Hudson's Bay Company's connection to rivers in the Liard watershed, I focused my research more specifically on their archives.

The Hudson's Bay Company Archives is located in Winnipeg, Manitoba. On request, the archives loan copied microfilm material to libraries throughout Canada including the University of Northern British Columbia and the Yukon Archives. The journals and reports from Fort Halkett, Black River Post, Liard Post, Fort Liard Post, Frances Lake Post, Dease Lake Post, Upper Post (Dease River) and Fort Simpson were reviewed with dates ranging from 1830-1940.

After reviewing the archival materials in the Hudson's Bay Company journals written from within the Liard watershed, I summarized and analyzed the early historical interactions in the region. To illustrate these initial findings, I then tabulated them into a timeline. I further narrowed my examination to the journals of John M. McLeod documenting his 1831 and 1834 river expeditions. As part of his journeys, John McLeod wrote two detailed journals and included a map of the entire watershed in his 1831 journal and an "Indian Chart" map in 1834 (see HBCA B.200/a; HBCA Fort Halkett B.85/a). Both journals and the two maps offer immense insight into past human-river relations.

3.1.3 Analyzing Primary and Archival Documents: Content Analysis

The scope and nature of the potential documents for both the primary sources and the archival material is multi-dimensional and includes visual and textual materials, and covers a vast range of subjects and time periods. The research required me to effectively and appropriately narrow the selection of primary and archival documents. I limited the scope of the primary material using content analysis to ensure that the selected material addressed the larger research question as to how, in using the Liard watershed as a case study, I could understand rivers as cultural places. In order to effectively carry out the analysis of primary source and archival research, I also had to be acutely aware that my own perspective limits and defines my understanding while the author of the document that

I am examining also writes from a fundamentally different basis (Krippendorff 1980: 21). Therefore, I employed content analysis as my methodology for ensuring the documents and information in them focused on my research questions.

Content analysis is an accepted method for studying human documented resources that addresses the challenge of bias and pre-determined perspectives held by the researcher. This understanding and emphasis of the risks of bias and pre-determined perspectives aligns with a phenomenological approach. Content analysis is a "research technique for making replicable and valid inferences from data to their context" and it provides an appropriate approach that can be utilized in the social sciences (Krippendorff 1980: 21). Content analysis is a "tool" that can provide insight and balance to a larger research project (Krippendorff 1980: 21). Kripperndorff discusses content analysis as:

> potentially one of the most important research techniques in the social sciences. The content analyst views data as representations not of physical events but of texts, images, and expressions that are created to be seen, read, interpreted, and acted on for their meanings, and must therefore be analyzed with such uses in mind. (2004: xiii)

Figure 3-2 outlines the framework for content analysis adapted from Krippendorff that guided my primary source research design and critical examination of the data while providing direction for interpretation.

1. The data the analyst has available to begin an analytical effort
2. The context of the data
3. How the analyst's knowledge partitions their reality
4. The target of a content analysis
5. Inference as the basic intellectual task
6. Validity as ultimate criteria of success.

Figure 3-2. Adaptation of Krippendorff's Content Analysis Framework.
(from: Krippendorff 1980: 26; 2004: 29)

The following discussion illustrates my use of Krippendorff's framework for content analysis as applied specifically to the Hudson's Bay Company journals:

1. The data the analyst has available to begin an analytical effort: The Hudson's Bay Company journals that I examined can only be found at the posts that directly relate to the research region (Liard watershed in British Columbia). More specifically, the journals that I examined were from: Fort Halkett, Black River, Liard Post, Glenora, Fort Liard, Frances Lake, Dease Lake Post, McDame Creek, Fort Nelson and Fort Simpson.

2. The context of the data: These journals were kept to document the trade of furs with goods and to inform the company directors in London of all information pertinent to the operation of the company (Simmons 2007: 119). They were kept during a time (1830-1905) when record keeping and communication was considered vital to the success of the company and therefore reflect the agenda of the Hudson's Bay Company and the journal authors as actors within that system (Simmons 2007: 119).

3. How the analyst's knowledge partitions their reality: I have been trained in a society that has been strongly influenced by multiple ideologies such as colonialism, capitalism or positivism. Awareness of this perspective and my knowledge of anthropology will shape how I access and interpret data in these journals.

4. The target of a content analysis: My intention with the Hudson's Bay Company journals was to look for data relating to human relationships and interactions with rivers.

5. The inference as the basic intellectual task: The interpretations that I draw from the Hudson's Bay Company journal will be used within a larger research project that incorporates this data with other sources.

6. *Validity as ultimate criteria of success:* By looking both at maps and journals as well as my own experiences and fieldwork, I was better able to analyze the content of the Hudson's Bay Company documents.

I applied content analysis to maps, photographs and other primary sources including archival material to work towards answering my research questions. The content analysis I implemented addressed both general and specific data, helped guide my research process, and allowed me to critically examine my knowledge and limitations as a researcher. However, the content analysis of primary sources and archival documents does not provide a holistic examination for human-river relations research. Therefore, fieldwork that included participatory research and ethnographic interviews was implemented to triangulate the data collected in primary and archival documents.

3.1.4 Fieldwork: On the River, in the Communities

The third method component in my research was to conduct fieldwork that employed participant observation (Fife 2005: 2, 71). As an essential element of anthropological research, participant observation fieldwork provides the foundation of cultural anthropology (Bernard 2006: 342). It is the most basic and essential method for all ethnographies (Fife 2005: 71). Introduced and exemplified by early anthropologists such as Bronislaw Malinowski and Margaret Mead, the purpose of participant observation is to incorporate knowledge that outsiders would not otherwise be able to access and which is essential for a holistic understanding of the research topic (Erickson and Murphy 2008: 126; Fife 2005: 1). Wayne Fife (2005: 71) argues that participant observation is conducted to essentially engage in situationally appropriate activities while observing activities, people, and physical aspects of the situation (see also Spradley 1980: 54). Participant observation is a method "by which fieldworkers attempt to achieve ethnographies and

understanding through an artful synthesis of 'insider', 'subjective' participation and 'outsider', 'objective' observation" (Erickson and Murphy 2008: 126; Fife 2005: 71-91). Therefore, participant observation is a balance between research that incorporates an emic (participant) approach and etic (observation) research approach (Erickson and Murphy 2008: 126; Fife 2005: 71-91)). As a methodological tool, participant observation has the potential to allow anthropological researchers to engage at a level that limits the tension between researcher and their 'subject' to a minimum (see Behar 1996: 1-33; Kovach 2009: 112). However, participant observation demands that the researcher also separate his or herself from this 'insider' perspective and also conduct research from an 'outsider' perspective (see Behar 1996: 1-33; Heewon 2008: 25-27). The equal weighting of value between insider and outsider experiences further allows the researcher to synthesize perspectives in order to get insight on local-global articulations (Biersack 1999: 10).

Much of the literature for research methods calls for a phenomenological approach towards the ongoing fieldwork process (see Kovach 2009; Tilley 2008; Van Manan 1997). During fieldwork that involves participant observation individuals share emotions, ideas and creative engagements, while subsequently reflecting on that embodied experience through the process of writing (Strang 2006). Methodological processes such as field notes, journals and the act of taking a photograph are mnemonic devices designed to trigger the researcher's memory of participant observation fieldwork. Furthermore, participant observation seeks to achieve intercultural collaboration (Strang 2006) in an ethical space (Ermine 2007). In doing so, this kind of anthropological fieldwork is not merely a brief visit where the anthropologists get a 'taste' of a particular culture. On the contrary, the anthropologist requires a full, immersed form of engagement (Strang 2006). This approach is consistent with phenomenology's epistemological framework by emphasizing the

importance of 'being there' (Merleau-Ponty 2002; Tilley 2008) as well as community-based research that demands a long-term commitment (Markey et al. 2010: 174). Given the essential nature of my thesis argument that we must experience rivers to discover our relationship to them, including the use of autoethnography in this research encourages experienced-based self-observation and self-reflexive interpretations (see Behar 1996, Reed-Danahay 1997; Tuan 2001b; Van Manen 1997).

While the personal experience of travelling river routes and community-based research allowed me to gain insight as to how the experience of river relations interacts with the data collected through other methods, it also provided a reflective and experience-based approach to analyzing historic and contemporary documents. I kept a detailed journal of my river trip that recorded my experiences and reflections of the river-based fieldwork. Further, I recorded this participant observation-based approach to fieldwork through a photographic journal where I took approximately 500 photographs of human-river interactions as I traveled. The content of these photos were purposefully broad to illustrate the range of fieldwork experiences. They include trapping cabins eroding into the river, horse trails crossing the river, abandoned highway motels, seasonal riverside mushroom picking camps as well as photo journals of my river trips. Additionally, I carried a basic GPS unit where I could create 'waypoints' at significant spots and align the photographs with such locations. This data were then catalogued and located "in place" on web based 'Google maps' that I created. These photographs and their corresponding geographic coordinates acted as base data from which I could digitally revisit significant spots during the writing process in order to enter additional data such as archival material or interview narratives.

3.1.4.1 On the River

This component of the fieldwork comprises participatory research. Over the course of two summers, I travelled two major tributaries of the Liard watershed by canoe. In late July of 2010, I travelled for nine days by canoe with one other participant, from the upper reaches of the Gataga River into its confluence with the Kechika River and 200 kilometers along the Kechika River to its confluence with the Liard. The following year, along with two other research participants, we paddled the route of John McLeod's 1834 exploratory trip along the Dease River using, as a guide, his journal and the 1834 map. The focus and intention of this river trip was to examine his journal narrative and maps through an experiential analysis. We left on the same day of the year, July 14th, as did McLeod, so as to emulate similar seasonal and water conditions as well as encouraging the psychological and experiential connection with McLeod's experiences as he recorded in his journal.

The trip participants on both trips were given a journal (the second trip participants also had the archival "Indian Chart" from McLeod's journal glued onto the front page) and they were asked to record daily field notes. All three participants took detailed notes, including sketches, which I then analyzed. Along the river and at evening camps, conversations were recorded. These interviews followed an in-depth, open-ended interview model where participants and I had conversations that were not dictated by a specific predetermined structure, but guided by specific research questions that I had outlined prior to the trip (Fife 2005: 93). Further, these interviews were 'place-specific'. For example, on the Dease River trip, I would read sections of John McLeod's 1834 voyage journal that was relevant to the same section of the river we had just travelled through. I would then ask questions about how the participants perceived and reacted to the history of the region and about their direct experience of 'being there'. We would also stop along the river at key

locales that I had identified prior to the trip. These locations were deduced from the descriptions in McLeod's journals that included specific river confluences and campsites. In this way, we observed a similar riverscape, experienced a similar range of weather conditions as those noted by McLeod, and travelled along a river as unfamiliar to us as it was to McLeod (who relied on the information of indigenous people as well as information provided earlier from fur traders and guides).

During the course of the fieldwork, I employed additional methods that served to triangulate, confirm and validate information collected from what was obtained through these river trips. Important amongst these additional methods was a community-based research approach.

3.1.4.2 In the Communities

This component of the fieldwork comprised ethnographic fieldwork in addition to participant observation. I implemented elements from community-based research methodology (CBR) as it applies to rural communities (Markey et al. 2010: 158). Markey et al. (2010) describes the essential and pragmatic steps for conducting CBR in the communities of rural region of northern British Columbia. I use the plural word 'communities' as the nature of my research did not allow for a traditional community research model that is bounded by a single community. My research was highly mobile in order to reflect a rural mobile way of life that prevails in the Liard watershed (Markey et al. 2010: 162). I applied a CBR approach, acknowledging that effective and ethical research requires that substantial time be committed to relationships within those communities based on respect and patience (Markey et al. 2010: 174). Research was carried out in a flexible, cooperative manner, and it was my intent to establish a strong network of lasting

relationships (Markey et al. 2010). See Appendix D for UNBC Research Ethics Board Approval.

I conducted formal and informal interviews with a wide range of individuals in order to obtain a diverse range of perspectives about the Liard watershed. For my fieldwork, I followed a qualitative research approach and contacted twenty-two individuals based on their relevance to the geographic region and diversity of their relationship to the Liard watershed. The contacts included First Nations education and development coordinators, canoe instructors, Alaska Highway lodge owner/operators, river guides, river travelling musicians, environmental activists, members from the Yukon and British Columbia Water Resources departments and park planners. This research did not include a formal interview with industrial user representatives. Rather, I pursued information about mining and hydroelectric operations that were available in published documents and websites.

From the twenty-two contacts, formal interviews were carried out with ten individuals. They were selected based on availability, willingness to participate in a formal interview and their relevance to the thesis research goals. The interviews were conducted in person or by phone. The interviews followed an in-depth, open-ended model where participants and I had conversations that were not dictated by a specific predetermined structure (Fife 2005: 93). This allowed participants to detail their perspectives with little interference from me, yet this approach still allowed me to guide the dialogue to specific topics associated with the importance and meaning of rivers in their lives (Fife 2005: 93). In this way, the most important issues and topics to the participants became the focus of the research. Thus, the interviews and community contacts continuously shaped the research process. There were some individuals, besides those that were interviewed, who

participated informally with the research, but they chose not to engage in formal interviews. Any specific information they provided to me was not included in the following chapters.

There were additional communities and participant-observation experiences that shaped this research. I was an active member in online communities relating to river conservation or water policy such as "Save our Rivers", "Skeena Watershed Conservation Coalition", "Save our Sacred Headwaters" and "British Columbia Water and Waste Association". Other online communities were nostalgic groups such as "Cassiar do you remember". The online community participation through social media consistently led to contemporary and focused primary documents about current issues and events.
Finally, community-based research creates methodological and conceptual space for the fluidity and ad hoc interactions that occur through participant observation (Markey et al. 2010: 172). CBR insists that this 'being there' style of research is a "sincere dimension of rural research, while offering researchers a reflective lens to prepare for and view community interactions in such a way that enhances rather than jeopardizes reliability" (Markey,et al. 2010: 172). In the upmost headwaters of the Liard watershed, I spent a week on a moose hunt. While in the Liard's middle canyon I spent many nights camped along the river having casual conversations with local inhabitants, taking photographs and writing down observations. On several occasions I visited the community of Watson Lake and Upper Liard where the Liard River still acts as a vital transportation and cultural lifeline. I attended public lectures and environmental forums, taught canoe lessons for high school groups, and visited river-related art shows and museums.

3.2 The Value of Experience

If scientists experiment, humanists experience (Tuan 2001b: 43). However, the humanist must also conscientiously and systematically reflect and organize such experience

(Tuan 2001b: 43). I employed a phenomenological approach as a methodology by which to incorporate direct lived experience in my research. By emphasizing the importance of direct experience, the use of a phenomenological approach supports alternative epistemologies, the importance of experiential narratives, and a self-reflective analysis (Moran 2000: 5). Further, a phenomenological approach aligns with community-based research in its methodological flexibility, patience and commitment of time, which are essential components for doing research in remote regions and small communities (Markey et al 2010: 174).

It is a difficult proposition to simply 'be there' and then turn around and write about those lived experiences (Tuan 2001b: 44; Van Manen 1997: 30). By ignoring this challenge and simply using the term 'phenomenological' to embody a research method, the resulting work can readily slip into an unstructured, overwhelming documentation of all the essences that surround the researcher and the experience under study (Jackson 1981: 300-301; Van Manen 1997: 30). In *Researching Lived Experience,* scholars of education such as Van Manen describe phenomenology as a research framework that does not necessarily have a set method or set of procedures designed to develop qualitative data. One of the major principles when employing a phenomenological approach is that there is no pre-defined method to applying it at all. While Van Manen emphasizes that the method of phenomenology is that there is no method, he nonetheless argues that there is a "tradition, a body of knowledge and insights, a history of lives of thinkers and authors which, taken as an example, constitutes both a source and a methodological ground for present human science research practices" (1997: 30).

Instead of a closely directed, well-established laid-out phenomenological method, Van Manen states that the phenomenological research process within human science is one

that follows a focused, yet unguided, path (1997: 29). Studying lived experience and the essences within that experience cannot be achieved by following a predetermined path with clearly marked "signposts" (Van Manen 1997: 29). The path must be discovered and followed "as a response to the question at hand", wherever that might lead the researcher (Van Manen 1997: 29). With this perspective, a phenomenological approach to an interdisciplinary study is particularly useful:

> A human science researcher is a scholar: a sensitive observer of the subtleties of everyday life, and an avid reader of relevant texts in the human science tradition of the humanities, history, philosophy, anthropology, and the social sciences as they pertain to his or her domain of interest.
>
> (Van Manen 1997: 29)

In answering the question as to how to conduct research on human-environment relations, Christopher Tilley provides a methodological guide concerning how to conduct research on human-environment relations (2008: 274). Tilley's method for fieldwork allows us to examine the process by which people in both the past and present have understood, experienced, engaged with and moved through the landscape. It involves visiting and recording landscapes of historic significance to humans and familiarization with the landscape by following the human paths of movement through the landscape while recording observed changes and relationships (Tilley 2008: 274). I employed Tilley's methodology in my repeat of McLeod's actual river journeys while ensuring that I applied phenomenological principles of setting aside assumptions and prejudices.

3.3 Creative Synthesis: Interpreting Human-River Relations

The final process in my research was to provide a creative synthesis of the information collected during my fieldwork with the archival and primary documents. The concept of a "creative synthesis" is a tool in the phenomenological method that distills data so they can be presented in an accessible form that more directly conveys the knowledge of

the phenomena in question (Moustakas 1994: 100). Creative synthesis "represents the essence at a particular time and place from the vantage point of an individual researcher following an exhaustive imaginative and reflexive study of the phenomenon" (Mousatakas 1994: 100). This phenomenological approach to synthesizing the data is particularly apt in an interdisciplinary analysis of human-river relationships. If we are to truly understand the writings in an archival record or the words spoken in an interview, we must also understand the nature of the experience that gave rise to those writings or spoken thoughts (Moran 2000: 142). The use of my own personal narratives from my field notes supports a self-reflective approach. Including direct quotes, drawings and illustrations from participants and other documents further supports the use of phenomenological approach in research that values the lived experience of the individual.

