

"Land Talk" in Iiyiyiuyimuwin (Eastern James Bay Cree)

by

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A thesis submitted to the Faculty of Graduate and Postdoctoral
Affairs in partial fulfillment of the requirements
for the degree of

Master of Arts

in

Applied Linguistics and Discourse Studies

Carleton University
Ottawa, Ontario

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ISBN: 978-0-494-93621-4

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ISBN: 978-0-494-93621-4

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Abstract

This thesis presents a linguistic investigation into how Iiyiyiuch of Iiyiyiu Aschii (Eastern James Bay Crees) talk about their local land environment. Through morpho-semantic and discourse analysis, it seeks to unearth how the geography is represented in the Iiyiyiu lexicon and discourse. Specific consideration is extended to how Iiyiyiuch primarily orient themselves in land navigation, and how linguistic spatial location description is used to situate reference points. The argument is made that Iiyiyuyimuwin encodes for three linguistic frames of reference with strong preference for an “absolute” orientation system. Preliminary testing of Iiyiyuyimuwin compatibility with Innu-aimun leads to evidence that the Iiyiyiu way of semantically organizing the geography is reflected in the morphology. The intention of this thesis is to contribute to the documentation and preservation of Iiyiyuyimuwin, with the implication that current and future generations may continue to *know* how the language has inherently guided Iiyiyiuch in the Iiyiyiu way of life.

Also, I thank my loving sister Liette for always believing in me, and for showing me such strong support over the years. Thank you for always being by my side.

Thank you to my two little girls who are my life and who are the underlying purpose of what I do, and who can always be counted on for those energizing hugs at the end of a long day. And to my older children, who were a tremendous support by taking care of their little sisters when most needed, and who most of all taught me patience and the meaning of perseverance.

In the ups and downs of academic life, and life itself, I thank my partner in life for his extreme patience during this venture, for his unending support, and his utmost respect and endless encouragement in both my academic and life ambitions. Thank you Ray for everything that you do for our children, and above all, thank you for being my rock, and for walking with me in this life.

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List of Abbreviations

VTA	transitive animate verb
VTI	transitive inanimate verb
VAI	animate intransitive verb
VII	inanimate intransitive verb
ni	inanimate noun
nid	inanimate noun, dependant
na	animate noun
(p, location)	location particle
(anim)	animate
3	third person proximate
P	plural
OBV	obviative
NOM	nominal

The language therefore reflects the relationship that liyiyiuch have with the land, not only in the practical sense, but in terms of its philosophical considerations as well. It is in this context that the language itself can give us an indication of liyiyiu epistemology in regard to the significance of the land, and furthermore tell us how the land is semantically represented through language.

My interest in focusing on geographically descriptive words comes from a number of influences, but mainly from the observation that liyiyiuch tend to describe the landscape in a very particular fashion, especially when they talk about traveling out on the land. The terminology used in land description is very specific, as are the reference points used to mark the landscape along a travel route. For example, in recalling travel journeys and in giving navigational instructions, landmarks (i.e. hills, types of trees, bodies of water, etc.) serve as the primary points of reference. These can often be described by their observable qualities such as their physical properties. For instance if a lake serves as a defining landmark, it may be described in terms of its shape, colour, or by the quality of the surrounding land (e.g. type of vegetation or relief).⁴ In giving land navigation instructions, the landmarks described along a route are often beyond the visual limits of the person set to travel. The description of land is thus only useful if it is accurate and can guide a traveler according to reliable points of reference.

Landmarks are determined by way of situating them in relation to other landmarks. In order to identify them, what must be specified first and foremost is the initial direction in which a traveler must set out. The initial direction is first outlined by identifying one of the four cardinal directions, then supplemented by other references

⁴ This is expanded upon in chapter 6.

to constants such as where the sun shines (or does not shine) on the land, or the direction in which water flows in a river.

What I mention above is a type of discourse or “talk” (*land talk*, as I like to call it) that I did not hear very often growing up. This particular “land talk” is still practiced by a good majority of people. For liiyiyu individuals like me who have had limited contact with the more traditional⁵ cultural practices as they occur out on the land, the knowledge that accompanies “land talk” is also limited. My prior observations of this land-related talk led me to understand that land description is a vast domain that has the potential of offering some insight into the liiyiyu cultural worldview.

That said, what motivates the research in this thesis is the opportunity to actively contribute to the broader documentation of liiyiyuyimuwin, particularly in connection with the East Cree language project (eastcree.org) which is aimed at developing language resources for liiyiyuch of liiyiyu Aschii. An additional goal of this thesis is to identify possible future research areas pertaining to liiyiyuyimuwin and traditional liiyiyu world philosophy.

This thesis is organized as follows: chapter 2 presents the history of liiyiyuch of liiyiyu Aschii, the biography of my father – my primary informant and consultant on

⁵ The following are my definitions of “tradition/traditional” and “culture/cultural”. Tradition is what is passed down from one generation to the next and has been created through cultural living. Culture is what is lived and practiced every day. Traditional culture is the culture as it was before outside influences started to change the long-established nomadic way of life into a sedentary one. These influences have in turn changed the dynamics of how people relate to, and depend on, one another. It has created a different type of community – a broader one in fact, because traditional Cree communities consisted of small family groups. This has also caused a shift in values. The traditional cultural values of the past are becoming faint in our modern Cree culture, where traditional cultural activity has become the backdrop for a modern way of life, facilitated by everyday modern conveniences.

liiyiyuymuwin – and my own biographical background. This is followed by a descriptive background of liiyiyuymuwin.