In addition to personal narratives from my journal, photography is used to provide revealing illustrations of scenes from the Liard watershed. Photographs help illuminate the complexities of a particular issue while creating a forum in which to provoke discussion (see Crowder 2003; Cummins 2004; Hammond 2003). The photographs throughout this thesis are a source of data for my research and a part of the application of the creative synthesis. As data, the photographs accompany the self-reflective narratives and synthesis of information to provide illustrations and representation of cultural/social expressions. As part of a method, they were used as mnemonic devices designed to trigger my memory of participant observation fieldwork as well as document the river trips. Finally, the photos can be additionally utilized as a way for the reader to visualize river experiences and relationships that will ultimately provide a creative arena to discuss the information and issues that are presented.

I identified my goals for this thesis study from various sources of information about

an understudied region (the Liard watershed in British Columbia) and an understudied topic (cultural value of rivers), which proved to be incredibly challenging to synthesize into a continuous narrative. I quickly learned that investigations into human-environment relations are complicated by their very nature. The landscape or riverscape is not just 'there' waiting to be analyzed, but rather interpretations are constantly being produced and reproduced (Wynn 2007: xiv). Studies of human-environment relations are an act of interpretation and reinterpretation based on political, economic and cultural factors, as well as ecological and physical materiality (Smith 2001; Wynn 2007: xiv). To provide a rich and complete narrative of the complexities and wonders of the Liard watershed, would require multiple years of research and an extensive volume: one could spend a lifetime. Obviously such a volume is outside the boundaries and purpose of a Master's study. Therefore, the creative synthesis is ultimately a reflection of my own perspective and research goals and follows my commitment to further advance both the interdisciplinary analysis of the ideologies that establish human-river relations and to contribute to the environmental portrait of an understudied region of British Columbia. The three following chapters are not intended to close the dialogue about human-river relations and the related history of the Liard watershed, but instead work to create a thought-provoking reflection and interpretation that opens the possibilities for further research. The following chapters present data, theory and interpretations through a series of three essays from the Liard watershed.

4 Chapter: Representations of Rivers, Representations of Experience

Field Notes May 20, 2011:

I am listening to a presentation hosted by the orienteering club of the Yukon. While my fieldwork is intentionally diverse and the orienteering club is full of people deeply committed to the environment, I am not entirely sure if this presentation is a good use of my time. The individual presenting is very passionate about the Group of Seven's paintings and orienteering. He describes how he travels to the location represented in the painting. Then, using mapping, orienteering and repeat photography/artistry techniques, he documents and shares his journeys with others. Following maps and discovering the locations where A.Y. Jackson or Arthur Lismer painted a landscape is a way for him to connect in a very elemental way to the historical past through its art. He sees and uses the paintings as a visual archive of perspectives of nature that he directly experiences when he repeats the artist's visit to the painting's location.

I had been exploring the meaning of and actual requirements to do 'repeat' actions within research methods. As I listened to him speak, I wonder how his experience applies to my intentions to retrace McLeod's route along the Dease and Liard rivers? Then, the presenter shows a detailed map of the Algonquin region. In explaining to the audience how he discovered the exact location of a specific painting, a location which was previously a mystery to all but the original artist, he starts saying, "the first thing every orienteer does when given a map is to..." Before he finishes the sentence, the crowd of enthusiastic orienteers join with him in unison, as if they had rehearsed this moment, "realign the map in the direction you are going".

Until this presentation, the use of the 1834 Liard-Dease 'Indian Chart' for navigation was a mystery to me – the 'Indian Chart' showed little resemblance to the

contemporary maps or satellite photographs of the area that I had laboriously pondered. However, once I realign the map in the direction of travel from which McLeod's guides would have surely started, the map and the role of the navigator within the map starts to make sense to me. I sketch the following note to myself:

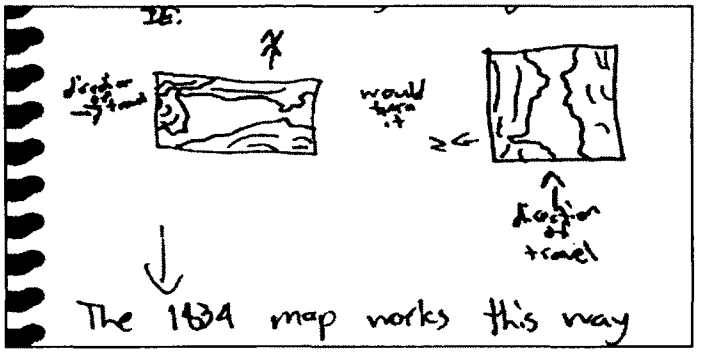

Figure 4-1. Sudden understanding the 1834 map's orientation.

August 24, 2011:

In search for the remains of Fort Halkett, today I attempt to negotiate my way through the thick brush of the Liard Valley where the Alaska Highway crosses the Smith River. All I find is a scattering of old cans that were probably left behind during the building of the Highway. But, I'm not yet at the confluence of the Liard and Smith Rivers and that is where Fort Halkett would have been. "Forget the bush", I think to myself, "follow the river". By walking on low water gravel bars, sandbanks, falling into the water twice and swimming across it once I finally reach the confluence of the Smith and Liard Rivers. Here the confluence acts as a natural harbor where York boats could be tied to a tree and protected from the westerly winds. Further back into the trees, the ground was flat, showing evidence of human impact, but the fort had become a victim of the multiple Liard River floods in the past century. To the east, is calm water acting as a meandering road to the Liard Hotsprings before plummeting down and through the Liard's Grand

Canyon. In front of me, as I look to the west with map in hand, is a path to the Pacific.

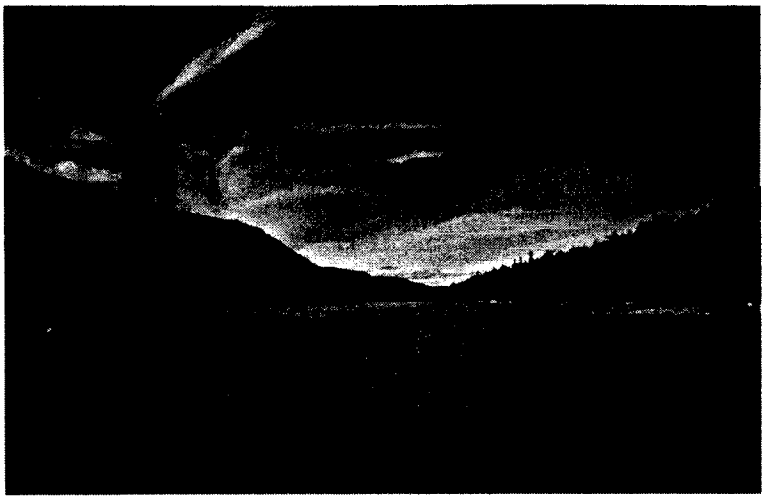

Figure 4-2. Looking west at the confluence of the Smith and Liard Rivers.
(J. Staveley, 2011)

While historians of the northwest fur trade and anthropologists of northern British Columbia provide detail about McLeod's voyages along the Liard Valley, very few mention the existence of maps and none examine them as a historical source or discuss how river maps in northwest Canada convey meaning.[2] During the years 1831-1835, Hudson's Bay Company employee John McLeod traveled two separate voyages along the Liard. For each voyage, McLeod wrote a comprehensive journal and included a river map. While the Hudson's Bay Company's motives for mapping the rivers in the northwest were primarily economic, the river maps of the Liard represent more than the river as just a global economic trade network in an emerging frontier (Evenden 1999: 169). As representations of both physical and social constructs, Liard River maps can also be examined as

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[2] The only study to mention McLeod's 1831 map is Lloyd Keith's edited volume *North of Athabasca: Slave Lake and Mackenzie River Documents of the North West Company, 1800-1821* (2001). Keith provides a synthesis of the post journals along the Mackenzie River and the opening of the fur trade in the Nahanni and Fort Nelson region (2001). The 1834 Liard Valley map has not been discussed in any scholarly literature.

metaphors that represent human-environment relationships based on river experiences and mobility (Belyea 1992: 1-24; Harley 1988: 1; Smith 2007: 81). As such, rivers should not be examined as abstract environmental or topographical features on a map but first and foremost as a phenomenon that an individual directly experiences during their travels through the landscape.

This chapter examines two nineteenth century river maps in the Liard Valley and investigates how these maps significantly represent human-river relations embedded in experience. In particular, the river map from McLeod's 1834 journal is used to exemplify these representations, experiences and relationships. In my examination of this map, employing methods from phenomenology, I draw on my fieldwork in which I travelled the same route illustrated in the map. In doing so, I was able to explore how this river map communicates to the river traveller and I ultimately argue that Liard River maps are embedded with the journeys and relationships that produce them.

4.1 Map as Representations

Archaeologists, historians and geographers continue to use maps in past interpretations of human-environment relationships. They typically do so within a framework where maps are representations of areas of land delineated by identifiable features such as mountains and lakes. From this perspective rivers are considered just another topographical feature. As an example, in *Historical Maps of Canada,* Michael Swift provides a gallery of top-down cartographic visions of Canada. According to Swift, historical maps of Canada "were required to record the physical presence of land and of physical features" (2001: 21). Swift further states that while historical maps of Canada during the colonial era often include rivers, the purpose of these maps were to record land and ownership of that land. Essentially, they are maps that include rivers as landmarks and

identifiable features that assist in the political domination of a landscape:

> At a more local level, the maps could illustrate the ownership of parcels of land that had been divided between individual colonists. In the Euro-centric way in which North America was colonised, the great European monarchs granted huge areas of land to their subjects for the creation of colonies; while these often took account of major geographic features, such as rivers, they were quite often arbitrary in the delineation of borders (Swift 2001: 21).

As Swift and others have noted, European hegemony imposes a Cartesian perspective on the landscape and with it the view that a map positions active representations against a passive backdrop (de Certeau 1984: 121; Harley 1988: 1; Smith 2001: 71). The Cartesian perspective of maps arises from concepts deeply rooted in western-based ideas of science, mathematics, geometrical space and philosophical tradition (Low and Lawrence-Zuniga 2003: 5-6,17; Tilley 1993: 22). In western European culture, "these notions can be traced to Renaissance rationality that separated people from nature, abstracted both, and created a separate ideal, a background of objective reality" (Low and Lawrence-Zuniga 2003: 16). The environment is broken down into functional components that inevitably become divorced from human aspirations and creates a conceptual hegemony towards how humans ultimately relate to our surrounding landscape (Low and Lawrence-Zuniga 2003: 5-6,17; Tilley 1993: 22).

As a counterpoint to this western hegemony, scholars present alternative theories intended to deconstruct such traditional rules of cartography. Maps are presented as being representations of authority (Harley 1988: 1; Monmonier 1991: 1). Examples include a dialogue on early Ordnance Surveys as a way to assert power and ownership (Smith 2007; Withers 2000) or how maps were utilized as a colonial tool (Brealey 1995: 140; Harley 1992). Maps and mapping techniques have also been presented as providing alternative epistemological representations of the environment including discussions on aboriginal

maps and mapping (Belyea 2007; Binnema 2001; Helm 1989; Pentland 1975) as well as cognitive mapping (Brody 1981; Downs and Stea 1977). Contemporary scholarship therefore argues that maps are not objective forms of knowledge, but instead maps are cognitive understandings and articulations of the relative structure of the world portrayed onto a cultural artifact (Binnema 2001: 219-220; Harley 1988: 1; Smith 2007: 81-83). Such arguments re-direct our understanding of human-environment relationships represented in maps away from an abstract conceptualization towards a more place-based understanding.

Many maps, particularly of northwest Canada, encompass more than the representations of physical features or of political authority and cannot be understood solely in terms of epistemological or cognitive orientations. Such epistemological or cognitive orientations of maps are essential to their understanding but fail to recognize the mapmaker's direct experience with and relationship to the physicality featured on some maps (see for reference Smith 2007). Rivers are not passive geographical features of the landscape framed by epistemological or cognitive understanding. In the past, rivers have been active pathways enabling human agency and they continue to be, albeit in a changed form. For river maps, epistemological and cognitive constructs portrayed in the map are made manifest through the act of travelling along the river. Unlike many contemporary maps of western Canada, historical Liard River maps are embedded with the journeys that produce them and represent the experience that is obtained from a physical relationship with the river. As such, the maps and the rivers depicted on them are representations of river experiences.

There is only limited literature examining historical maps of western North America that allude to this element of direct experience. Such examples include June Helm's work distinguishing maps written by Samuel Herne's guide, Matonabbee, in the late 18th century

(1989). Helm uses ethnographic and ethnohistorical knowledge to describe the features of three Athabascan maps (1989). In her analysis, the lakes and river are emphasized and depicted as interconnecting pathways, but not as interconnected experiences. Linda Johnson provides a strong contextual analysis of an 1880 map 'co-authored' by a French explorer and a northeast Alaskan local named Paul Kandik (2009). Johnson argues that the map reflects a time when indigenous knowledge was being fused with the mobility-based ambitions of explorers (2009). In the North American plains, Theodore Binnema investigates Blackfoot mapping techniques during the early 19th century. In this case, Blackfoot maps communicate to the reader through a network of viewscapes and other isolated identifiable landmarks (Binnema 2001). Recognizing the experiences of the mapmaking traveller and the role of a unique landscape, they are "maps designed by plains people, and they truly represent a view of the plains from the plains" (Binnema 2001: 212). Therefore, to effectively interpret the intersect between what is represented on McLeod's maps and the experiences that produced them, we must first understand the historical context within which the maps were created.

4.2 Nineteenth Century Northern British Columbia

Prior to the first European ship arriving at the mouth of the Stikine River in 1799, Athabaskan people including the Tahltan and Kaska Dene utilized expansive trade networks throughout the Liard valley (Davis 2011: 18; Johnson 2010: 141)[3]. Stretching from the upper tributaries of the Liard, the Dease and the Turnagain Rivers are trails that link the prosperous salmon rivers of the west coast with those of the interior. With Tahltan

[3] Athabaskan people, such as the Kaska Dene, is a way to describe a language group that represents much, if not all, of the Liard watershed. See Honigmann 1954; Johnson 2010; Moore 2000.

territory located as a juncture point between the fur-rich interior and the wealth from the sea, these interlinked trade routes were places of Tahltan power and authority. With the arrival of Russian traders on the northwest coast in 1799, these trade routes became "one of the terrible ironies" of British Columbian history (Davis 2011: 19). These productive routes became "the vectors along which passed pathogens destined to destroy nations" (Davis 2011: 20; see also Reedy-Maschner and Maschner 1999: 715-718). Smallpox, measles and influenzas swept throughout northern British Columbia during the early 19th century fragmenting the indigenous trade networks including those throughout the Liard Valley (Reedy-Maschner and Maschner 1999: 715-718).

While the Tahltan continued to control the rich fur-bearing part of the interior as well as the grease trails, the introduction of guns and metals as trade goods from the coast fundamentally changed northern British Columbian social trading structures (Reedy-Maschner and Maschner 1999: 715-718). A monopoly for the Russian and Tlingit traders was established due to their pre-contact coastal position, trade inequalities and social fragmentation from disease (Reedy-Maschner and Maschner 1999: 715-718). In doing so, all furs from the interior were funneled to the coast (Karamanski 1983: 88). By the 1830s the Tlingit along the Russian 'coastal strip' had control of the trade network into the interior (Karamanski 1983: 88-90). With furs already funneling west, the Russian-American Fur Company traders had no reason to travel into the interior and instead continued to utilize key Tlingit trade routes for furs (Karamanski 1983: 88).

Farther to the east, where the Liard meets the Mackenzie, the rivers were increasingly being mapped, documented and utilized during the period of fur trade competition between the Hudson's Bay Company, the North West Company and the Russian American Fur Company (Innis 1956: 280). During the fur trade in "the far northwest", rivers were

essential economic and cultural transportation routes (Innis 1956: 285; Karamanski 1983: 87). After the amalgamation agreement between the Northwest Company and the Hudson's Bay Company in 1821, the newly amalgamated Hudson's Bay Company believed that exploration into the northwest was a priority and initiated further exploration and trade along the lower Liard watershed in 1824 (Innis 1956: 286; Karamanski 1983: 88). Also after the amalgamation, the North West Company's Fort of Forks, located at the confluence of the Mackenzie and the Liard Rivers, became a permanent settlement and was renamed Fort Simpson (Innis 1956: 280-291). As exploration pushed to the west in 1827, the Hudson's Bay Company established trading posts along the Liard watershed including Old Fort Halkett located at the confluence of what is now the Fort Nelson and the Muskwa Rivers (Karamanski 1983: 89-90). Throughout the lower Liard watershed trading posts were directly located on the bank of either the Liard River or one of its main tributaries; most were located at the confluence of where the Liard's tributaries flowed into the Liard. During the 1820s, as the Hudson's Bay Company intended to access the furs funneling from the coast through the northwest interior, the middle and upper Liard River became a focal point for the contestation between the Russian American Fur Company and the Hudson's Bay Company traders.

Prior to 1831, exploration and navigation into the Liard Valley was limited to the area downstream of the river's Grand Canyon. Upstream of the canyon, including the middle and upper Liard River, was nonetheless recognized and mapped by explorers such as Peter Pond. Appendix A illustrates how the Liard River was mapped based on descriptions and accounts such as "Falls: said to be the largest in the known world" (Pond 1790 in Belyea 2007: 8). In the 1830s, the Hudson's Bay Company wished to extend the Liard River trail past these 'impassible' falls. The Company's governor saw the expansion

of the Liard River trail as a pathway to intersect the furs that were being transferred to the Russian American Company controlled coast, furs that he viewed as rightly belonging to the Hudson's Bay Company (Karamanski 1983: 88). He and Chief Factor Smith ordered explorer and trader John McLeod to map and document a route along the upper reaches of the Liard River (Karamanski 1983: 87). Through his voyages along the Liard River and its tributaries, McLeod effectively transformed the Liard River Valley from a place unknown to Europeans to a frontier riverscape (Karamanski 1983: 132). These journeys were documented in McLeod's 1831 journal and include a detailed map dated to that same year (HBCA B.200/a).