In chapter 3, I present the literature review, and in chapter 4 I discuss the methodology chosen to answer my research questions, namely how liiyiyuich are able to orient themselves and navigate a vast “unmarked” territory, and how the language, liiyiyuymuwin, encodes and organizes the semantic knowledge category of geography through descriptive verbs and particles of location. The process of data collection and the method of analysis are also described.

Chapter 5 explores how liiyiyuich linguistically describe orientation and land locations. Here, what is primarily discussed is the inherent liiyiyu knowledge of one man – my father, Jimmie Neacappo – regarding liiyiyu linguistic description of land navigation practices. Specifically, I look at how East Cree encodes the concept of spatial orientation on the land in the context of location description and land navigation. Chapter 6 identifies the semantic domain of geography as a salient form of knowledge, and East Cree is linguistically compared to Innu, one of its sister languages. Furthermore, I identify specific geographical morphemes that are particularly salient and productive in geographical description words. These morphemes also seem to indicate how geography as a semantic domain is represented in language. Finally, chapter 7 presents the conclusions drawn from the findings of the previous two chapters.

In this study, I restrict my analysis to descriptive verbs (inanimate intransitive verbs or VIIs) and particles of location that specifically describe aspects of the

geography.⁶ Toponyms are not considered in this research project, although place-names have been identified as significant pathways to uncovering cultural worldviews embedded in language (Basso, 1996; Denton, 2007; Junker, 2007). It is an area that remains beyond the scope of this thesis.

That said, we now move on to explore the next chapter where the history of liyiyuch of liyiyu Aschii is outlined, followed by a background on liyiyuyimuwin.

⁶ See section 2.3.7 of chapter 2 for a detailed explanation of VIs and particles of location.

Chapter 2: Background

2.1 Background of liyiyuch of liyiyu Aschii

liyiyuch from liyiyu Aschii⁷, otherwise known in the rest of the world as the James Bay Cree from Eastern James Bay, Northern Quebec, Canada, have had deep-rooted bonds with their homeland since time immemorial. Scientific evidence shows that liyiyuch have lived on and utilized the territory of James Bay that spans an area of “400,000 square kilometers, twice the size of England and one-fifth of the whole of Quebec” (Morantz, 2002, p.28). It is also estimated that liyiyuch have utilized these areas for the past five thousand years (Morantz, 2002). In terms of its location,

This vast territory ranges from coastal plane, including the coastlines of James and Hudson Bays, from the treeline at Richmond Gulf in the north to Rupert Bay in the south (roughly from 52° to 56° latitude); it embraces the land fronting on this shoreline inland to the lakes and headwaters of the rivers which drain it (roughly 69° to 80° longitude). Most of eastern James Bay falls within Canada’s subarctic region and forms part of the Canadian Shield. (Morantz, 2002, p. 28)

liyiyuch have traditionally led a nomadic life revolving around various hunting and gathering practices that tied in with the shift of seasons along with the available harvestable food resources. It was a life that relied on the bounty of the land to provide the essentials of subsistence: nourishment, shelter, clothing, and well-being. But of course, life must have been about more than mere survival. This life must

⁷ *liyiyu Aschii* is the Cree term referring to Cree land and territory in the James Bay region in Northern Quebec. The Grand Council of the Crees, the Cree political body representing liyiyu Aschii, has adopted the spelling Eeyou/Eenou Istchee. *liyiyu Aschii* is the form used throughout this thesis as the spelling reflects the direct conversion of syllabics into roman orthography as standardized by the Cree School Board, the education authority for Cree education in liyiyu Aschii. *Eeyou/Eenou Istchee* is only used when referring to the Grand Council of the Crees.

have also been rooted in the worldview that have shaped liiyiuch's conceptions of their environment and their understanding of their existence as people. The specific relationships between people and their interactions with the land, animals, plants, and spirits of the land, are what have woven the liiyiu cultural fabric. The liiyiu cultural values of today are surely the reflection of the intricacies of liiyiu traditional life.

Archeological evidence shows that prior to contact with the fur traders, liiyiuch typically wintered in small groups of two to three families and hunted various game, water birds, and fish. The forests of the Eastern James Bay area house many different types of animals. Some liiyiu favorites include bear, beaver, caribou, moose and porcupine, not to mention all types of fish and waterfowl. Rich fishing spots along well-traveled waterways typically served as summer gathering places for many family groups or "bands" to meet. It was along these waterways that fur traders eventually established their trading posts, which then became the gathering places of liiyiuch in the summertime (Morantz, 2002).

The first contacts with fur traders occurred in the seventeenth century, and trading was officially established in the late 1600s. As Morantz (2002) describes it, the fur trade was a partnership between fur trading agencies, such as the prominent Hudson's Bay Company, and the Cree of James Bay. For the most part, it appeared that this relationship was reciprocal in nature as liiyiuch had maintained control of how they approached the partnership. In the early days of this trade relationship, liiyiuch did not become economically dependent on exchanging furs for commodities such as flint, rifles, and cloth. Rather, they continued living their own lives, determined by their own needs. It was not until later in the twentieth century

that technological advancement and the increased availability of diverse trade commodities such as flour and other foods officially drew in liyiyiuch to depend on the fur trade as an economic means, especially when animals became scarce and food in general was hard to come by. Fur trading companies were just as dependent on liyiyiuch for the furs they brought in. Without the liyiyiu capabilities to navigate vast territories, locate and trap, and preserve the fur-bearing animals, the fur trade story would have been very different, as would have been the story of the liyiyiuch of liyiyiu Aschii.