After a transfer to another region for two years, McLeod returned to Fort Simpson. He was ordered to establish a fort at the confluence of the Smith and Liard Rivers and spent the winter of 1833/1834 at the newly established Fort Halkett. According to McLeod, the Fort Halkett site was established in collaboration with the indigenous inhabitants:

> The Chief of the Sandy Indians provided as the most advantageous site for our establishment, the entrance of Smith's River and from my own observations I think is the fittest situation for the Fort Establishment, when once settled, and our knowledge of the country extended, there is a strong presumption that the formation of other establishments further on will soon follow. (HBCA B.85/a)

The following summer McLeod was ordered again to travel west, this time in search of a route to the Pacific. It was this region, between the impassible falls (the Grand Canyon of the Liard) and the Stikine River that most interested the Hudson's Bay Company. McLeod was ordered to establish a detailed route up the Dease River and seek access to the Stikine River as part of the Hudson's Bay Company's strategy to compete with the Russian trade. This voyage was documented in his 1834 journals, which also includes the 1834 map (HBCA B.85/a).

4.3 River Maps

McLeod's two journals from 1831 and 1834 contain two maps from his voyages along the Liard watershed. Even though both maps represent river experiences, the purpose of each map is fundamentally different. On the 1831 map, McLeod is clearly the sole author. McLeod was tasked with identifying the region past the Grand Canyon of the Liard for its potential economic use: sources of furs; indigenous inhabitants; travel routes within the region; location for trading posts; and the potential for trade. As such, the map reflects a human-river relationship in which the river is a medium for economic exploitation of a region. It is a map that represents cartographic traditions of a colonizing European hegemony: its purpose was to document McLeod's explorations. Essentially, the 1831 map is a pictorial report of the Liard watershed.

If the 1831 map represents an exploratory documentation of the river geography, then the later map represents a specific river route, based on local knowledge that guided McLeod and his crew from one point to another. The 1834 map was developed after McLeod had completed the earlier journey and had lived in the indigenous community for a winter. Furthermore, McLeod labels this later map as an 'Indian Chart' and it is unclear who was the mapmaker. While this suggests that it was a map drawn by a local inhabitant, he provides no further context as to who drew the map or the extent of indigenous involvement in its development. Unlike the exploratory nature of the first journey and map, McLeod's task on the second journey was to find a route to the Pacific. An examination of the 1834 map reflects a different human-river relationship – one based on direct lived experience and a more specific task of wayfinding.

To fully understand the later 1834 map, we must first examine the context of the 1831 map and how the river features and river landscape is developed and portrayed on the

map. Secondly, in order to interpret the 1834 map, we must also examine the use and role of local involvement in the mapping process.

4.3.1 Understanding the 1831 River Map

Figure 4-3. McLeod's 1831 river map.
(HBCA B200/a)

In order to understand the 1834 map, a broad interpretation of the 1831 map is helpful in providing context and in understanding how river maps convey meaning. This map is attached as the last page in McLeod's 1831 journal, which he titled "Journal and map of the West Branch Expedition Summer 1831". The map portrays a vast region that McLeod travelled through, extending from Fort Simpson west and north to what we now know as Simpson Lake. Along the way, McLeod provided names for the rivers, lakes and other significant features he encountered, some of which are still in use today. On this

map, McLeod marked major tributaries, major rapids and indigenous regions. The map's stated purpose was to provide the Hudson's Bay Company with a guide to the newly formed Liard River trail, which was used six years later by Robert Campbell – the man who replaced McLeod (Karamanski 1983: 88, 133).

By examining the corresponding 1831 journal, travelling to certain locales mentioned in the journal, and carrying out ethnographic and modern mapping research, I was able to identify the rivers on the 1831 map. This map can be deciphered by orientation to the significant landmarks such as the identification of Fort Simpson. Once readers can interpret the location of Fort Simpson on the map, they can follow the Liard River upstream using some familiar tributaries such as the Nahanni and Toad Rivers as wayfinding points. The rivers are portrayed as a tree, with the "West Branch" or Liard River acting as the primary branch. As such, the network of rivers that makes up the Liard Valley is portrayed in a pattern familiar to McLeod's Hudson's Bay Company audience (see, for comparison, Binnema 2001: 216). The "West Branch" refers to the Liard River and includes what is now called the Frances River. Frances River was identified as the Liard well past McLeod's era (as late as the 1950s when it was subsequently identified as a tributary of the Upper Liard River). The current names of the rivers on the 1831 map are ordered from where they enter the 'West Branch' from headwater to mouth in Appendix B.

The 1831 map noticeably contrasts with the 1834 map (Figure 4-4). One such contrast between the two maps is the depiction of lakes. Unlike the nondescript oval lakes on the 1834 map, Simpson's Lake on the 1831 map is shaped more descriptively and is aligned with its narrow south end (field notes 2011). Contrasting the later 1834 map, no river direction arrows or cardinal directional arrow are provided on the 1831 map. Also, unlike the dark shading of the mountains on the 1834 map, the mountains are named and

represented with a line and a series of connected triangles on the 1831 map. Similarly, the rapids identified are drawn with a line and a circling of the pen. This map also depicts a unique feature of the Liard River: the 'Grand Canyon', described by Parks Canada as, "a 30 km stretch of river with dangerous rapids [and] is an area of tremendous visual quality" (British Columbia Parks 2011: np). On the 1831 map, McLeod illustrates this canyon using the same symbolic design used to depict a rapid but also labels the two ends of the canyon as, "first range of mountains" and "last range of mountains".

The 1831 map communicates what McLeod directly experiences, imagines and portrays from his colonial vantage point. Firstly, McLeod's 1831 map reflects collaborative features based on local indigenous understanding of the region, yet he does not recognize the indigenous knowledge that is represented on the map. For example, detail is given on the map that identifies rivers that McLeod did not actually travel on, such as the Smith River. The Smith River, which he extensively maps, is a particularly illustrative example of how this collaborative mapping is based on knowledge from one of his indigenous guides:

> It would have been satisfactory to know more about this stream and its sources than my guide was able to inform me; he however, agrees at not a great distance beyond the fall [Smith River falls] there is a sufficiency of water with little or any current, and abounds with beaver in which account I have no hesitation to believe him (HBCA B200/a).

That McLeod does not acknowledge the collaboration of his indigenous guides suggests a colonial attitude especially since there is no representation of the network of indigenous trails that McLeod knew existed (his journals document the use of indigenous runners to take messages back to the Fort as he journeyed along the river). A second glaring example of the colonial perspective that is represented on the map is the appropriation of the landscape as illustrated in the naming of the rivers. The rivers and mountains are mostly

named after individuals within the colonial hierarchy and he labels them in the possessive ownership form i.e. Smith's River. Finally, a third example of a colonial perspective is that forts, identified and symbolized as square oversized houses complete with windows and a door, replace indigenous communities with concepts of western buildings in an act of colonial removal. In these ways, the 1831 map transformed the Liard watershed from an unknown place to a frontier network of rivers (Karamanski 1983: 81).

In the article "Mapping them out", Brealey investigates how indigenous people in central British Columbia were fragmented and detached from their territory and traditional livelihood through a Euro-Canadian mapping process (1996: 141). Examining spatial relationships, Cole Harris (1997) identifies how power was favorably tilted towards the European traders during the fur trade. In "Strategies of Power in the Cordillian Fur Trade", Harris illustrates how the division of aboriginal populations led to a hegemonic discourse where kin groups and traditional social structures were divided through what Harris calls "the geography of power" (1997: 56). The Nuxalt and Tsìlhqot`in were first mapped out of their traditional territory and subsequently "mapped into the concocted antiquity upon which our own territoriality and nationhood has always depended" (Brealey 1996: 154). Brealey emphasizes that the Nuxalt and Tsìlhqot`in peoples were both contained and represented according to the worldview held by the colonizer. Thus, spatial relationships between aboriginal and non-aboriginal people in British Columbia are strongly influenced by the maps created through a Euro-Canadian imagination of where and how aboriginal people lived (Brealey 1996: 154). McLeod's 1831 map therefore provides context and contrast to the uniqueness of his later 1834 map, which reflects more of a direct engagement with the region and its rivers.

4.3.2 Local Knowledge and Mapping

In order to fully appreciate and interpret the 1834 map, we must also examine the use and role of local involvement in the mapping process. Scholars recognize indigenous agency and assert that mapping, as part of European exploration in western Canada, was not a trait reserved only for the colonizing culture (Harley 1992: 524-525; Helm 1989: 28; Johnson 2010). Barbara Belyea argues that there was a fusion between the ambitions of explorers and indigenous knowledge that was represented on early maps of the northwest (1992: 1-24). Others too have argued that focusing on the role played by a map's single author is not helpful in exploring how that map communicates and how it is experienced. Johnson's work examining the Kandik map in Southeast Alaska recognizes combined explorer and local knowledge (2001). Binnema states that Blackfoot "maps represent the accumulated knowledge of a community, not merely of individuals" (2001: 210).

Further scholarship suggests that local knowledge was not simply diffused into European cartography, but in some instances, is part of a resistance strategy. In a discussion of Ordnance Survey maps of Ireland, Angèle Smith asserted that even though mapping occurs with the familiarity of local inhabitants, the maps are not intended for locals (2007: 87-89). Smith argues that locals do not require maps because locals know the arrangement of the region in question (2007: 87-89). However, local inhabitants for Smith are essential, yet seldom recognized, agents in the creation of maps (2007: 87-89; see also Smith 2003). Additionally, both Smith and Harley discuss how indigenous maps during colonial times were utilized as acts of colonial resistance (Harley 1992: 527; Smith 2003). They argue that local inhabitants were not passively compliant with European requests about mapping their lands, but instead maps were part of an "intellectual apparatus by which the imposition of colonial rule was resisted" (Harley 1992: 527). Following Smith

and Harley's argument, it is essential to any interpretation of maps to acknowledge the role and knowledge of local inhabitants of the region and to recognize that this knowledge was incorporated, or denied incorporation, onto the maps.

Research in northern British Columbia and southern Yukon supports the assertion that indigenous people had an alternative, yet sophisticated, method of explaining and portraying an expansive region through stories and other cognitive explanations (Brody 1981; Johnson 2010: 96). Ethnobotanist Leslie Johnson claims that rivers have an essential mnemonic function for indigenous inhabitants when they travel throughout the Liard Valley (2010: 96-97). According to Johnson, locals who travel along the rivers in the Liard Valley do so as a way to connect key sites such as hunting grounds, fishing locales, or lookout points (2010: 96-97). As Kaska elder Mida Donnessey describes, rivers "shape her sense of the land" (cited in Johnson 2010: 97). In a study of ten maps, drawn by local community members in northeast British Columbia, Hugh Brody demonstrates that indigenous cartography is centered upon lived experience within the landscape, such as witnessed in the identification of fishing locales (1981: 146). The importance of indigenous cartography cannot be denied (Harley 1992: 524).

However, David Bernstein argues that indigenous maps should not be understood as representations of apolitical indigenous knowledge, but instead need to be examined within the political apparatus, social motives and historical context in which the map was created (2012: 33). For instance, it is reasonable to suggest, that the Athabaskan knowledge portrayed on the 1834 river map was part of a geopolitical strategy. From this perspective, a plausible speculation about why an indigenous inhabitant residing at or near Fort Halkett would draw a map showing an effective route to the Pacific might be that it was intended to strengthen the cartographer's trade leverage with the Hudson's Bay Company. This

effectively would have reduced the unequal 'middleman' trade held by the Russian-Tlingit traders on the Pacific coast. Thereby, potentially gaining status, as well as the trust and support of the Hudson's Bay Company traders to be able to mitigate violence of neighboring populations and improve their own trading power[4]. An understanding of the motives and political context affecting the 1834 river map is a possible direction for future research.

Geopolitical strategies aside, as a historical representation of human-river relationships, I argue that, unlike the 1831 map, the 1834 map is a representation of the shared knowledge of a community living at or near Fort Halkett. Effective cartography should not be evaluated on its ability to represent space but in its effectiveness for those who are travelling through the landscapes (Ingold 2000: 219-220). Representing the knowledge of local inhabitants and the ambitions of McLeod, the map is a collective vision of the rivers in the Liard Valley and has as its purpose the illustration of how to travel from Fort Halkett to the Pacific coast. My interpretation of the 1834 map centers on how river maps are represented and experienced. As such, the interpretation of this map is viewed from the perspective that it is intended to communicate a way of effectively navigating a river route to the Pacific.

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[4] See, Kaska Tribal Council "Dene Gudeji: Kaska Narratives" (1999) for indigenous narratives about war, violence and competition.

4.3.3 Interpreting the 1834 River Map

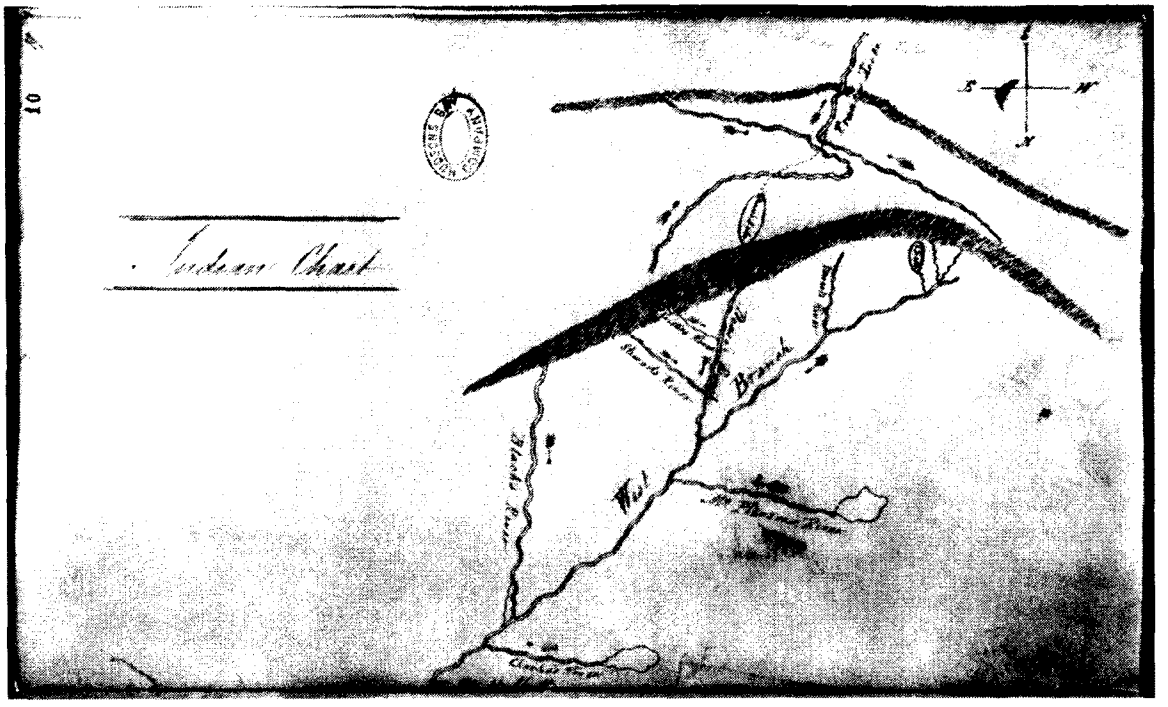

Figure 4-4. McLeod's 1834 river map.
(HBCA B.85/a)

The second Liard Valley river map is found in McLeod's 1834 journal. Attached as the last page of McLeod's 1834 journal entitled "Notes on a Voyage of Survey up Dease's Branch and to Frances' River West of Rocky Mountains Summer 1834", it portrays a distinct working relationship based on direct experience in this area and on these rivers. To understand such a relationship, I employed in-depth experiential analysis of the 1834 Liard Valley map. Therefore, in order to understand how the 1834 map communicates to the river traveller, I needed to make myself the intended audience of the 1834 Liard River map (see for reference Binnema 2001: 210[5]). In the summer of 2011, I and two other research participants canoed along the Dease River and a section of the Liard Rivers, representing a

[5] Binnema states that for Blackfoot maps "the intended audience will find it clear and direct" (2001: 210).

significant section of the route portrayed in the 1834 map. Using a copy of his 1834 journal and the attached map as a reference, we embarked from a Dease River access point ten kilometers north of Dease Lake on the same day of the year, July 14th, as did McLeod in 1834. During the trip we visited key locales identified in both the journal and the map. As a way to bring an additional phenomenological perspective to the map experience and analysis, I also physically redrew the map in order to create my own version of the 1834 Liard Valley river map. By retracing both the route and the map itself, I was able to identify many of its subtleties and thus develop a better understanding of the representations and constructs in the 1834 Liard Valley river map.

For the modern western reader, the 1834 Liard Valley map is confusing and for someone unfamiliar with the region, it is initially unrecognizable. Complexity is added by the inclusion or omission of familiar representations. For example, if the map-reader orientates by use of the north arrow, the map is unhelpful. The inclusion of a cardinal directional arrow can be attributed to what Binnema describes as a 'false friend': an aspect prone to incorrect interpretation (2001: 212). For Blackfoot maps, Binnema notes that "clouding a map with unnecessary detail would help neither people familiar with the terrain, nor a people unfamiliar with the terrain" (Binnema 2001: 213). The same can be stated of the Liard Valley map. With the exception of the directional arrow, the 1834 river map provides only those details that are necessary to navigate from Fort Halkett to the Stikine River[6]. For example, the 1834 map does not even represent the rapids where, three years earlier, two of McLeod's crew members drowned, further reinforcing the premise that McLeod was not the sole author, for he surely would have included the locale of this

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[6] The map also includes the route of McLeod's 1831 voyage.

dangerous rapid. Similarly, in Helm's discussion of Athabascan cartography, there is no portrayal of rapids (1989). Representing rapids, which is seen on many river maps including the Liard Valley 1831 map, is only a distraction and is not of concern for the experienced river traveller. For the river traveller on the Liard watershed, rapids can be heard from a significant distance away and therefore can be adequately addressed without the need for any other previous warning. Furthermore, rapids are not static aspects of rivers. New rapids form and old ones get washed out depending on water levels or changes in river channels. For the experienced river traveller, rapids are a constant hazard and their ongoing identification is the responsibility of the river navigator or scout. The absence of marked river rapids on the 1834 map suggests that the mapmaker and its intended audience were experienced river travellers and that the map was a record of their knowledgeable river travel experiences.