In the late 1800s, religious missionaries began to establish their presence in liyiyiu Aschii, as did prospectors and even tourists who for the most part were seeking adventure. The increased contact with outsiders during this period brought deadly diseases that were foreign to the liyiyiuch. The spread of diseases like the flu, whooping cough and scrofula, in combination with the scarcity of food, resulted in many casualties in the late 1800s and early 1900s. In the 1880s starvation also plagued certain areas of the territory, but this would pale in comparison to the widespread starvation epidemics of the late 1920s and early 1930s. Reports of this period via fur traders' journals and personal accounts of the people describe awful waves of starvation that spread throughout the region as animal and food resources became extremely scarce (Morantz, 2002).

Starting in the mid 1800s, the Anglican and Catholic missions were the primary Christian presence in the James Bay area. The Anglican Church took over the coast of James Bay, while the Catholics remained primarily in the south around the Waswanipi and Mistissini areas bordering the Algonquian regions of Abitibi. However, the Catholic presence eventually moved north up the coast and a

permanent Catholic mission was set up on Fort George Island (present-day Chisasibi). Despite the Catholic mission's superior services such as medical care, and the establishment of its own residential school in 1930, Cree Catholic converts on Fort George remained few in number. By the early 1900s, liiyiuch were adopting Christian beliefs and customs into their way of life. By the mid-twentieth century, Christianity eventually took precedence over animist spirituality and practices, predominantly through the Anglican sect of Christianity (Morantz, 2002).

Since the first contact with fur traders, and then with religious missionaries, not much had changed in the liiyiu hunting practices and beliefs, and it certainly did not affect the language. liiyiuch had minimally modified their approach to hunting and trapping when they entered into partnerships with the fur traders. Granted, they had adopted Christian beliefs into their spiritual considerations, but because liiyiuch still had to subsist and their world was still their own, the overall and necessary traditional hunting practices – including animal spirituality linked to the hunt – remained more or less intact (Carlson, 2004).

It was not until the mid-twentieth century that the Cree way of life started to change significantly, where liiyiuch began to depend on the outside agencies in order to make a living. This marked a drastic shift in Cree society, which until the later part of the 1900s had been an independent society that despite fluctuating hardships had always had the resources to adapt and continue to control their own way of life.

It was the technological impacts of the First World War that started to change the way things worked in the outside world. As remote as liiyiu Aschii was from technological developments such as railway construction, liiyiuch were not immune

to the rippling effects of the Great War. In the 1920s the first radios were sent to some of the fur trading posts where electricity was already available for a select few. In 1930, Fort George already had a hospital, and airplanes began to make regular appearances during that time. In 1938, the Catholic mission established the first two-way radio in Fort George. By the 1940s, the Hudson's Bay Company started to fly people who had the financial means to their hunting camps via chartered flights.

It was around this time that those dependent on the fur trade for economic means encountered great hardship, as transportation modes and high fur prices changed the dynamics of the fur trade. Advances in transportation technology (i.e. trains and airplanes) allowed for non-Cree trappers to travel further inland, while the financial value of fur enticed a great number of white trappers to invade Cree trapping territory and disrupt the trapping practices of liyiyiuch. The "white" method of trapping involved trapping all fur-bearing animals within an area and then moving on to another, putting in jeopardy the availability of such animals and often depleting their populations within an area. Cree trappers practiced conservatory trapping, which meant that only a limited number of animals would be killed for fur and subsistence, while others were left to ensure the continuity of the species. This is how liyiyiuch ensured that there would always be animals for future generations.

In the 1960s, the southern areas of Quebec felt the boom of economic development propelled by government interest in appropriating natural resources. Many First Nation communities, including the southern James Bay Cree, also felt this. In the far reaches of northern James Bay, development came later, but it came fast with many sudden changes to the territory (Morantz, 2002).

On April 30, 1971, in front of a crowd of no more than three thousand *Québécois*, the premier of Quebec announced the promise of 125,000 jobs through hydroelectric development in the James Bay territory. This declaration of hydroelectric development in Cree traditional territory came as a shock to liyiyuch, who still lived quite close to nature. It was a shock because soon after the announcement, heavy machinery started entering the territory to begin tearing up the land. This posed a serious threat to the lives and livelihoods of liyiyuch in liyiyu Aschii. It was thus in the midst of shock and disbelief that a new era began for the Cree. It was the commencement of a new lifestyle for most, and for others it meant hanging on to a way of life that could very well become extinct.

At the time of Quebec's proposed economic venture, liyiyuch were not yet legally officially defined as a *Cree Nation*. liyiyu society still consisted primarily of family units. Community groups were only defined under the Indian Act. Furthermore, liyiyuch were certainly not politically organized in the Western sense. It was in the heat of the developing news that for the first time the liyiyuch gathered forces amongst the (then eight) communities and assembled as one fighting power. It was also out of this momentum that the Grand Council of the Crees (of Eeyou Istchee) was born (MacGregor, 1989).⁸

Amongst liyiyuch, it was understood that they had never ceded their territory in any way, and most importantly, they had never signed any treaty pertaining to the surrender of any land or any rights. liyiyuch had had strong ties to the land for as

⁸ Today, this organization is led by the Grand Chief and Deputy Grand Chief, both of whom are elected by each of the nine Cree Communities they represent. The council also constitutes the nine Chiefs of the communities along with one representative from each community. This makes for a total of twenty members of the Grand Council that represent approximately 18,000 Crees of the James Bay region (Grand Council of the Crees, n.d.).

long as they had existed, and the thought of severing that bond was unfathomable: "There had been no consultation, nothing. This was our land. We believed this land had been created for us. We felt we had a responsibility to protect it. To make sure no one harmed it" (Late Chief Billy Diamond, cited in MacGregor, 1989, p. 67).

On November 7, 1972, the Cree filed for an interlocutory injunction to stop the damming of the James Bay Rivers. They insisted that the land claim issue be settled first before any attempts at negotiation or construction began. This demand was not met, however, and did not go according to plan.

The interlocutory injunction had been made along with the Northern Quebec Inuit Association. In his decision, Judge Albert Malouf ruled in favour of the Crees and Inuit. This ruling was suspended shortly afterwards, and then reversed entirely with an appeal from the James Bay Energy Corporation, which oversaw the development of the James Bay region. The overturning of the decision to stop all work forced Iiyiyiuch into negotiations with the government and with Hydro-Québec in order to salvage something – anything – that would remain of the land after this mass destruction that was called development. At this point in the negotiations, there was little time to reach any type of a favourable deal because construction in Iiyiyiu Aschii had already resumed after the successful appeal of the injunction ruling.

In 1974, an agreement in principle was negotiated and on November 11, 1975, the James Bay and Northern Quebec Agreement (JBNQA) was signed. The agreement was termed the "first modern Aboriginal claims settlement in Canada" (Dickason, 2002, p. 194). Despite compensation in the amount of \$225 million and guaranteed community development, jobs, and self-administrable public services such as education, health, and the hunters and trappers income security program,

the social disruption incurred in Iiyiyiu Aschii has not gone unnoticed, nor have the failures of government and Hydro-Québec in meeting their fiduciary and moral obligations as laid out in the JBNQA.

“Development” of the land meant the utmost destruction of Iiyiyiu ancestral homelands. Hydro-Québec and other development corporations proceeded to divert major waterways and build dams on the most important rivers. This destructive process included the flooding of thousands of square kilometers of pure wilderness, the eradication of natural habitats and spawning grounds, and the disruption of the natural cycles of the land and ecosystem. Not to mention the disruption of what Iiyiyiuch had made of this vast area: networks of historically and culturally significant places that had shaped Iiyiyiuch into a People. These were important places that had been in existence since time immemorial and that were the lifeblood of a culture.

Social disintegration and disconnectedness were among the outcomes of hydroelectric development in Iiyiyiu Aschii, and this affected Cree communities on a catastrophic level. Because Iiyiyiuch and land cannot be separated in respect to Iiyiyiu ways of being, the chaotic destruction of the land has had dire social consequences such as the disintegration of traditional Cree moral values and the breakdown of the communities. Current leader of the Grand Council of the Crees, Matthew Coon Come, has commented on the chain reaction that resulted from loss of land:

We have discovered that people who have lost their family lands are at great risk of losing their traditions and values. [...]. We have discovered that our way of life, our economy, our relationship to the land, our system of knowledge, and our manner of governance are an interlinked whole. Remove us from the land, and you destroy it all. We are then left with social disruption, suicide, epidemics of disease and violence, and loss of hope. (2004, p. 158)

The social devastations such as family and cultural breakdown, suicide and alcoholism cannot be blamed solely on the hydroelectric development that was imposed on liiyiuch of liiyiu Aschii, though they are perhaps predominant factors. The disconnection and displacement that people feel are in fact the end product of a long equation of injustices and racial ignorance toward liiyiuch through colonization and assimilation attempts.

Robbie Matthew Sr., an elder from Chisasibi, once shared his views on the James Bay hydroelectric project. He explained that before people had had a chance to heal from the impacts of residential schooling, or any other form of southern⁹ intrusion, there was yet another, much heavier burden to carry. It was that of the damming of the rivers and its resulting effects. Robbie explained that liiyiu elders had envisioned the devastation that would accompany such a hydroelectric project. The people had voiced their concerns and their opposition to this project. They explained their understanding of it and the impacts that could result, but the mega-developers and both the provincial and federal governments ignored all claims opposing such development. The construction went ahead, and as a result, it is the liiyiuch who are paying dearly for the outcomes. According to Robbie, we as people must look to the traditional liiyiu teachings and values. For generations before, liiyiuch were resilient people who persevered in the face of adversity and despite

⁹ The "south" is how the non-Cree world (French and/or English) is talked about up north. For liiyiuch of liiyiu Aschii, this is limited to the province of Quebec or to Canada. For example we talk about "southern" influences on Cree society. It is the same idea when, for example, we talk about *Western* traditions versus Indigenous ones in certain academic theory and discourse.

the tragedies of life. As such, Robbie explains that liyiyiu people must continue to walk towards the road of healing, away from the wounds of the past. People today are finding the strength to stand up to social issues and problems. Robbie further states that liyiyiuch, as a nation, must look towards the traditional teachings from the land in order to emerge as survivors, and continue on. The people must remember the values given to them by the Creator and turn once more to the cultural traditions for salvation, using their rights as liyiyiuch to continue to fight for, protect, and respect the land as was taught to them through the animals, the land, and the Spirit of Mother Earth (Matthew, 2002).