The 1834 Liard Valley river map can be broken down into three essential components: rivers, lakes and mountains. The rivers are represented as either a major stream (e.g., West Branch or Dease Branch) or are represented as tributaries. The tributaries are further distinguished by the width of the line on the map – a common technique for western cartography. A thinner line (or single line) means the tributary has less volume of water than a river with a thicker line. A river traveller can therefore navigate the main channel by the use of tributaries; identifying the tributaries by both relative location and strength of river flow. They are checkpoints in the river traveller's progress. On the Dease River (mapped as Dease's Branch) portion of the mapped route, there are four major tributaries (see Figure 4-5). In downstream order they are: 1) the Cottonwood River; 2) the Eagle River; 3) the Rapid River and 4) the Blue River (change of river names is provided in Appendix B). The Cottonwood and Blue Rivers both enter from

river left and the Eagle and Rapid Rivers enter from river right[7]. However, the maps represent only one minor tributary and two main tributaries. The two main tributaries both enter the Dease from the river-right shore and are therefore the Eagle River (marked as Christie's River) and the larger volume Rapid River (marked as Stewart's River).

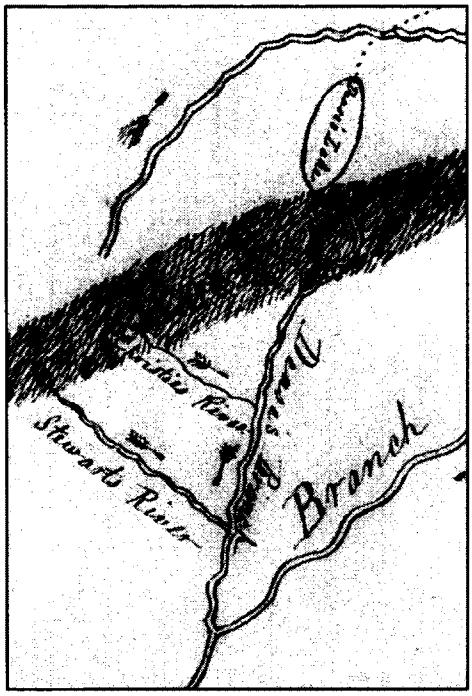

Figure 4-5. A selected crop from the 1834 Liard watershed - the Dease River route. (HBCA B.85/a)

The confluence of the Cottonwood and the Dease Rivers is represented as the only minor tributary. This confluence is located on the map where the Dease River splits into two equal halves, within the shading of the "Rocky Mountains". When I visited this confluence at the same time of year as McLeod, both rivers were of similar volume. This direct experience of the confluence illustrated to me how, for the upstream river traveller, the tributaries can become confused with the main channel itself. Indeed, at the same

[7] River navigation terminology refers to the sides of the river from the perspective of travelling down river, where "down" refers to "downstream".

location, in McLeod's journal he describes how he made a wrong turn up the Cottonwood tributary:

> I was somewhat at a loss this morning which of the two streams near our camp we should attempt surmounting, but as the one on the Westside appeared the largest of the Two, I ordered my Bowsman to turn the bow of his canoe up that Stream, but had not proceeded far when from the rapidous state of the River, and in some parts hardly a sufficiency of water to float our little craft, that our progress was but trifling, and conceiving that we had not taken the proper route (HBCA B.85/a).

The Cottonwood-Dease confluence example illustrates that successful upriver navigation using a map based on direct experience must necessarily include what side of the main stream that the tributaries fall into. In many braided sections of the Liard, and on low volume rivers such as the Dease River, tributaries can easily be confused as part of the main channel. Having knowledge of which side of the river the next tributary enters the main stream, the river traveller knows to stay close to the opposite shore (see Figure 4-6).

Figure 4-6. Up river travel - confluence of the Kechika and Turnagain Rivers.
Navigating by tributaries requires the traveller to stay along the appropriate shore at these juncture points. This photograph also illustrates the viewscape of the Liard Plains (J. Staveley 2010).

The Cottonwood confluence example also offers a subtle suggestion as to how rivers are experienced and represented. Unlike the other tributaries that are clearly marked and

emphasized with a directional arrow, this tributary is not marked as a tributary, but as one of two equal parts of the same river. Yet, in order to reach Dease Lake by waterways (and then from there, overland to the Stikine River), the traveller must 'stay left' at the confluence of the Cottonwood and Dease Rivers. The 1834 map of the Liard Valley has multiple rivers that are represented as one river in the map. Helm describes Athabascan cartography in which river drainages are not distinguished as separate paths, but instead waterways are viewed as interconnected (1989: 36). The rivers we understand today are based on hydrological information and, are therefore mapped, documented and represented based on their drainage. Western cartography has therefore represented rivers as only ever being singular. For the 1834 river map, two rivers that flow from different places can effectively form one path (Helm 1989: 36).

The second feature of the Liard Valley 1834 map is the representation of the mountains. The mountains are labeled as the "Rocky Mountains" (now known as the Cassiar range of the northern interior) and are drawn as a thick dark shading arching across the middle of the map (see Figure 4-4 and 4-5). A second range of mountains is also represented in the same way, but is thinner and not labeled (Talhtan highlands). These mountains are portrayed in a way that is unlike both the 1831 Liard River map and European maps of that time period, which isolate individual mountains. Including mountains on a river map may seem unnecessary, but from the unobstructed view along a river, travellers can utilize their vantage point to help understand their location. With a clear line of sight, mountains are incredibly useful landmarks. They are used to help triangulate location, relative distance and pace of travel. As such, they work in conjunction with the use of tributaries. The mountains on the 1834 Liard River map are not a representation of specific topographical features nor are they a boundary restricting the

traveller's mobility (de Certeau 1984: 129). They are a viewscape. Understanding mountains as a viewscape is a useful reference from a river traveller's perspective and works well for route wayfinding when contrasted with a region that has no view of mountains, such as the Liard Plains (see Figure 4-6). Figure 4-7 illustrates how, for the river traveller, there is no need to identify specific mountains since the purpose of representing mountains is to act as waypoints within a specific viewscape from the river (they are following the river, not a landmark).

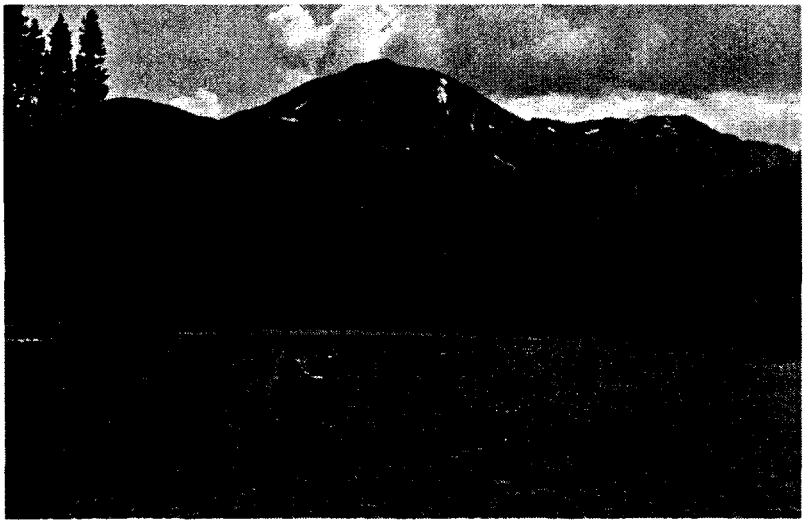

Figure 4-7. A viewscape of the 'Rocky Mountains' from the Dease River.
This is in the same location identified on the 1834 Liard River map as "Rocky Mountains", approximately fifteen kilometers upstream of the confluence of the Eagle River on the Dease River. (J. Staveley 2010)

The third component of the map is lakes. Two lakes are represented on this map in a standard oval shape. Literature on North American indigenous mapping has recognized that lakes drawn as standard ovals are common (Helm 1989: 32; Pentland 1975: 153). Lakes connected by creeks or rivers have been described in aboriginal mapping literature as 'beads on a string' (Binnema 2010). This is in contrast to Helm's investigation of Athabasca maps that includes an oversized detailed representation of Great Slave Lake

(1989: 32). Helm suggests that Great Slave Lake was given such detail because it is both a destination in itself and also a hub for travellers (1989: 32). In the 1834 Liard River case, the reasoning for the standard oval lake design is a matter of efficiency in mapmaking. The purpose is to compress the landscape in order to effectively navigate such a great geographic distance (Binnema 2010). Dease Lake (represented as "Dease's Lake") is approximately 40 kilometers long from the river outflow to the lake's opposite end. Lakes are part of a larger travel route, the sole purpose of including the lake is to note its existence and to note the task for the traveller at either end. Therefore, drawing this lake as a standard oval size has the practical application that allows the map to fit on one sheet of paper. Simply put, if there are no long bays that might otherwise confuse the traveller, the shape of the lake itself is irrelevant.

4.4 The Map as a Tour

In an influential essay of how spatiality is lived through both an embodied practice and a narrative, Michel de Certeau (1984) uses a simple example to illustrate the difference between a map and a tour. He draws on an earlier study in which New York residents were asked to provide precise descriptions of their apartment. The study isolated two distinct types of descriptions: a map and a tour (de Certeau 1984: 119). For de Certeau, a map arranges space in relation to the objects around it – "the girls' room is next to the kitchen" (1984: 119). A tour however, describes a series of connectable units to create a path – "You turn right and come into the living room" (de Certeau 1984: 119). Furthermore, the tour can be either "static (to the right)... or mobile (if you turn to the left)" (de Certeau 1984: 119). A tour can also condition a map – "If you go straight ahead, you'll see..." – by providing the actor with an itinerary (de Certeau 1984: 119-120). A map therefore presents objects while a tour organizes both movements and the actor's mobility (de Certeau 1984:

119). The tour connects the traveller with their surroundings by intimately connecting the traveller through movement and experience to the history and narrative that the tour provides.

The river maps in the Liard Valley only fully convey meaning through direct experience. In this light, the 1834 "map" is not a map at all, but a tour. It represents a vision of the Liard riverscape from the river and for the river traveller. It provides an itinerary. A series of successive events based on experiences: "If you go straight ahead, you'll see...the Rocky Mountains". An itinerary for the Dease River portion (Figure 4-4) of the river tour based on the pictorial elements provided in the map and my fieldwork would read: "Once you pass two rivers on the left you will see the mountains, stay left when the small river enters from the right and you will come to a lake. At the end of the lake is the trail to the Stikine River, which flows to the Pacific Ocean". An analysis of the pictorial elements of the Liard Valley "Indian Chart" is a representation of river experiences and mobility (de Certeau 1984: 115; Harley 1988: 277). The traveller is guided through an otherwise confusing web of rivers through a vast region. The representation is understood not as a series of connectable places, but as a fully interconnected web of movement.

De Certeau recognizes that over time the map "colonizes space; it eliminates little by little the pictorial figurations of the practices that produce it" and eventually replaces the tour (1984: 121). As a result, maps eliminate the encounters, itineraries, histories and narratives embedded in a tour with "descriptive geometry" (de Certeau 1984: 121). Nonetheless, the tour, acting like a "delinquent child", is still relevant in understanding the environment and our role within it (de Certeau 1984: 128-129). De Certeau defends and

describes the necessary and elemental experiences of this hidden tour by quoting French historian Jules Michelet:

> when the aristocracy of the great Olympian gods collapsed at the end of Antiquity, it did not take down with it the mass of indigenous gods, the populace of gods that still possessed the immensity of fields, forests, woods, mountains, springs, intimately associated with the life of the country. These gods lived in the hearts of oaks, in the swift, deep waters, and could not be driven out of them... Where are they? In the desert, on the heath, in the forest? Yes, but also and especially in the home. They live on in the most intimate of domestic habits (cited in de Certeau 1984: 129).

Similarly, the experientially based tour lives on in our interactions with places, landscapes and rivers. Rivers are essential places of experience. The 1834 Liard Valley River map archives mnemonic devices and thus provides an artifact of human mobility and experiences. For the experienced river traveller, the 1834 river map still contains all the richness and depth of the tour. In examining maps with rivers or waterways we should consider that they may not be only a cognitive representation of travel across the surface of the globe (Ingold 2008: 75). Instead they may be river maps embedded with encounters, itineraries, histories and tasks that only reveal themselves in the act of practicing the journey. The case of the Liard River encourages us to think about river maps and the mobility encoded on them as representations of moving through the world along paths of direct experience (Ingold 2008: 75).

5 Chapter: Abandoned Places or Abstract Spaces?

Field Notes, July 16, 2011, Dease River, Day 5:

Today, in the early morning, we left camp at French Creek. At this established camping site, we briefly straddled two realities. Last night we had a visit from a black bear whose routine consists of picking up the fish scraps left behind from the highway travelling fishers. He had decided to take a pass through the area to see if there were any new opportunities. The site was quiet between the sounds of the river surging in the background, but we were not alone. There were two other groups of people at the campsite. One was an elderly couple with a truck and camper, a small dog and two inadequate, brightly colored umbrellas, which did very little to protect them from what had become a hard driving horizontal rain. Resigning themselves to the inevitability of the weather, they retreated early to their camper. The other was a large extended family that established a semi-permanent camp to earn their summer income by collecting and selling the mushrooms that grow in last year's forest burns scattered throughout the river valley. Seemingly oblivious to the rain, they engaged us in a friendly casual conversation about their summer task before driving off in the evening to get groceries and returning late. As the three of us attempt to warm up under a tarp next to the fire, we recognize the role of the highway and the river as the past and present means of mobility through this valley.

Today, leaving French Creek, the river veers east and we travel away from both the highway and encounters with these contemporary users of the river. We are now nearing the end of the trip from Dease Lake to Lower Post and at camp tonight my participant paddlers and myself take some time to reflect on the trip. We have travelled past the creek, which carries water from the Cassiar Asbestos mine tailings (abandoned in the early 1990s) and past the remains of the old town of McDame Creek – once a bustling gold rush

town, now lost in a forest amongst the overgrown bush with its regional cabins steadily eroding into the river bank. I ask about their thoughts about river travel and the places it produces, "understanding the history and the essential role this river once had, does it now feel to you like we have travelled down a ghost river?" Yes, they agree, and the conversation drifts off about the importance of contemporary travel along these rivers: the need to experience and engage with the land. "If engagement is essential in understanding the value of rivers", I ask "and if there is no role of rivers as a functional part of our lives, then why are rivers still important to people?" They were quiet for a few seconds, the fire crackled and smoked, threatened by the damp evening rain. They responded, "well what makes it important to you? Why are you so passionate about rivers?"

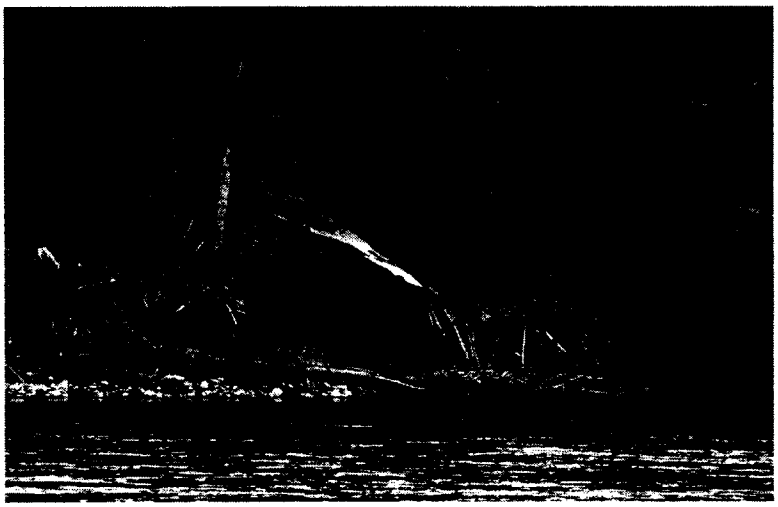

Figure 5-1. Cabin on the Dease River
(J. Staveley, 2011)

In an analysis of possible strategies for interpreting landscapes, Donald Meinig articulates the significance of understanding how "landscapes display us as cultures" (1979a: 3). For Meinig, a landscape represents a specific place that embodies "symbolic expressions of cultural values, social behavior and individual actions" (1979a: 4). Rivers transect a landscape and in doing so rivers can be understood as both expressions of social

constructs and also as essential components of a larger landscape. In understanding that larger landscape, the meaning of a river is not formed by any logic that is inherent to the river itself, but rather is shaped and transformed by its interconnectedness with the surrounding landscape (Krause 2010: 1). While bounded by geographical restrictions, our relationship to and our historical understanding of a river is shaped by ideological diffusions of aesthetics or wealth, economic ambitions and systems, political discourse, and cultural habitats (Meinig 1979b: 33-48). In order to make sense of such symbolic social and cultural expressions, Meinig argues for the utilization of photographs in landscape studies (1979a: 3). He argues that while maps are useful tools in understanding the nuances of landscapes, they are not enough (1979a: 5). Landscapes for Meinig "must be visualized and if not directly by our own eyes then by means of the best substitutes" (1979a: 5). A photograph or drawing that provides a total vantage point allows interpretations to expand in order to encompass the mutual influences that reveal a complementary perspective to those portrayed in maps (1979a: 5).

In chapter 4, I argued that during the early nineteenth century the rivers of the Liard watershed were essential places. The network of rivers that expand across northern British Columbia and southern Yukon reflected a working relationship with rivers as represented in river maps from that period. Such a working relationship is embedded with encounters, itineraries, histories and tasks that are produced and reproduced in the act of practicing the journey. In this chapter I expand the research lens to incorporate the entire landscape in which rivers are central elements. In doing so, I consider broader cultural values and acts of human agency that have worked to shape the role and significance of the rivers within the Liard watershed. Using photographs and illustrations to support my discussion, I argue

that through a series of significant transitions, a discourse about rivers has changed resulting in rivers being viewed as abstracted spaces.