On October 31, 1995, a referendum was held in Quebec to decide whether or not Quebec as a province would secede and become an independent state, sovereign from the rest of Canada. For liyiyiuch, this represented yet another attempt by a colonialist state to decide the fate of liyiyiu traditional territory. Matthew Coon Come, then (and recently re-elected) Grand Chief of the Grand Council of the Crees, declared:

At least four times – in 1670,¹⁰ 1870,¹¹ 1898,¹² and 1912¹³ – *Eeyou Astchee* [*sic*], our traditional lands and water, have changed status. Our land was somehow transferred between kings as gifts, or deeded between colonial companies and government, all without our knowledge, and certainly without our consent. (Grand Council of the Crees, 1995, opening letter)

This time in 1995, twenty years after the signing of the JBNQA when the Crees had first become aware of the manipulation of their lands without their informed consent, liyiyiuch sent a strong message to Quebec regarding the separatist

¹⁰ Charter creating the Hudson's Bay Company, giving Prince Rupert exclusive control of the Hudson's Bay area (http://www.gov.mb.ca/chc/archives/hbca/about/hbc_history.html).

¹¹ Rupert's Land and North-Western Territory Order giving Hudson's Bay to the Canadian Dominion (<http://www.justice.gc.ca/eng/pi/const/lawreg-loireg/p1t31.html>).

¹² Territorial expansion of Québec (Grand Council of the Crees, 1995).

¹³ *Ibid.*

referendum. The Cree message was one that asserted their inherent rights as First Nations people, their right to establish their own political association, and their ultimate right of not being incorporated into a sovereign Quebec without their informed consent. The Crees made their voices heard just days before the Quebec referendum where *Québécois* would cast their vote deciding the future of Quebec. On October 24, 1995, liiyiuch of liiyiu Aschii held their own referendum. At 96 percent, eligible voters of the Cree Nation of liiyiu Aschii voted overwhelmingly against separation from Canada in the event of a *yes* vote in Quebec's referendum (Grand Council of the Crees, 1998).

Since the 1970s, liiyiuch of liiyiu Aschii have been forced into Western-style debates and discussions over the use and expropriation of liiyiu lands. In turn, issues such as wildlife, culture, and linguistic preservation have been propelled in the collective Cree mind and heart as pressing issues because the heated quest for modernization, resource development and technological progress has become overwhelming.

The initial invasions of mega-project developers like hydroelectric seekers in the 1960s and 1970s were certainly not the first to affect liiyiu culture and language, but they were the first to cause a whirlwind of radical changes in the Cree way of life. The many changes that accompanied "modernization" caused a shift in language retention and threatened its saliency.

Nevertheless, to this day liiyiuch continue to maintain a deeply intimate connection with their heritage landscape. When the land is spoken of in the Cree language, that intimate connection is made clear. The heartfelt sentiments can be heard in the speaker's speech: it is a great love that permeates the words. The

connection felt is one that expresses a sacred bond such as the one that can exist between parent and child, or child and a loving grandparent.

The elders, as well as younger people, understand that the land and all it represents means everything to the survival of our Cree culture and society. Despite the many changes in Iiyiyu Aschii, some of them catastrophically devastating, land and language are still central to the pursuit of healthy lives and a connected community.

And so a new discourse emerged in the way Iiyiyuuch talked about their lands, inside and outside of their communities, with each other and with outsiders (i.e. government officials, environmental activists, or mega-project developers). Yet within the cultural practices, the manner in which they described their own territory remained as it had been for generations, filled with the cultural nuances that encapsulate the great sacredness of their bond with the land.

2.2 Biographies

2.2.1 Jimmie Neacappo

Jimmie, my father (nuuhtaawii), is a seventy-year-old Iiyiyu man belonging to one of the last generations to have been born, and to have lived, on the land. He was born inland, deep within the boreal forest of Iiyiyu Aschii, where his family had always practiced the hunting, trapping, and harvesting nomadic lifestyle of traditional Cree society. Jimmy is a member of the modern Cree Nation of Chisasibi that is located on the eastern coast of James Bay, but originally comes from a long line of

people that have traditionally lived, utilized and walked the ancestral inland territories that are at the centre of the province of Quebec.¹⁴

His educational background is comprised of two elements: the first is primarily rooted in the traditional and cultural practices of liyiyiuch, and the second is one that began in the residential school system.¹⁵ This was followed by more “formal” education at the college and university levels. His first language is of course liyiyuymuwin, and he is fluent in English, his second language, and knows some French. Despite many years spent in formal educational institutions, he has always practiced the Cree way of life, and despite early efforts of the residential school to forbid liyiyuymuwin within its walls, his knowledge of the Cree language persevered and was not affected. The following is a chronology of his life.

Nuuhtaawii was born in the early fall of 1941. This was a time when most liyiyiuch of liyiyiu Aschii were heavily involved in the fur trade, trapping fur-bearing animals as an economic means, while still primarily relying on hunting and fishing for subsistence. He was the fourth child born to his parents, and had two younger siblings. When he was only four years old, his mother died while they were living out on the land. Shortly after that, he and his siblings were taken to his maternal family where his maternal grandmother and grandfather took care of them while their father continued to hunt and trap on the territory. His father later remarried, which brought

¹⁴ These family hunting territories are now defined as traplines, a system that was partially devised from the fur trade and then specifically outlined in the James Bay and Northern Quebec Agreement (1975).

¹⁵ Residential schools were institutions created out of Canadian government assimilative policy in the late 1800s. The different religious missions were given the task of operating these schools, and instructing Aboriginal children to become “productive” members of Canadian society. In reality, they were designed to address Canada’s Indian problem. There were two residential schools on Fort George Island, respectively run by the Anglican Church Mission and the Roman Catholic Mission.

about new siblings: sisters, and later, younger siblings that made for a well-blended family.

At the age of six, Jimmie was put in the residential school system where he had his first major contact with the English language. This particular school was run by the Anglican mission and was strategically located on the island of Fort George where the Hudson's Bay Company had one of its major fur-trading posts. According to my father, he had to learn English very quickly because children were punished for speaking their own language within the school. Learning English was not optional; it was absolutely necessary. He had entered the school at six years old, before he was considered of age to start the first grade. So by the time he started at age seven, he had absorbed enough English to be able to function at the first grade level.

During these residential school years, most of the children got to spend two months of the summer out of the school with their families. Most of the inland families would make their way to Fort George every summer to trade in their furs at the post before they would leave again in the fall to go back to their traplines. Such was the case for my father's family. They would paddle up the Chisasibi River all the way into the inlands for the remainder of the hunting season, only to return to the island the following summer. This meant that my father and other children would spend ten months of the year, including Christmas time, within the walls of the residential school.

At the age of ten or eleven, after five years at the school, my father convinced his father to take him out of residential school so that he could live with him in the bush. He spent a total of two years away from residential school where he was able to

continue to learn how to hunt and how to live off the land. He spent one year living with his father, and the following year with his maternal grandfather. It was when my father's younger brother, who had been living with their grandfather, entered residential school that nuuhtaawii was sent to live with his grandfather. It is the time spent living with his grandfather that my father cites as the source of his in-depth knowledge about how to do things out on the land. He says that he did learn from his father, but that his father did things so fast that he did not have much time to observe and learn during the first year of his living in the bush.

After two years of living on the land as the ancestors had done for countless generations, Jimmie reentered the residential school in Fort George where he would spend an additional three years before completing the highest grade taught. At about fourteen or fifteen years old he landed his first paying job during the summertime. It was his endeavour to help out his family as much as he could, so he gave the money he made to his father to put towards what the family needed. At sixteen years of age, he worked with some geologists in the inlands where he concluded that his wages at that time were forty percent higher than those of any other income earners in Fort George. This is when he made the decision to pursue wage-earning work for a living, even at a time when the Hudson's Bay Company was still demanding furs and was trying to promote trapping to young men.

After his experience with the geologists, Jimmie would spend three to four years living out on the land where he says he became even more knowledgeable in the Cree way of life, as if those years in the residential school had done little to take away from his *liyiyiu-ness*. He attests that he truly feels like it was during those years

that he reached full competency in regard to liiyiu knowledge of the land and the cultural practices that are crucial for survival in the bush.

It was later on, after those years in the bush, that my father decided to return to Fort George, where he worked for the Hudson's Bay Company in a wage-paying job. Shortly after that, he was hired on by the school to work as a supervisor to watch over the children in the school. He worked there for one year before he and another young person were recruited to board out to further their education.

Now in the early 1960s, he spent one year in North Bay, Ontario, and another in Sudbury completing grade twelve. He spent another year after that working in Sault-Sainte-Marie. The following fall, he was enrolled through Indian Affairs to study Business Administration at the college level in Toronto. He did so for two years, then spent another two years working for Indian Affairs in Toronto before he was encouraged to apply to Trent University in Peterborough. In 1969, he applied and was accepted into the Native Studies program.

In 1971, after nearly two years and in the midst of his program of study, Indian Affairs once again recruited him out. This time, however, he was to go back to Fort George so that he might become the administrator for the local school. At that time, it was recognized by Indian Affairs that after he had completed his studies in Business Administration, he was one of the most highly-educated Cree individuals from the Eastern James Bay area. And so fittingly, Indian Affairs thought it was appropriate for a local person possessing the knowledge of administration to be in charge of managing the school's business-related aspects. It was then, in 1971, that nuuhtaawii met nikaawiih (*ma maman* 'my mother' Diane) who had moved to Fort George from the south to work at the hospital. The events that follow are what led

him to a career in working with our own people in various organizations in Iiyiyiu Aschii.

On November 7, 1972, the Grand Council of the Crees (Eeyou Istchee) took legal action in the form of an interlocutory injunction to stop the damming of the James Bay Rivers after construction of hydroelectric infrastructure on the Chisasibi River began without notification, let alone consent from Iiyiyiuch of the area. It was within that context that my father, in 1972-73, was hired on as a Cree-English interpreter during the Supreme Court hearings against Hydro-Québec and the Quebec government. The following year, when the decision to stop all construction was overturned in an appeal process, my father was asked to go to Montreal in 1974 to take charge of some administrative duties while the James Bay and Northern Quebec Agreement was negotiated and eventually signed on November 11, 1975.