5.1 Controlled Space

Rivers were instrumental to the success of the fur trade. In central and northern British Columbia during the early nineteenth century, there was no military conquest, no systematic purchase of land, and no organized system of European law (Brealey 1996: 141; Harris 1997: 33). For this reason, rivers played an especially significant role in the process of European power asserting its hegemonic position in British Columbia (Brealey 1996; Harris 1997: 56). Historical geographer Cole Harris argues that fur traders were driven by two imperatives: how to move through the landscape and how to turn a profit (Harris 1997: 33). Rivers in the Liard watershed were the mobility paths that connected the forts. Harris further describes that forts and rivers that connected movement through the landscape became essential elements of the discourse of power during the fur trade (Harris 1997: 42). In this way, rivers became controlled space. Against an economic backdrop of resource competition and exploitation of Canadian fur resources, traders used the river as an essential means of movement that worked to support Harris's thesis of "how non-native power took root in this province" (Harris 1997: 67). Given the essential role of rivers as means of mobility during the fur trade, the relationship to rivers as controlled space became normalized and hegemonic throughout central and northern British Columbia (Harris 1997: 42). This relationship was also the case in the Liard watershed following the explorations into the northwest during the Hudson's Bay Company's monopoly from 1821 to 1869 (Innis 1956: 287). The effects of this hegemonic relationship were far reaching. In river-based communities, hegemonic social behavior was reinforced through a western worldview and continued throughout the nineteenth century (Coates 1991: 155; Harris

2002: 269). Figure 5-2 illustrates the early development along the Liard River in what is now the predominantly Kaska community of Lower Post. Accessed by the river, Lower Post became a social and cultural space for the convergence of surrounding communities.

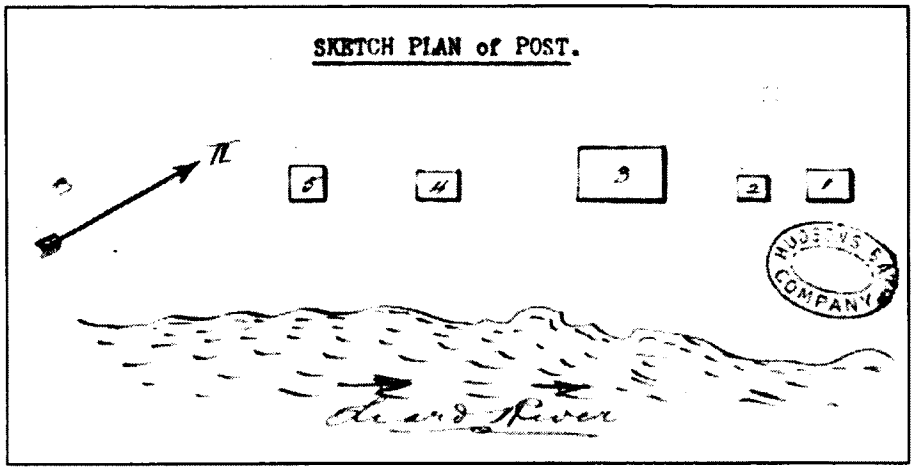

Figure 5-2. Hudson's Bay Company sketch of Lower Post on the Liard River.
This sketch shows the location of the Hudson's Bay Company post of Lower Post on the banks of the Liard River from the 1904-1905 post journals. (HBCA B.299/a/1, 1904-1905 Liard Post Journal)

Primary access and mobility throughout the Liard valley continued to be provided by its network of rivers during the 19th century. This relationship to rivers defined the creation of specific places within the river's related landscape, imbued with social, cultural, political and economic meaning. The rivers that connected these places were therefore pathways for human agency, and the dissemination of western hegemonic discourse of political and economic power. Following McLeod's initial exploration, the Hudson's Bay Company employed trader Robert Campbell in 1836 to depart from Fort Simpson and continue McLeod's drive toward the Stikine River (Karamanski 1983: 139). Continuing throughout the middle 19th century, Campbell and the Hudson's Bay Company worked to further establish a network of trade throughout the Liard watershed (Karamanski 1983: 140-160). The trade network utilized strategic trade locales such as Dease Lake post, the Dease-Liard

confluence and the confluence of the Smith and Liard Rivers (Fort Halkett) (Karamanski 1983: 145-160). In the mid 19th century, the Liard watershed was an active economic and social landscape including a small agricultural operation on its banks at Fort Halkett (Innis 1956: 300). After Robert Campbell's discovery in 1851of the Frances Lake portage to the Pelly River towards Fort Selkirk, the Hudson's Bay Company abandoned its Liard River operation due to its navigational hazards and difficulties. Hudson's Bay Company trading boats followed the more advantageous route down the Mackenzie River to the confluence of the Peel River, portage to the Porcupine River that flows to Fort Yukon (Innis 1956: 291). Furs within the Liard watershed funneled towards Fort Selkirk and after the American purchase of Russian America in 1867 trade goods were brought in from the Stikine River avoiding the rapids of the Liard Plains.

Continuing throughout the late 19th century riverboats ran from Dease Lake towards Lower Post on the Liard River to access the trade and goods arriving from the Stikine River. Riverboats also ran down the Mackenzie River and up the Liard River connecting northeastern British Columbia (Johnson 2010: 96). In 1873 the discovery of gold in the Cassiar region created a small settlement on the confluence of McDame Creek and the Dease River (Figure 5-3). The discovery of gold accelerated the settlement and displacement process that had been taking place in the region. Once again, rivers in the Liard watershed played a key enabling role. Steamships brought people in and out from the Pacific who then traveled through to Telegraph Creek where they employed local packers and also brought in 300 head of cattle (Lamers 1974: 96-97). One year later, the settlement of McDame Creek had grown to house and support 1600 people. The 1898 Klondike Gold rush brought yet another influx of people in the form of gold seekers who traversed the Liard Valley navigating the trails and rivers (Johnson 2010: 96). The river was vital to the

lives of the local inhabitants who would have had a direct experience and working relationship with the rivers (Johnson 2010: 96).

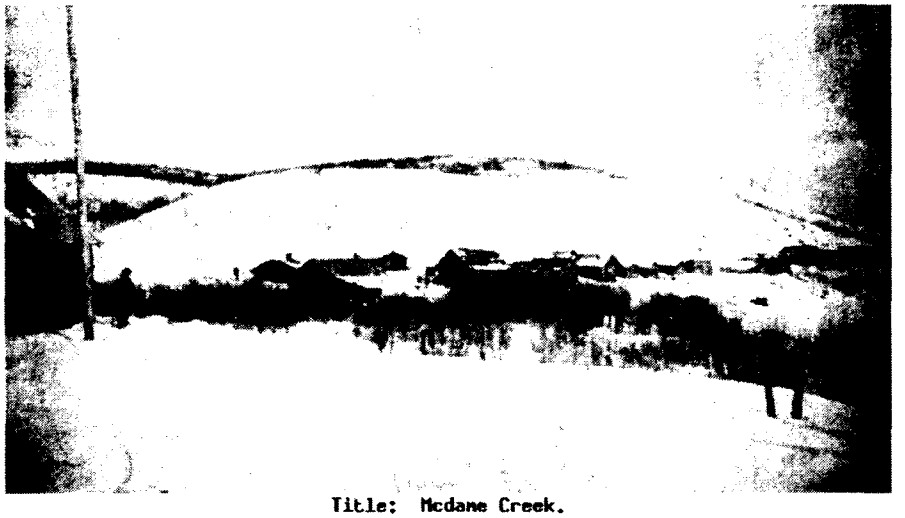

Figure 5-3. McDame Creek on the banks of the Dease River.
(BC Archives, A-04854: nd) The once gold rich creek flows behind the photographer and enters the Dease River to the right. Now, McDame Creek is an uninhabited place (field notes).

Even though other parts of western Canada were impacted from the industrial revolution through transportation efficiencies, transportation in the northwest still heavily relied on rivers (Innis 1956: 345-346). The working relationship with the rivers in the Liard watershed continued past the gold rush and was initially unchanged by the emerging technologies of the early 20th century (see for reference Hoelscher 2008: 149). For example, while the use of technologies such as the outboard motor in the 1920s changed the pace and distance of river mobility, transportation along rivers still required the same deep knowledge of the techniques of river travel that was required by McLeod, his crew and his indigenous guides. River travel therefore continued to be embedded with the specific skills, encounters, itineraries, histories and tasks that are produced and reproduced in a working river as illustrated in Figure 5-4.

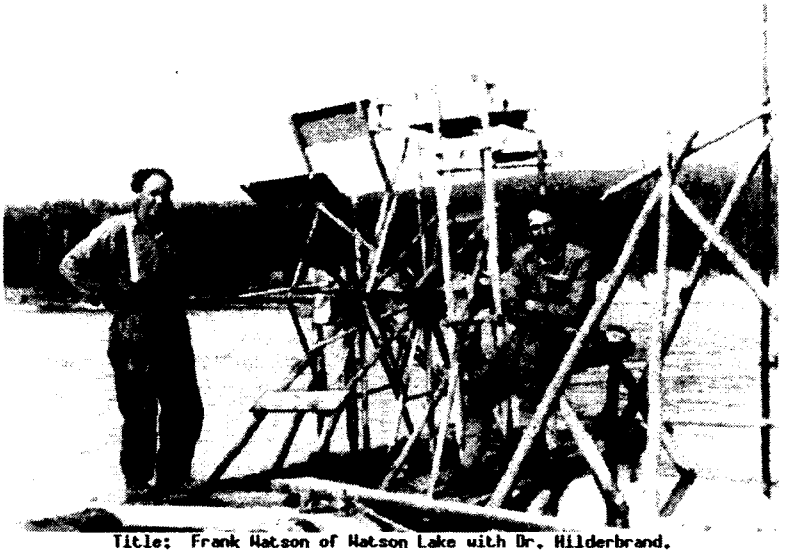

Figure 5-4. "Frank Watson of Watson Lake with Dr. Hilderbrand".
Prospecting on the Liard River illustrates a working relationship with the river. (BC Archives, C-07667: nd)

The utilization of the bush plane in the 1930s also had some impact on the system of doing business along rivers. Yet, people still used the river as their primary means of transport. Heavy or less essential cargo was brought in and out of the region along the rivers as illustrated in Figure 5-5.

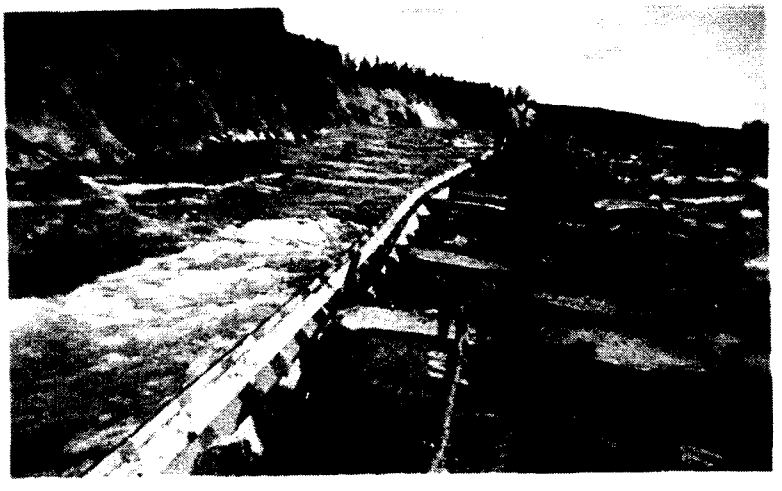

Figure 5-5. Riverboat transporting raw materials up the Dease River (1941).
Transporting tar barrels down the Dease River for the building of the Watson Lake airport. This particular locale along the river is known as '4-mile rapid' (located four miles from its confluence with the Liard River). (Photographer Victor Johnson (?), Permission Janet McDonald)

5.2 Abandoned Places

It was finally automotive technology and the building of the ALCAN (Alaska) Highway (1942) that profoundly transformed the role and significance of rivers in the Liard watershed. Scholars of the Kaska people argue that prior to the building of the highway, social and cultural rhythms centered around and on the river (Coates 1991; Cruikshank 1990; Johnson 2010: 96 Meek 2010: 18). Such a working relationship required direct, often daily, lived experiences that were built upon mobility: a relationship that was widespread amongst the communities (Johnson 2010: 96; Meek 2010: 18). The literature further suggests that river travel after the building of the highway became re-characterized as no longer being a place for work, but primarily as a means to access hunting grounds, trap lines or for recreation (Coates 1991; Cruikshank 1990; Johnson 2010: 96; Meek 2010: 18). Such an outcome suggests that the building of the Alaska Highway represents the most significant cultural transformations the Liard watershed has undergone in the last century (Meek 2010: 18). Attention towards an ever-improving road, instead of to the rivers, became prioritized as the favored method of travel and transport. As a result, the network of rivers that make up the Liard watershed were no longer experienced as working rivers. The direct working experience with the river was relinquished to industrial surveyors, fishing groups, tourism, trappers, and hunting outfitters; in other words, specialized occupations rather than part of the common everyday experience.

For scholars such as Franz Krause, rivers and roads provide fundamentally different forms of mobility (Figure 5-6). The transformation of mobility based on rivers to one based on roads highlights crucial changes in our relationship to the surrounding landscape: a relationship that is central to social life (2010: 1-9). Krause argues that while "rivers are

part of the landscape; roads aim to bridge the landscape to connect one point with another" (2010: 4).

Figure 5-6. The building of the Alaska Highway at Watson Lake.
The archival photo illustrates the building of the ALCAN Highway and the transition of mobility from rivers to roads (Alaska State Library, Historical Collections 1942).

A year-round transportation method that connects people from one place to another replaced the names, stories and social encounters that are inherently part of river travel (Krause 2010: 5). Such new engagements produced an ideological transition from 'river as place' to 'places along the river'. This transition has significant implications for understanding the role and significance of rivers in people's lives. In a working river relationship, the river traveller is focused on being part of the journey and is "integrated with the social and ecological landscape" (Krause 2010: 7). Driving a vehicle along the Alaska Highway does not interconnect the social and ecological landscape to the same extent as river travel. Instead highway travel focuses on "connecting the points of departure and destination" (Krause 2010: 5). At a experiential level, with the shift from

river to highway mobility, the skills and knowledge embedded in a working river relationship become replaced with skills and knowledge targeted towards the use and support of a vehicle (Krause 2010: 5).

Furthermore, the transition to highways and vehicles has a decaying effect on specific places along the river and a sense of relationship to them, which resulted from abandoned communities. Krause further argues that as roads and vehicles became more efficient, the roads omit an ever-increasing list of places that were once part of its support network (2010: 6). In the Liard Plains, the building of the Alaska Highway resulted in the abandonment of communities such as Iron Creek (Figure 5-7) that were once stopping points for travellers prior to highway improvements and the ability to drive vehicles longer distances without refueling (Halseth 2011, personal communication). These small, abandoned, highway communities, which were once places of significance in the landscape, are scattered throughout the Liard Plains.

Figure 5-7. The abandoned Iron Creek Lodge in the Liard Plains
(J. Staveley, 2011)

However, the creation of the Alaska Highway should not be viewed as replacing the human relationship with the Liard's rivers, but rather as a transformative agent in the

discourse about rivers. Towns that were established along the river during the fur trade, such as Lower Post or Upper Post, had to be linked by the highway. Thus, the highway became a progression from the already established points of river travel. Or as Krause describes, "roads are... the river in a further developed form". In the Liard plains, the Alaska Highway mirrors the route of the Liard River. While scholars such as Cruikshank (1990), Meek (2010) and Johnson (2010) have argued that rivers in the Liard watershed became abandoned places after the building of the highway, roads connect places in the landscape that are were historically located there as a result of earlier human-river relations. As such, the journey along a road such as the Alaska Highway echoes the earlier form of travel in the Liard watershed. This river-relationship between roads (and the 20th century technology they support) is reflected in the cultural expressions in the region. For example, the "Robert Campbell Highway" (Figure 5-8) that follows the upper Liard and Frances Rivers is named after a river journey, by the 19th century explorer Robert Campbell who documented the river routes in the region.

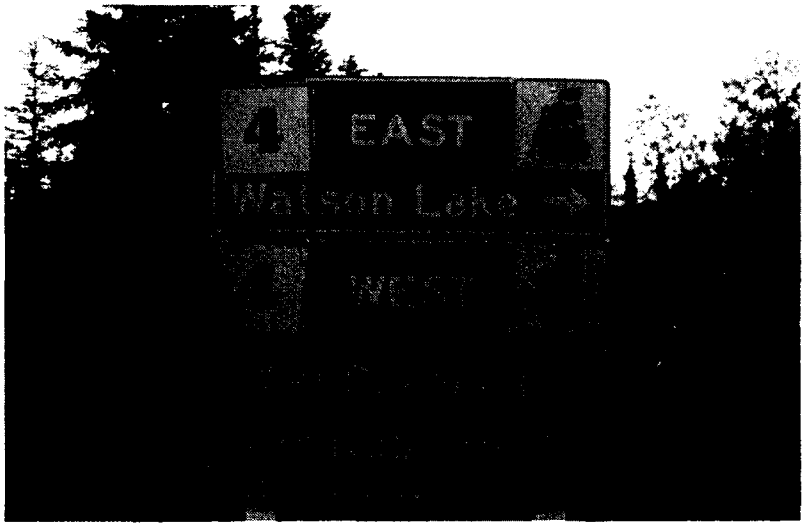

Figure 5-8. A highway sign along the "Robert Campbell Highway".
This sign in the southern Yukon represents a link between historic river routes (as witnessed in the image of the canoeist) and contemporary roads (J. Staveley, 2011).

5.3 Abstracted Spaces

Drawing on the metaphor of the mobilization of young men into military service, Canada initiated a broad hydroelectric program that practically as well as metaphorically "mobilized rivers" (Evenden 2009: 847). In 1939 hydroelectricity already accounted for 98 percent of Canada's power generated – the largest output in the world on a per capita basis (Evenden 2009: 847). Further development of hydroelectricity on rivers was made possible by the high demand for aluminum during the Second World War and political barriers were removed to accommodate the military priority of building large-scale hydroelectric projects (Evenden 2009: 847). Figure 5-9, a poster in a travelling exhibition commissioned by the Wartime Information Board and displayed by the National Gallery of Canada, illustrates this prevailing ideology (Evenden 2009: 847-848). Representing a river captured by a masculine hand, such images reinforced a relationship with rivers based on power, military authority and "mobilizing the economy" that continued throughout the mid and late 20th century (Evenden 2009: 845-847). Emerging as a key item of the postwar social agenda, rural electrification and the demand for economic exploitation of mineral resources available in the more remote regions of British Columbia compounded this industrialized relationship of rivers as a resource (Evenden 2004: 3-5). Evenden describes such an influence in British Columbia as the beginning of a "New Hydroelectric Era" (2004: 121).

Figure 5-9. "This is Our Strength: Electric Power" poster from a traveling exhibition of posters of Canadian resources.
This poster by Marien Mildred Scott (1939–1945) represents a relationship with rivers based on power, military authority and the 'mobilization' of the economy. (Canadian War Museum, Artifact number 19920196-009, in Evenden 2009: 848).

After the building of the ALCAN Highway and the emergence of the industrialized river relationship, the rivers of the Liard watershed were no longer a place of mobility, but increasingly one of contestation. By the mid 1970s, B.C. Hydro was investigating a variety of potential hydroelectric sites in the north. Of particular consideration was the Liard River. The likelihood for opposition to a mega project on its rivers was reduced due to various factors including: the distance from major metropolitan centers; waters with very few migrating fish; and communities that were, and still are, highly dispersed over a geographically vast region (Munson 1982: 2). A B.C. Hydro news release from 1979 states that, "the Liard development would provide more power, at lower unit cost, than any other river basin currently under investigation in British Columbia" (B.C.Hydro 1982: 2). The

Liard River hydro proposal consisted of two major dam sites while a potential third site was also under investigation.

The initial site was the Devil's Gorge project. Located at the upstream end of the Grand Canyon, about 25 km below where the Alaska Highway currently crosses the Liard River near the Liard Hot Springs, a 200 meter high earth-fill dam and two "saddle dams" before and after the main dam, would produce 2490 megawatts of energy (B.C. Hydro 1982: 7). According to the B.C. Hydro bulletin, the Devil's Gorge project's floodwaters would be 240 kilometers long. With a surface area of about 890 square kilometers, the building of the dam would require the flooding of the entire Liard River Valley in northern British Columbia including the tributaries, such as 150 kilometers of the lower Kechika River (B.C.Hydro 1982: 7).

The second site proposed was the Beavercrow project. Two earth-fill dams, 160 metres and 112 metres high, would halt the flow of the Liard below the Devil's Gorge site situated about 110 kilometeres west from where the Liard River crosses into the North West Territories (B.C.Hydro 1982: 8). At the time, the Liard hydro project was being described as the "third-largest dam in the world" (Passarell 1981: 6666). In 1980 the projected total cost was $5 to $10 billion.

The grand vision to produce electricity was on a scale that matched the vastness of the region that would be flooded. The Liard River hydroelectric project was projected to generate approximately 26000 gigawatt-hours of electricity annually. Such production would provide a greater electric output than the combined output of B.C. Hydro's two largest existing dam sites: G.M. Shrum on the Peace River and Mica on the Columbia River (B.C. Hydro 1982: 6). Seen for its ability to produce electricity for an increasingly technological south, these B.C. Hydro proposals for the Liard River Valley reinforced the

transition of viewing rivers as working rivers to understanding them as an abstracted concept. What was once a place of direct and daily experience had become a resource to be harnessed and utilized.

However, this hegemonic view was contested as part of an outcome of social discourse generated about First Nations rights in British Columbia (Harris 2002: 293, 323). By the early 1980s, local community concerns about the Liard hydro projects were growing. In 1982, the Kaska Dena Native Band Council organized a northern native conference on B.C. Hydro's Liard River hydro project (Munson 1982: 2). It was the first time a unified group showed opposition to the Liard hydro development (Munson 1982: 2). Tom Munson reported that at the event "native representatives from across the country spoke of their concerns about northern development on native lands, about settlement of land claims, about past dealings with corporation and government officials, and about their love and feelings for the Liard River area" (1982: 2). The conference highlighted the urgent need for a united stand against development pressures (Munson 1982: 2). The flooding from the Liard hydro project would force over seven hundred people from their homes and eliminate land use options, further fragmenting the ability to gain aboriginal rights and self-title to the land (Kaska Dena Council 2011: np) (see Figure 5-10). However, in the same year, B.C. Hydro announced that "the Liard program was cut back in 1982 as a result of reductions in the electrical load forecast for British Columbia and financial restraints implemented during the year by B.C. Hydro" (1982: 1). The report went on to state, "engineering site explorations and environmental field studies previously planned for 1983 have been deferred". Finally, this contestation ended with the passing of Bill 17 (Clean Energy Act) in 2010 and the Liard hydroelectric project officially became "prohibited" (see Lekstrom 2010).

Figure 5-10. The Liard River in the proposed flood zone
(J. Staveley, 2011)

B.C. Hydro's proposed development on the Liard River was also challenged during the early 1980s through an environmental management discourse. As a result, a further institutionalized government-sanctioned relationship to rivers emerged in response to the contestation of the industrialization of rivers in the establishment of Heritage Rivers. In addressing the creation of this kind of relationship with the Liard, the then Member of Parliament for Cassiar, Allen Passarell described his vision of Heritage Rivers, stating that:

> I'd like to discuss river parks, such as the system that the federal government has instituted regarding heritage rivers. We should be developing heritage rivers, particularly the northern rivers, some of the last free-flowing, major salmon producing rivers in this province – the Stikine and the Liard – before developing them into river parks which are free of destruction by B.C. Hydro (Passarell 1982: 8648).

While the Liard River never achieved the status of a Heritage River, the Kechika River was labeled as one of the eighteen rivers in British Columbia that "require special recognition and management because of their outstanding qualities" (British Columbia Heritage Rivers Board 1999: 2). The Kechika was particularly chosen as a Heritage River for "its outstanding natural features, wildlife populations, wilderness qualities, and cultural

significance to First Nations to be enjoyed by people as one of British Columbia's finest examples of undisturbed natural beauty" (British Columbia Heritage Rivers Board 1996: 13). This kind of relationship to a river is defined abstractly by public policy and perceived externalized values of environmental wealth or sanctity. As a result, the concept of a Heritage River produces a top-down institutional interpretation of a place that further abstracts the full meaning of a river, from being a very material, physical experience that can be directly engaged, into a vague concept of heritage and natural, ecological values that must be preserved. Scholars refer to such a relationship as one of "environmental management" that is reinforced by public policy and is expressed through formal displays of signage (Bakker 2007: 15). Such signage abstractedly divides the landscape into those that are to be ecologically preserved and those that are not to be preserved, as illustrated in Figure 5-11. The process of abstraction of the human-environment relationship, illustrated in these signs about ecological preservation and the separation of rivers into heritage and non-heritage places, plays a more ominous role in the discourse about rivers as sources of 'clean' energy. The 21st century concern about climate change has become entangled with neoliberal ideology. An outcome from this entanglement is the emergence of a human-river relationship centered on the myth of "green energy".

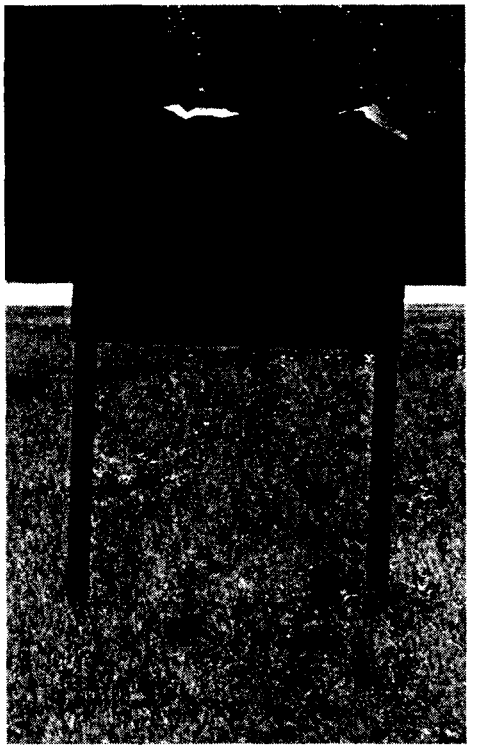

Figure 5-11. The Muskwa-Kechika Management Area.
The Muskwa-Kechika Management Area is part of a provincial and local initiative of ecological governance (J. Staveley, 2010).

5.4 Disassociation from Rivers Through the 'Green' Myth

A new neoliberal narrative of green energy is forcing an even further abstraction of the human-river relationship. The proponents of green energy claim to have resolved the 20th century contestation over rivers and permit their industrialization. Yet it is still the continuation of the concept of rivers as a mega-energy resource, albeit as a series of smaller landscape footprints. Through the participation in web-based conservation communities, I was directed towards a recent guest column in the British Columbia newspaper, *The Province*. In the September 2011 edition, Gwen Barlee (the B.C.-based organization 'Wilderness Committee' policy director and executive team member) published the article

entitled "It's time to end BC's failed run-of-the-river policy"[8]. Barlee wrote passionately about the 800 creeks and rivers in British Columbia that have now been identified and laid claim to for electricity generation (2011: 1). She raised her concern about unacceptable environmental standards and an increasing financial cost that is being passed along to the consumer (Barlee 2011: 1). At the same time, local governments have had their zoning authority reduced and the provincial environmental assessment office has been weakened to the point of being incapable of fulfilling their watchdog role (Barlee 2011: 1-2). For Barlee, the 2010 British Columbia Clean Energy Act (Bill 17) needs to be reexamined (Barlee 2011: 2). The Clean Energy Act states that one of the Clean Energy Bill's objectives is "to generate at least 93% of the electricity in British Columbia from clean or renewable resources and to build the infrastructure necessary to transmit that electricity" (B.C. Legislative Session 2010: Part 1-2.c). Figure 5-12 illustrates that run-of-river hydro projects make up the vast majority of expected future energy sources for so-called clean or renewable power.

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[8] The British Columbia conservation organization 'Watershed Watch' defines run-of-river hydropower as a project that "diverts some of a river's flow to power electricity-producing turbines, returning the water downstream of the turbines. Turbines are not installed in the river itself" (Watershed Watch 2007). See Figure 5-13 for a photograph of a small-scale run of river project. See Appendix C for a diagram of such projects.

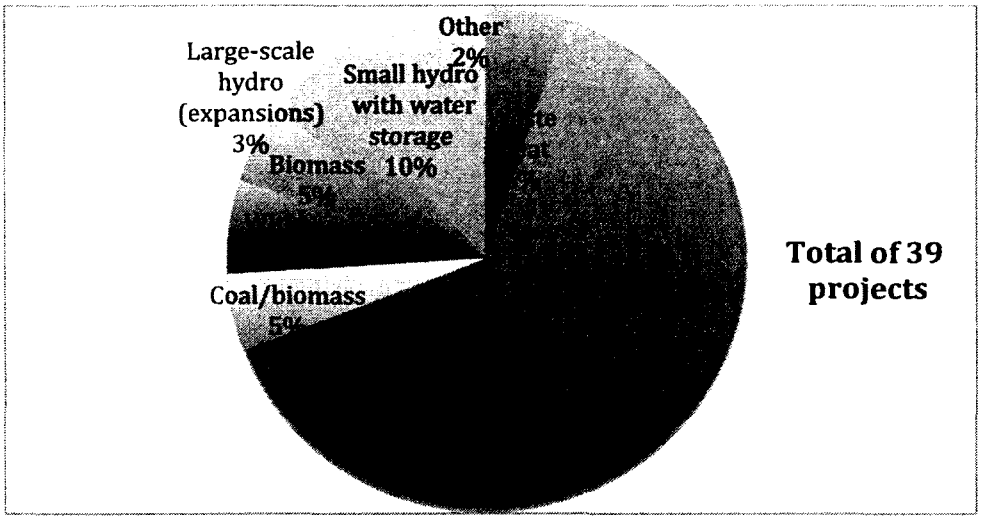

Figure 5-12. Projects approved in the 2006 'Call for Power'.
(Adapted from Douglas 2006:3)

In 2002, British Columbia saw the emergence of Independent Power Producers (IPP). In effect, a contemporary "gold rush" was triggered in response to Gordon Campbell's new Liberal government that released a policy allowing energy production to be devolved to the private sector (Barlee 2011; also see B.C. Legislature 2002 point 13). At the time, reflecting a neoliberal viewpoint about large governmental organizations and globalization, energy and mines Minister Richard Neufeld felt that B.C. Hydro was "kind of like the big gorilla. They control a lot of things" (Simpson 2002: np). Neufeld felt that B.C. Hydro needed to be fragmented in order to "fit into an emerging continental market" and to stay competitive in the newly created electrical grid organization. This organization, the Western Electricity Coordinating Council, encompasses 71 million people living in the western half of North America, from B.C. to Mexico (Simpson 2002: np). For Neufeld, the best solution for overcoming the B.C. Hydro monopoly was to support "the entry of independent power producers into the B.C. market" (Simpson 2002: np). The movement from public utility ownership to private ownership was an increasingly common trend of

changing from a government to governance model: "it wasn't just happening in British Columbia, it was already happening in Alberta and Ontario" (Gwen Barlee Interview, Oct 3, 2011). The transformation of the political apparatus on energy revolved around metaphors of "privatization", de-regulation", "economic efficiencies" and was also entangled with concepts of clean, green energy as public concerns over climate change were erupting (Gwen Barlee Interview, Oct 3, 2011).

Figure 5-13. run-of-river project on Ptarmigan Creek
(J. Staveley, 2009)

This change, driven by a neoliberal agenda, has inevitably resulted in further contestation and a new coalition of the opposition. In discussion with Gwen Barlee, she described how she became involved with run-of-river hydro opposition:

> Around 2003 or 2004 maybe a little bit later that we started getting phone calls from a guy named James Smith[9]. He was a rancher up near the Ashlu [river], which had an IPP

[9] Pseudonym used.

> proposal at that time. The community was up in arms about it and they didn't want to see it go through. James was very persistent and he phoned again and again. He said "you know you owe it to your members to scratch beneath the green veneer and find out what's actually happening and what's going on", so we did. (Gwen Barlee Interview, Oct 3, 2011)

By 2003, British Columbian residents who had immediate relationships to a river began to experience the effects of run-of-river hydro projects. Barlee became aware of the case of James Smith for whom the development on the Ashlu River limited access to what he felt was a public region. Barlee went with Smith to the Ashlu development project to see it for herself. Her experience was eye-opening for her both in terms of the scale of industrialization but also in the experience of how private versus public concepts reflect abstractions and disassociations about river relationships:

> I went up with James to see the Ashlu. We drove up in his vehicle and it was really an eye opening experience for us. What I'd thought would be sort of a bucolic little scene, where maybe you'd have a turbine and a stream, it was far different. It was a big industrial project... we were told even though we were on a public road that we couldn't take photos because it was a private power project. (Gwen Barlee Interview, Oct 3, 2011)

From that point on, Barlee began to scrutinize the run-of-river policy in British Columbia. Being affiliated with an environmental organization such as the Wilderness Committee, Barlee also saw the effects of an increasing "divide in the environmental community" created by the 'green energy' argument of run-of-river projects (Interview, Oct 3, 2011).

In British Columbia 'clean' energy in the form of small-scale run-of-river hydro projects have become a prevailing rhetoric that employs a 'green energy' myth. The myth reflects idealistic themes that energy can be produced and consumed without serious environmental degradation in an ever-increasing spiral of material wealth and related freedom for the individual. Further, the myth widens the divide between those who see 'green' energy as a positive solution to climate change and those who experience the

impacts of run-of-river hydro projects or question the move towards private ownership of rivers and water sources (Gwen Barlee Interview, Oct 3, 2011). Barlee points out that while B.C. Hydro was paying run-of- river power suppliers $125.00 a megawatt hour to make power economically viable, the industrial power price was $40.00 a megawatt hour. Barlee asserts that this kind of economics has "has nothing to do with green energy" (Interview, Oct 3, 2011). Even within the supposedly environmentally concerned "green energy" ideology, rivers become further abstractions and people are further disassociated from their rivers.

This chapter is not intended to romanticize a perceived utopian past human-river relationships. The historical transformations in this chapter are intended to illustrate how river use and ideologies have become disassociated from human experience. Starting with the building of the ALCAN Highway and the continued industrialization within the region, a working relationship with the Liard's rivers has been mostly abandoned resulting in a dialogue about the role of rivers within an abstract space. The creation of a concept such as the classification of Heritage Rivers is the result of a continuum of historical processes in which rivers have increasingly become ideological abstractions. The emergence of 'green energy' further suggests that an abstract relationship to rivers has been established where commodities such as hydroelectric energy are now valorized. This willingness to industrialize rivers is based on the premise that since people no longer need to go to the river for work, transportation or daily activities, rivers are therefore disconnected from our lived experiences and realities.

6 Chapter: Experiencing the Liard

Field Notes, June 21: 2011

It is the summer solstice today and at the same confluence of the bounding Rapid and Dease Rivers there is a week-long celebration. Entirely off the radar of any of the people in vehicles travelling down the Stewart-Cassier highway, families travel from Ross River to Fort Ware to connect, celebrate and participate in a stick gambling tournament during their 'Kaska days'. Families and friends, government employees and lodge owners all gather for the music and games held along the river. A U-Haul truck brings a music stage to be set up directly in front of the riverbank, tents and motorhomes create lively temporary camps in the trees, and the smells of coffee and burgers for sale drift across the celebration grounds. Travelling down a rough, one-lane winding road (road is generous – it is better described as a track), the method of reaching the Rapid-Dease confluence has changed, but the role of the river has not. The river was and always has been central in people's lives.

Figure 6-1. Riverboats on the Liard River
(J. Staveley, 2011).

6.1 The 'De-materialization' of Rivers

In chapter 5, I provide illustrations and present a dialogue to argue that a series of ideological transitions took place resulting in rivers becoming abstracted spaces. The abstraction of rivers from the very real and immediate experience of them as a working river, to an intangible and indirect relationship centered on a river's ability to produce electricity, disassociates people from the essential river experiences that have traditionally fastened the dynamic relationship between human interpretation and the rivers that flow through our lives. In the *Meaning of Water*, Veronica Strang discusses the emergence of a relationship to water that she identifies as 'de-materialization' (2004: 246). She explains that water has become "abstracted from its physical and social location and transformed into an invisible, tradable 'global' commodity" (Strang 2004: 246). Strang's concept of 'de-materialization' expands on my interpretation of rivers as abstracted space to include the global and multinational forces where water management has shifted from local communities into control by large international organizations (Strang 2004: 246). For Strang, this 'de-materialization' of water is also a 'de-socialisation', "that denies the reality of local, specific human-environment relationships" and alienates the medium through which individuals can experience or identify with the resource (Strang 2004: 246). For Strang, the de-materialization of water is not necessarily a benign process of abstraction, but a more forceful process (2004: 246). People are "alienated" from direct engagement with water represented in its many forms, including rivers (Strang 2004: 246). Such a process compromises essential human essences of identity and social cohesion (Strang 2004: 246).