Following their years in Montreal, my father, mother, and by now my brother, moved to Val d'Or, Quebec, where my father worked with the Cree Regional Authority for four years. It was in 1980 that my family (now with two additional children, myself included) moved back to Fort George, or more specifically, the newly-relocated community, now officially named Chisasibi.

Since our permanent move to Chisasibi, my father was involved in many Cree entities in different capacities, including Director of Administration Services for the Cree Health Board, Deputy Chief for the community, and a band councilor for twelve years. In 1986, the La Grande Agreement was signed to complete the second phase of the hydroelectric project. He was hired on by the James Bay Eeyou Corporation where he finished his working career. He "officially" retired (but not really) in 2005.

Today he is happy pursuing more leisurely tasks such as running his own outfitting business and making sure his traplines are taken care of.

Reflecting back on his life's adventures, he says that despite all his years spent in formal schooling and business-related work, he feels truly thankful for having learned his ancestral way of life. In his words, "it is a blessing to have acquired something that has been existence for thousands of years and that is still in practice today" (J. Neacappo, personal communication, April 2012). He maintains that it is because he learned the Cree way of life that he feels that perhaps the work that I am doing today in the field of language and culture retention is partly influenced by his transmission of that ancestral knowledge. I cannot see how my work with the language is not related to what he has taught me.

2.2.2 Personal

I was born in the summer of 1978, the second child of a young francophone *Québécoise* woman and a good-looking James Bay Cree man. My parents had met in the tiny Cree village of Fort George, Northern Quebec, in the early seventies. Fort George as some knew it, is a small island at the mouth of the *chisaasiipii* 'big river' that flows fast from the interior of *Iiyiyiu Aschii* and empties into the bay known as James Bay. Unlike my brother before me, I was not born on Fort George. I was born in a French *Québécois* town (Val d'Or) roughly 900 kilometres south of where the island of Fort George is located. We lived there for the first two years of my life until my family moved back north.

In the fall of 1980, now with a third child in tow, our family relocated. By then a new town was being built on the mainland to replace the home community of Fort

George on the island. 1981 was the year a new town was officially established and appropriately named Chisasibi, after the mighty *chisaasiipii*. Major hydroelectric developments on the Chisasibi River forced the relocation of an entire community. The mega-development of the La Grand hydroelectric complex along the entire river flowing deep from the inlands of *liiyiu Aschii* threatened to accelerate the erosion of the small island of Fort George. So by means of a referendum, it was decided that the entire community, including some of its infrastructure, would move to a new location.

My earliest memories of our new home, Chisasibi, was when I was three years old and broke my arm while playing on an unbalanced saw horse that tipped to the ground. At around the same period of my childhood, I remember my cousin, who called himself my "brother," speaking to me in Cree. I don't remember thinking it was foreign, because through my father I must have heard the language often, but I do remember knowing that I was different by comparison: not necessarily physically, but linguistically.

At that point in time, my linguistic capabilities were strongest in French and perhaps English, followed by Cree. French was my primary language as it was spoken fluently amongst my francophone mother, my siblings, and me. English was spoken between my mother and father, and so we picked it up along with French. Our father primarily spoke Cree to us and according to him, I eventually started to speak Cree with him as well, but not before first learning how to communicate in French.

Up until the time I reached school age and entered pre-kindergarten, a class taught in Cree by a lovely Cree lady, I had a certain awareness of my limited Cree

language abilities that came from having to adapt to an influx of thoroughly fluent Cree-speaking children. I had already grown accustomed to my newly-established little network of friends, cousins, and neighbourhood kids that had quickly become part of my very young world when we moved to Chisasibi. My very “elaborate” three-year-old interpersonal world at that time consisted of my immediate family, my little friends, and other relatives, where French, English, and liyiyuyimuwin distinctly marked this dynamic. Outside of my family home, the community’s fluency in liyiyuyimuwin seemed to contrast sharply with the mix of French, English, and liyiyuyimuwin to which I was accustomed in our home.

Even if, for the most part, my father spoke Cree to us, it seemed that a disparity existed between my spoken Cree and that of my friends, nearly all of whom came from a family where both parents spoke Cree. I cannot say I was fully conscious that there was a big difference in my linguistic abilities in the Cree language when compared to others, but it seems that it was enough of a distinction for me to notice at that time.

Starting in kindergarten, the primary language of instruction was French, as it was for the rest of my elementary and secondary school years. During my years of schooling from the 1980s to the mid-1990s, the school was linguistically divided into French and English sectors. liyiyuyimuwin was taught only as a subject at the rate of about twice a week. Cree instruction would alternate between Cree culture and Cree language classes. In Cree culture class, we girls learned how to sew different things and make traditional-style crafts. The boys had their own segregated Cree culture class where they learned how to work with wood and carve traditional tools and the