Yet, rivers and the water they carry are still central in our lives (Strang 2005: 247). Even with a neoliberal discourse of private ownership, regulation, management, enhanced

infrastructure or individual rights to water resources, rivers are still a fundamental aspect of our creative, physical and metaphysical lives. Every summer, thousands of tourists stop in their tracks to reflect and connect with the immense power of the same rapids that McLeod's voyage portaged along the Liard River (field notes 2011). Musicians, painters and poets alike still sit on riverbanks to physically and creatively connect through their artistic interpretation and communication (field notes 2011; Lasek interview 2011). Postcards displaying photographs of the Dease, Liard, or Frances Rivers are sent across the world as tourists express their identity and connection with these rivers and places along them (field notes 2011). Each year from a myriad of countries, canoeists arrive in the communities scattered along the northern British Columbia rivers eager to paddle and experience river travel[10]. The same rivers are sites that energize community gatherings, weddings, or environmental protests[11]. Rivers remain inextricably part of everyday physicality and imaginations. While rivers have gained neoliberal narratives involving management, regulation or infrastructure, the de-materialization of rivers is fundamentally at odds with its lived cultural meaning. The inherent contestation embedded in a de-materialized perception of rivers suggests that human experience is alienated from rivers; however, this perception does not align with the lived realities along rivers.

This chapter considers people's direct engagements with the rivers of the Liard watershed. I ask how river experiences link concepts of place and identity with perspectives of stewardship and responsibility. In my fieldwork, both on the river and in the communities along the river, I use auto-ethnography, participatory fieldwork, primary

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[10] See, for example, Nahanni River Adventures: www.nahanni.com
[11] See, for example, "Spirit of Skeena Swim with Ali Howard": www.sacredheadwaters.com

source review and open-ended interview methods to acknowledge how interactions with rivers are essential forces that underpin human-river relations. I present the data in a creative synthesis (for details on this approach see section 3.3) that follows the analytical techniques of phenomenological methodology (Moustakas 1994: 18). The synthesis incorporates photographs, drawings and direct quotations from the participants as well as myself to illuminate the experience, meanings and essences embedded within the direct engagements with rivers (Moustakas, 1994: 122). Ultimately, this creative synthesis allows for an interpretation towards a moral relationship with rivers.

6.2 A Living River

De-materialization of water and rivers is fundamentally at odds with the cultural meaning directly experienced and shared by those persons who continue to live with and engage with the river that I observed and participated in during my fieldwork. A variety of people interact and experience rivers not at an abstract level but indeed in a very elemental and fundamental way. This relationship is similar to that of the working river during the early 20th century. People still make their livelihood along the river but now as rafting and canoe guides or as big game guides and outfitters within the tourism industry. Others supplement their livelihood along the river by trapping, hunting and fishing. They travel the river in various seasons and become intimately familiar with certain places along the river at particular times of the year. Outsiders view them as 'locals' and, in a few instances, insiders valorize particular individuals based on their depth of knowledge of a particular river or river section.

While the cultural significance of direct experience with the river was evident during my fieldwork, it was also clear that the Liard watershed embodies a particular rhythmic human-river relationship. The rhythm is seasonally based and reflects the hunter-gatherer

traditions of Athabaskan societies. Most people's engagements with the Rivers in the Liard watershed therefore occur within a particular seasonal context depending on the activity. A variety of factors such as break up, freeze up, high water, low water, hunting season or seasonal fires influences the purpose of travel on and engagements with rivers. After a previous summer fire in the boreal forest, mushroom pickers and sellers set up camps along the shores and travel the rivers in order to access terrain where highly valued morel mushrooms are collected and then sold at a lucrative price (field notes 2011). Throughout the summer, canoe guides take small parties of tourists along the many tributaries of the Liard. When the water is low in September, a small group of river guides with paying customers travel by inflatable raft through the main rapids of the Liard (personal communication, field notes; King interview 2011).

A living river also acts as a transportation route for hunting outfitters where supplies move up and down the river by powerboat throughout the early summer. When sheep hunting season opens each year on August 1st, outfitters boat customers up-river to their hunting camps. In late July and early August of 2010, I counted some twenty-eight jet boats on the Kechika River including one vessel whose owner, in an expression of his relationship to the river, named his boat "The Kechika" (field notes 2010). After the opening of moose hunting season on September 1st, a new wave of families and members from the local communities travel the rivers and set up or return to their camps and cabins along its shores (Figure 6-2) (field notes 2011). The moose move down from the high alpine in the early fall towards shallow ponds and marshy oxbows in old river channels where they become vulnerable to hunting groups. Following this migration, the moose-hunt for winter meat is usually conducted along the river or in its swampy oxbows created from old river channels (perhaps explaining why in the Kaska language, there are at least

seven words for 'marsh' (Kaska Elders 1997)). Often killed on the river's edge, the water eventually flushes away the blood of the moose. In the Liard watershed, a river turned red from blood is not a symbol of death, but a celebration: an affirmation of community and identity.

Figure 6-2. "Moose Camp"
Moose camp in the headwaters of the upper tributaries of the Liard watershed (J. Staveley 2011)

When I ask raft or canoe guides about their work on rivers, they provide a deeply felt description of places on the river that are significant to them (personal communication, field notes 2011). After her 2011 season of river guiding was complete, I spoke with river guide Mackenzie King about the Liard River. She described river features she encountered on a rafting trip with an intimacy based on her specific direct sensory engagements with the river (King interview, 2011). King described that her experiences with rivers are not isolated to her as an individual, but are shared experiences (interview 2011). Furthermore, such shared experiences with other insiders are communicated through specific language and descriptive terminologies (King interview, 2011). King explained a specific river trip in which her boat took a wrong channel, causing herself and her clients to swim through the

violent rapids (interview 2011). She described rapids and other features of the river in a way that reflects de Certeau's highly detailed 'tour':

> Past the boils in the middle is very fast water on the left, to the right there are two big holes and if you stay left you will be pushed further left into a huge pillow and large undercut. The key is to go down the left and run the water falling off the pillow to the right, and then hit the horizontal angle waves pushing off the wall. If you go too far right the first hole is so big that you won't stand a chance (King interview 2011).

To the experienced river traveller, the information shared in such a detailed river 'tour' is also vital to the success of future safe, enjoyable and productive journeys along the river. She vividly recounted a trip down the Liard with precise descriptions of rapids, river features and surrounding landmarks in a mental tapestry of how to effectively navigate the river (King interview 2011). While we talked, King was able to instantly complete an ad-hoc drawing on a napkin of her mental map of specific places along the river with an emphasis on rapids or dangerous channels (field notes 2011). Her artistic description provided as much rich detail to me as a carpenter describing the building of a fine piece of furniture.

Other people, such as jet boat operators and hunting guides, who work on the river also speak of and share their sense of hardship of their river experiences. They emphasize dangers such as logjams and describe specific places on the river that should be avoided (personal communication, field notes 2011). Similarly, with a sense of pride and excitement, some individuals intricately describe specific camping spots or locales along the river, such as places where moose can often be spotted (field notes 2011). The elemental nature of this relationship of movement along a river causes individuals to become keenly aware of the river's immediate physicality. Whirlpools, particularly challenging rapids, or useful eddies, are identified, named and placed into the itinerary of the river. As Liard River guide, MacKenzie King described it:

> The river is boss, the power of the river keeps my respect for the river. You get the sense that there is no mercy, you can't ignore how powerful the river is...It's easy to forget how powerful the river is, but it doesn't take long before you are reminded that the river is the boss (King interview, 2011).

6.3 Experiencing the Liard: Retracing McLeod's Route

In the summer of 2011, two research participants and I canoed the same route that John McLeod's took in his 1834 exploratory trip along the Dease River. We used an archival copy of McLeod's 1834 journal and the map attached to it as an experiential reference. In the evenings, I would read (out loud to the research participants) sections of John McLeod's 1834 journal that were relevant to the same section of the river we had just travelled through. We each kept a journal with the archival "Indian Chart" glued onto the front page. Along with daily field notes, we recorded our thoughts and experiences, including sketches, conversations and photographs. A relationship between the research participants and myself advanced to a point in the research process where they acted as both participants and co-researchers. For example, we were all able to eventually distinguish how the 1834 map was used as a navigation device by aligning ourselves with the tributaries and triangulating that point with the adjacent mountain ranges. The sharing of these experiences necessitated by the journey along the river became an essential part of the field experience.

The goal of the canoe trip was simple: experience the history and heritage associated with this part of the Liard watershed and to experience and engage with the river itself. The trip also proved that river travel is an immediate inescapable physical experience. On the last night on the river, after a particularly cold rainstorm I recounted the day in my journal:

> I have called this trip an act of 'recreation' or 'heritage', but today it had nothing to do with either. With a head wind and driving rain that pushed us backwards whenever we stopped paddling; everybody was hungry, had blistered hands, and was cold and tired.

> Today, we just needed to get the hell out of the rain and under this tarp. (Field notes: July 18, 2011)

The river trip participants discussed how the river became a dynamic part of their lives as a result of their physical engagement with it. Sharply contrasting with their prior experience of more motorized forms of river travel, the pace of travel linked the act of paddling with emotions around "solitude" and "the interconnection to nature". A sense of "timelessness" was often mentioned in both the journals and in their conversations; even often referring to the wrong day of the week. Social constructs of time became "meaningless". The long daylight hours coupled with a canoe's pace of travel helped associate our sense of timelessness and formed a connection with the environmental rhythms around us and deepened our sense of connection and dependence upon each other. The pace of travel was described as "real time" or the need to be "patient with time" (Participant A & B interview, 2011). When discussing the river as a way of transportation in the past, we all described a newly felt connection to a collective history including both European and indigenous cultures. We also developed a sense of belonging and involvement with the river and the riverscape around it. We felt that our brief travel along the Dease River was secondary to the importance of the historical role and ecological significance of the river (field notes 2011).

The contemporary retracing of McLeod's voyage suggests that people can experience history at an intuitive level. The experiences of this canoe journey reflect Veronica Strang's argument that people's biological, sensory and perceptual experiences with rivers and water are "universally human, and yet simultaneously a product of a particular individual and cultural moment in time and place" (2004: 245). Building on Strang's discussion, while our cultural context as river travellers was fundamentally different than

the context of the past, the physical experience transcended time. Through our shared physical challenges, the participants and I felt a profound connection to McLeod's experience as we navigated the same rapids, whirlpools and felt the shared fatigue of conducting portages of canoes and equipment while being bitten by summer insects. McLeod explains such elemental, physical experiences:

> During the night, the mosquitoes annoyed the men, so much that they obtained little or any rest... tracking was pretty good, but current remarkably strong...weather still gloomy... it commenced rain which continued to fall in torrents all day... laboring under such slow progress we only reached smooth water at 3 pm... we reached in sight of the long sought for falls (HBCA B.200/a)

In 2011, one of the participant's journals recorded similar experiences:

> Mosquitos are bad, but bearable... The morning was very slow moving water – meandering...But the rain set in and it kept thundering so we decided to stay put for the evening...We paddled for about an hour before we got to the much anticipated rapids. (Participant A, 2011).

We all experienced and shared with each other a range of emotions from fear to courage, utter fatigue to exuberance. On almost every entry in our journals, the state of the weather was mentioned as well as being a frequent topic of conversation. Water levels, distance traveled, the pace of the river were often documented and each camp spot was ranked based on a sense of solitude, access to clear water, available tree shelter or view. The participants also expressed a profound sense of connection to McLeod's past experience through the observation, identification and photography of animals: "we could secure two beavers!" (Participant B interview, 2011). Through the direct engagement of travelling on the river, the experience is not only transmitted through the physicality of a place but the physicality of the past.

The participants consistently referred to their feelings of "being in nature" as juxtaposition to their involvement in an urban and a highly industrial/ techno-industrial

society (Participant A interview, 2011). They frequently engaged in the identification of river features becoming intensely aware of them. They named creeks, camp locales, river features and landmarks as a way to share and communicate that experience: "Beaver Island camp; Paradise Island camp; Ducks Unlimited camp" (field notes 2011). References to those newly experienced camp locales, creeks, river features and landmarks were made by using a riverscape landmark that might stay in view for long periods of time; in doing so, the participants would make an unfamiliar riverscape familiar and memorable. After the trip was completed the participants felt the need to communicate a mental map of the river, using the named creeks, camping spots, landmarks, tributaries and features such as "the big log jam" as mnemonic devices (Participant A interview, 2011). In addition, one participant took many photographs that can be pieced together to trace the route. That same participant additionally engaged with the river experience creatively by drawing pictures of our camp, as seen in Figure 6-3.

Figure 6-3. Excerpt from a participant's journal
A participant's hand drawn illustration of the "Ducks Unlimited" camp spot.

6.4 Towards a Moral Relationship

From the river travellers' constant weather observations and identification of powerful inspiring river features to the people who still work along rivers, individuals experience a profound elemental relationship to rivers. There are essential experiences that underpin all human-river relations rooted in the elemental nature of a direct lived physical interaction with a river. Such physical interactions are cross-cultural and transcend time. Furthermore, direct and immediate experiences with rivers shape individual identity and create a shared bond between individuals that is rooted in the physical experience. Rivers are a place to create and reproduce identity. As such, they are also sites for expressing moral perspectives and visions about the future.

People's perspectives and relationships with rivers are not imposed from a distance, but emerge from an intimate interaction involving contact, immersion and ingestion (Strang 2004: 5). Moral relationships between people and rivers are clearly influenced by such engagements. Engagements with rivers – through contact and immersion – are immediate to the individual, yet that experience is also interconnected to the place. For those who work on rivers and for those who travel along them, this immediacy translates to the importance and significance of the river as a product of their engagement with it. Liard River guide, Mackenzie King, also spoke of the importance of place, of a physical connection to the river and how that transfers to a moral relationship:

> The whole river experience is what makes rivers so special for people. My stewardship for water comes from that. When I'm in the river I'm thinking about the river, when I stand on the shore, I can see the mountains, the valley and feel connected to a larger place (King interview, 2011).

Jace Lasek, from the Montreal-based band Besnard Lakes, was asked to participate in the National Parks project to create music 'in place' along the Nahanni and Liard rivers.

After his trip, I asked Jace if there was a connection for him between the act of river travel and stewardship. His response strongly reflected an experience in which his sense of the river as place was prioritized over his self-identity as a musician:

> We created a pretty strong bond with the people we went with. I think some great friendships were created by the shared experience of this extraordinary place that we had the privilege of seeing and experiencing, that not many people get to see. It's truly one of the most beautiful places I have ever been to and I long to return. I was very sad to leave. The music to me was so secondary to the grandeur of this amazing place. (Jace Lasek interview, 2011).

When asked if the river trip translates to a sense of responsibility for the river, the Dease River trip participants, spoke of shared experiences:

> Whether good or bad, a trip like this shapes my understanding of this place, and being able to pass that on. One person can affect a few people about the Dease River by telling them about the place and I will shape other's minds. We can share the good things about the river and we can become a steward of the river... even if people end up just picking up a book about the area. (Participant B interview, 2011)

Similarly:

> Even just the act of being here, without knowing about the history would translate to stewardship, I can't speak for everyone but, by just connecting and by relating to the area through memories... some people are lucky enough to have experiences [with rivers] that provide them with a sense of stewardship (Participant A interview, 2011).

People's sensory and physical engagement with rivers not only lead to emotive feelings of identifying with river places but also produces a moral relationship based on stewardship and responsibility. As a further example, in Whitehorse, I met up with Skook Davidson, canoe instructor and long time Yukon resident. He created one of the first outdoor leadership courses in western Canada – a founder of outdoor education in Canada. For over thirty years he has been leading education-based outdoor trips on rivers throughout the Yukon and northern British Columbia. For Davidson, there are inherent "therapeutic benefits of life on the river" (Davidson interview, 2011). Lately, Davidson explains "we have seen outdoor education be a place for 'youth at risk', but we are all at

risk at some point" (Interview, 2011). For Davidson, experiencing rivers is an essential part of northern identity: "experiences with rivers shape us, they define us" (Interview, 2011). He states that the river links the physicality of travel with elemental realities. River travel for Davidson leads to:

> a deep appreciation and understanding of the interconnections around us and what is involved in the day to day activities on the river: there is a fundamental difference for students who catch a salmon versus those who buy a northern cod burger at McDonalds during lunch break (Davidson interview, 2011).

I further asked Skook Davidson if he aligns himself with anti-development river activist movements. He said, "I follow them, but I more closely align to a First Nations perspective where it is recognized that we are part of the water" (Davidson interview, 2011). For Davidson, moral responsibility for a river is not about protecting the river; it is about recognizing that we are part of the river (Davidson interview, 2011). Davidson presents the insight that we are all profoundly connected to the rivers that flow through our lives and a policy question that asks us to 'protect river X' misses the point. Instead, we should be asking how we protect our sense of an elemental connection to these rivers.

7 Chapter: Go to the River

Field Notes November 14 2011:

I am standing on a large rock outcrop overlooking what the road sign calls 'Whirlpool Canyon'. The topographic maps call it 'Mountain Portage'. For a river guide travelling, it does not really matter what the rapid is called, as long as you know where you are in relation to it. 'Whirlpool Canyon' is just such a place. It was the first place I went to when I started this research and today it is the last place I will visit. Power, inspiration, brilliance, and history converge at one geological fault line that traverses the Liard Plains. In John McLeod's 1831 return voyage along the Liard, he decided to travel through this dangerous section of whitewater, ordering four of his boatmen to navigate these waters. Their canoe filled with water after the first rapid. Uncontrollable with such extra mass, it slammed into one of the notoriously jagged Liard River rock outcroppings and the crew was flung into the river. After struggling for 2 miles, two crewmen found the strength to swim to shore. Two others "were still holding on by the remaining part of the wreck... but the Canoe broke". Their bodies slammed into a large boulder and they were "instantly killed" (HBCA B.200/a). At Whirlpool Canyon, thinking of this, the river's strength humbles me and while I fear its authority, I am drawn to its magnificence.

Figure 7-1. Whirlpool Canyon on the Liard River.
(J. Staveley, 2011)

In addressing human-environment relations, environmental anthropologists and historians identify that there is a prevailing western discourse of 'protection or development' (Neufeld 2011: 238; Sandlos 2011: 56). In the context of human-river relations, this debate positions rivers as being either a resource to be exploited for societal good or as requiring preservation against the degradation of industrialization. Scholars further suggest that the 'protect or develop' discourse is two sides of the same coin and ignores other theoretical perspectives that have the potential to illuminate alternative consequences and opportunities in water and watershed management (Neufeld 2011: 238; Sandlos 2011: 56). In chapter 1, I argue that within this 'protect or develop' framework where the environment is viewed as a set of resources, scholars continue to examine rivers and water as being removed from, or otherwise acting as a peripheral backdrop for, human existence (Bakker 2008, 2010; DeVillers 2003: 11; Smith et al. 2000; Sowry 1977; Speidel et al. 1988). This type of framework presents rivers and people's relationships with rivers as being strictly a 'functional' aspect of political and economic contexts. Further, I suggest that neoliberal economics fits nicely into this functional perspective that ignores complex social and cultural interactions and experiences. As such, the environment and the rivers we rely on, increasingly become part of a contested discourse concerning social and ecological responsibilities.

Recognizing that such a research perspective that separates rivers from human engagement is problematic, in chapter 2 I recognize the different reasons for why people 'go to rivers'. Using an interdisciplinary approach, I correlate the works from environmental anthropologists, environmental historians and political ecologists who integrate concepts of culture and nature and recognize that people reproduce 'nature' through cultural constructs. Following this literature, I suggest that rivers should not just

be understood as physical elements of the environment, but also understood as a product of culture, similar to other elements within human-environmental studies. In order to advance the understanding of human-river relations, while recognizing the historical processes and transitions that have shaped the meaning, role and significance of rivers, I employ a phenomenological approach. The concept that histories are a way to explain and provide the context for the dynamics, contestations and issues of the present, is central to this approach. Such an approach is fundamentally different than doing history for exemplary value that, such as in the history of science, dissolves the site and place where history is located (Foucault 1980: 64). Instead, doing history to make sense of the present requires, as Michel Foucault describes, "one [to have] some kind of involvement with the struggles taking place in the area in question" (1980: 64). Recognizing this, I combined the methods of archival research and primary source review with participant observation fieldwork (including auto-ethnography), to integrate the past and present.

In chapter 3, I described my research methodology. As part of this, I discovered historical journals about a river journey, along with an experientially rich map of a river whose route I could retrace. Subsequently, as an essential part of the fieldwork, I retraced the canoe route that was mapped by indigenous fur traders and Hudson's Bay explorers in 1834. In doing so, I encountered an intensely humbling environment with unmarked obstacles, unexpected bends and unforeseen occurrences. At an elemental level, I encountered the river in its many forms: ringed with forest fires, swelling with floodwaters, disappearing under dangerous logjams while experiencing a sense of awe, fatigue, exuberance and fear. All of these direct experiences helped me bridge the historical significance with the contemporary role of rivers. Applying a phenomenological methodology, contemporary river trips, as well as time spent in local river-based

communities, proved to be a pivotal point in my understanding of both the past and future role and significance of rivers. Furthermore, the fieldwork led me to recognize a fundamental premise of this thesis: in order to understand human-river relations, a river must be directly experienced.

In chapter 4, I explore the significance of two 19th century river maps of the Liard watershed of northern British Columbia. Specifically, I focus on the 1834 river map. This map represents a specific river route based on local knowledge that guided the Hudson's Bay company explorer, John McLeod, and his crew from Fort Halkett to the Stikine River and Pacific watershed. This is fundamentally different than the earlier 1831 river map of McLeod's, the purpose of which is to document his explorations of the region and provide a pictorial report of the Liard watershed. In the examination of the 1834 map, I draw on the fieldwork in which two research participants and I retraced the river journey represented on this map. Although the specific history of the river is important, my detailed examination of this historic map furthers my argument that Liard River maps archive a dynamic human experience. During the early nineteenth century the rivers of the Liard watershed were essential places of experience. People's working relationship with the network of rivers that extended across northern British Columbia and southern Yukon are represented in the river maps of this period. This working relationship was embedded with encounters, itineraries, histories and tasks that are produced and reproduced in the act of practicing the river journey.

In chapter 5, I provide photographs and illustrations and describe the transitions that took place that caused rivers to become part of an ideology of abstraction. By examining the larger landscape associated with a waterway, I argue that the ideologies of rivers in the Liard watershed shifted over time: from the relationship people had with working rivers

being very real and immediate, these became intangible and indirect relationships as rivers are now seen only in terms of their ability to produce electricity or their role within ecological sanctuaries. As a result, the role and significance of these rivers underwent a series of significant transitions that has transformed our relationships with rivers in a fundamentally different way. Further, within this process of abstraction, there has been a move away from a government model of river management to a governance model. Using a case study about the recent emergence of 'green energy' in British Columbia, I provide a contemporary example of how personal physical connections to rivers are effectively alienated through this process of abstraction and the governance model of river management. Chapter 5 recognizes that the contemporary rivers of the Liard watershed reflect a "key feature of modernity": the dissociation of identity from places within the environment (Strang 2009: 278).

Finally, in chapter 6 I consider people's direct engagements with the rivers of the Liard watershed. Using phenomenological and ethnographic methods, I identify the essence of human-river relationships based on direct engagements with rivers. The experiences of river travel for my participants and myself provided a connection both to the landscape through which we travelled and to our history. In this chapter, I articulate that experiences and engagements with rivers occur in a space that is immediate and physical to the individual. In the case of the Liard watershed, the discourse about river management, regulation or infrastructure does not align with the agency that people express during their engagements with rivers. In this way, the abstraction and de-materialization of rivers is fundamentally at odds with the lived cultural meaning of rivers. I argue for a human-river relationship that transcends binary discourse, such as 'protect or develop', and suggest a move towards a moral relationship with rivers. A moral relationship with rivers is based on

community identity, physical experience and creative engagements. The experiences described by individuals in chapter 6 reinforce a key theme in this thesis: that the examination of water management must be "reframed" in order to accommodate a profoundly complex issue that transcends ecological, biological and symbolic and cultural realms (Bakker 2010: 14; Matthews et al 2007: 335; Strang 2009: 287).

As a nation of plentiful rivers and great narratives about rivers, we all too easily forget the vital and essential role of rivers, and the water they carry, in our life. In a global context, this is not always the case. With an increase in global urbanization, global industrialization and global consumption, rivers increasingly become a focus for conflict between the essential biological reality of drinkable water and the forces creating environmental degradation. According to research carried out by the United Nations "Water for Life" program, each day approximately 3,900 children worldwide die from the lack of clean drinking water (DeVillers 2003: 11; United Nations 2004; 2012). In Bangladesh and western India 20 years ago, engineers drilled 'tube wells' for drinking water as a substitute for polluted groundwater (Smith et al. 2000: np). However, given the shallow depth of these wells, naturally occurring arsenic in the ground infiltrates the available water (Smith et al. 2000: np). An estimated 20 million people using these wells are slowly being made ill from what has become the "world's largest mass poisoning" (Smith et al. 2000: np; Pearce 2006: 86). In another case three years ago, the construction of the world's largest hydroelectric dam on the Yangtze River in China engulfed 13 cities and 1500 towns and villages resulting in the displacement of 1.3 million people (International Rivers 2009). In yet another case ten years ago, some 100,000 cubic meters of the lethal chemical cyanide filled a Romanian tributary of the Danube River and flowed through the villages of Hungary, past the city of Belgrade, killing fish and creating a river

that is unsafe for human contact or consumption (BBC News, 13, Feb 2000; DeVillers, 2003: 13). Subsequently in 2010, the Danube was once again filled with an unlisted chemical mix of toxic sludge that killed four people and hospitalized well over one hundred more (BBC News, 7, Oct 2010). Scholars assert that throughout the world, rivers have become industrial sewers and urban drains; some rivers no longer reach the ocean and if they do, their last leg is often a sewage filled trickle through impoverished neighborhoods (Evenden 2004: 4; Pearce 2006).

Rivers are the essential lifeblood of all communities. Within Canada, they are embedded with narratives, encounters and ideas that have made up Canadian imagination, identity and agency. To the researcher in social science, a river is an archive of mnemonic devices, an artifact of human movement and a reflection of environmental manipulation. A river and its surrounding landscape provide the human imagination with a place where memories are sustained, stories are told and lessons are learned. Rivers in the Liard watershed have been mapped, named, and colonized through economic trade; abandoned through transport efficiencies; and cultured through their affiliation with environmental governance and traditions of heritage. The rivers have been staked for hydroelectric potential and are sites of protest. The surrounding landscape has been contested over ownership and has been the backdrop of artist renditions. The region has been claimed for gold and reclaimed for other precious metals and, more recently, for natural and methane gas, while also being a place that continues to entice the canoeing and kayaking recreationists.

This thesis, centered on the Liard watershed, is both an interpretation of the historical portrait of an understudied region and a critical reflection of why people go to rivers. This thesis also opens possibilities for further research. The intent of this research

was purposefully broad so as to have a collaborative and holistic approach. While the required breadth of such an approach has many advantages, it necessarily limits the depth to which this study can be taken. Therefore, future work that examines specific aspects of this interdisciplinary project in a detailed study would be beneficial. Possible future research could include: a study of the ways narratives about rivers are produced and reinforced in political, industrial or conservation arenas; a comparative study of a different watershed; or a project that applies the history illuminated in this study within an experiential educational model.

The social sciences have an essential contribution in providing advocacy for and integrative discourses that connect river management models and the lived realities of people's relationships to rivers (Strang 2009: 288). Environmental anthropologists, environmental historians and political ecologists all recognize that in order to understand human-environment relations we must first understand how people internalize, narrate, structure and explain the world in which they live. I argue that it is critical to include the role of experience in understanding the complexities embedded in human-river relations. It is clear that there is a gap in our public discourse between those who 'go to the river' and those who view the river as an abstracted space. Contestation over rivers and their usage in western Canada is already taking place on rivers such as the Athabasca, the Peel, the Skeena and the Taku. It is not unreasonable to suggest that this gap in public discourse will continue to increase and intensify the contestation over rivers. Researchers have much to offer in rephrasing public discourse by examining human-river relationships in an interdisciplinary context. In doing so, our relationship to rivers can become revitalized by connecting past journeys, and the representations they produce, to the cultural interactions of the present.

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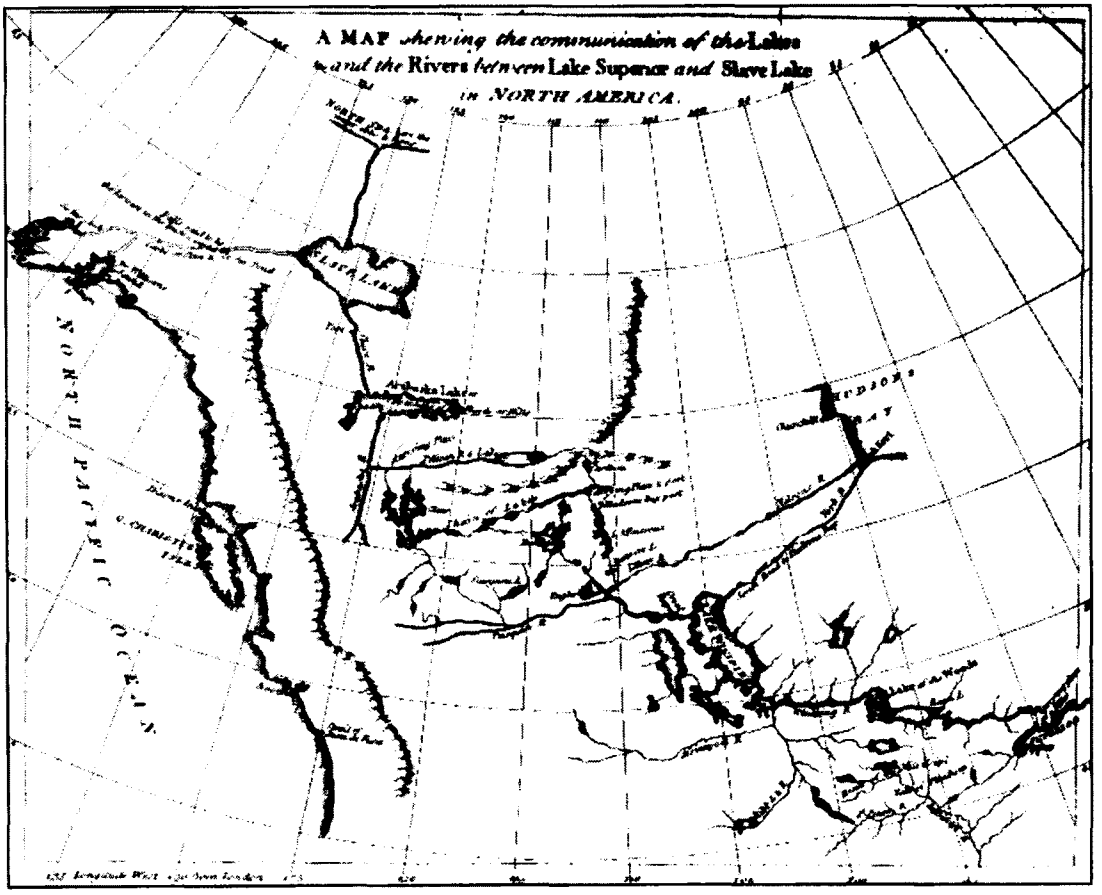
Appendix A - Peter Pond "A map showing the communication of the lakes and rivers between Lake Superior and Slave Lake in North America" 1790

This map illustrates the region of the Liard Valley where the Grand Canyon is located as part of imaginary mapping. The Grand Canyon of the Liard is described as "Falls: said to be the largest in the known world" (in Belyea 2007: 8).



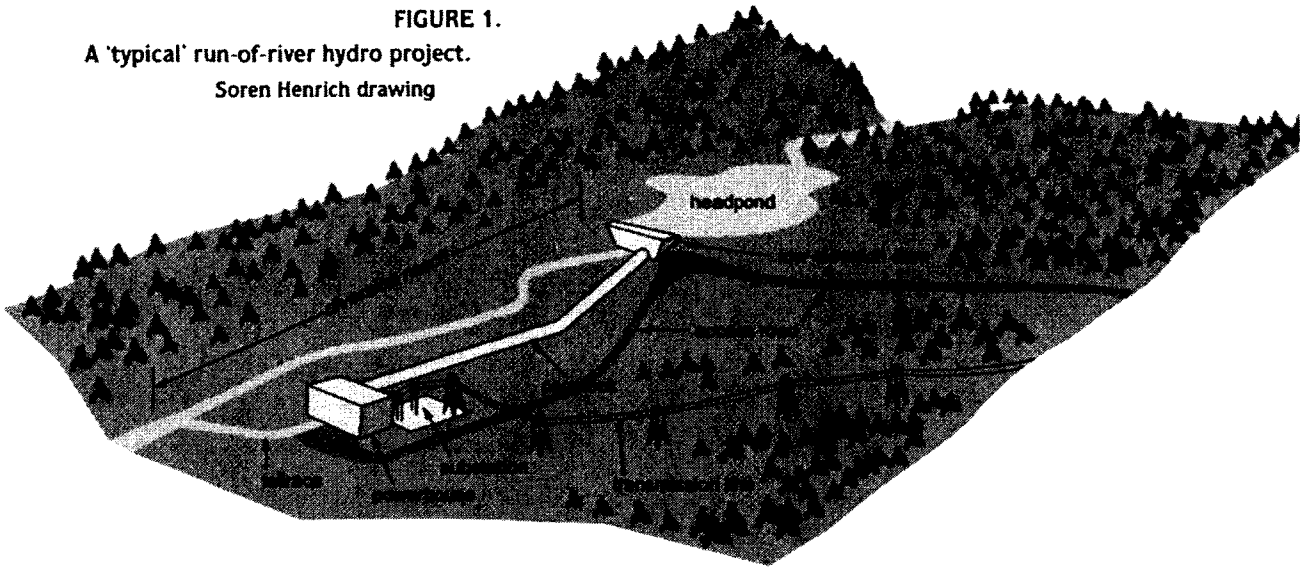
Appendix B - River names as they appear on Hudson's Bay Company maps

Names as they appear on the 1831 Map	Current Name
Simpson Lake	Simpson Lake (& Simpson Creek)
Stuart's River	Upper Liard River
Dease's Branch	Dease River
McPherson's River	Hyland River
Black's River (includes a second channel)	Kechika River (Second channel is Rabbit River)
Charlie's River	Coal River
Smith's River	Smith River
Unmarked (or imagined to be the Toad)	Racing River (?)
Toad River	Toad River
Beaver River	Beaver River
East Branch: includes Buffalo River and a river with an undistinguishable name	Fort Nelson River: The Prophet River (Buffalo) and the Muskwa River
Black River	Petitot River
Buckahe (?) River	Muskeg River
River of the Fort	Netla River
Nahany River	South Nahanni River

Name added on the 1834 Map	Current Name
Stewart's River	Rapid River
Christie's River	Eagle River
Frances' River	Stikine River

Appendix C - Diagram for a typical run of river hydroelectric project.

FIGURE 1.
A 'typical' run-of-river hydro project.
Soren Henrich drawing



Source (Watershed Watch 2007)

Appendix D – UNBC Research Ethics Board Approval

UNIVERSITY OF NORTHERN BRITISH COLUMBIA

RESEARCH ETHICS BOARD

MEMORANDUM

To: Jeremy Staveley
CC: Angèle Smith

From: Henry Harder, Chair
Research Ethics Board

Date: June 2, 2011

Re: **E2011.0419.048.00**
River Narratives and Experiences in the Upper Liard Watershed of Northern British Columbia

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Thank you for submitting revisions to the REB regarding the above-noted proposal to the Research Ethics Board. Your revisions have been approved and we are pleased to issue approval for the above named study for a period of 12 months from the date of this letter.

However, please continue to submit the letters of support from the various First Nations' groups you are working with as you receive them so they may be included with your REB application.

Note that continuation of your study beyond twelve months will require further review and renewal of REB approval. Any changes or amendments to the protocol or consent form must be approved by the Research Ethics Board.

If you have any questions on the above or require further clarification please feel free to contact Rheanna Robinson at rrobinso@unbc.ca in the Office of Research.

Good luck with your research.

Sincerely,

Dr. Henry Harder
Chair, Research Ethics Board