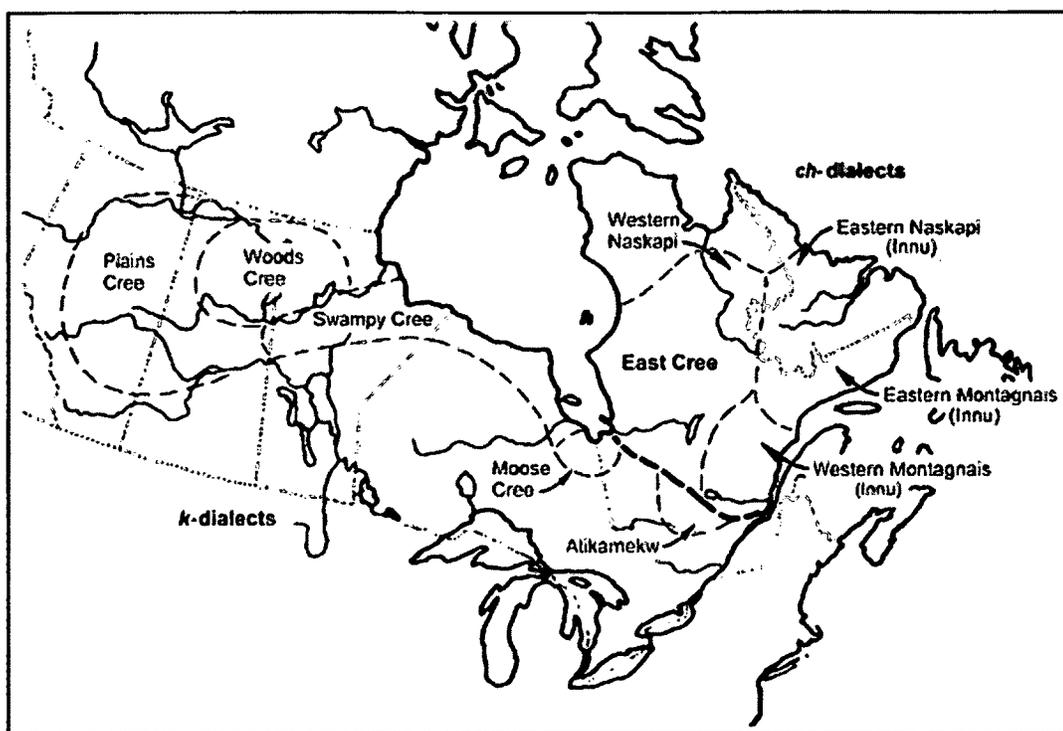


Figure 1. Cree-Montagnais (Innu)-Naskapi Language Continuum map (courtesy of eastcree.org)

2.3.1 East Cree dialects

East Cree consists of two dialects: Northern and Southern. The Northern Dialect comprises the three northernmost communities along the Hudson and James Bay coast (Whapmagoostui, Chisasibi and Wemindji). The Southern Dialect can further be divided into the two sub-dialects of Southern Coastal (Eastmain, Nemaska and Waskaganish), and Southern Inland in the southern James Bay region (Mistissini, Oujé-Bougoumou and Waswanipi), as shown in Figure 2 below.

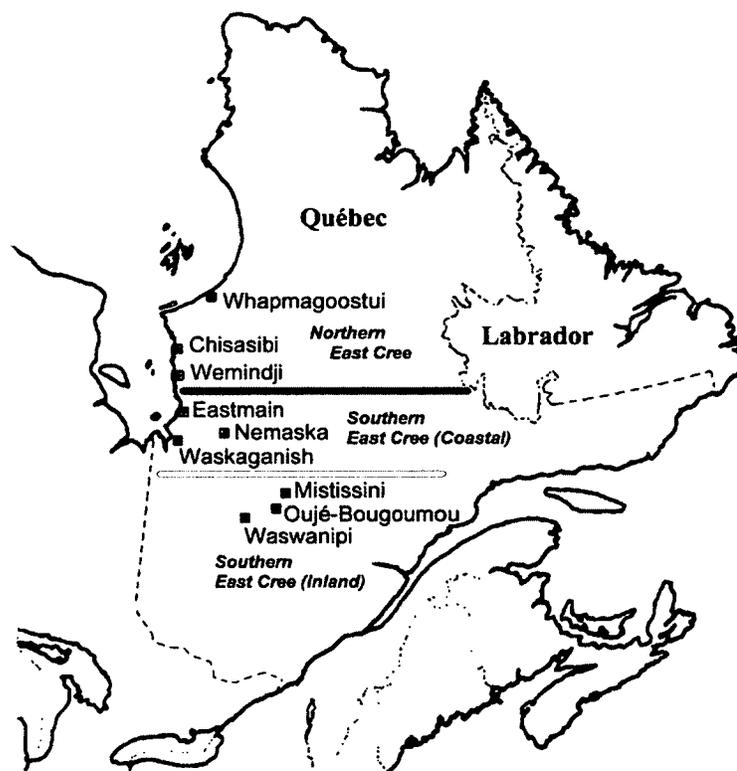


Figure 2. East Cree Dialect and Communities map (courtesy of eastcree.org)

Each community in both the Northern and Southern Dialectal regions has varying and distinct pronunciations and “accents.” Speakers of East Cree can usually identify the community of origin of other speakers by their intonation and sound.

The liiyiyu population is estimated to be at roughly 18,000,¹⁶ of which nearly all are fluent speakers of East Cree. While English has become the language of official business, Cree remains the dominant language in the majority of homes and everyday interactions within the community. For historical and colonial reasons, English has become more prevalent than French in the area today. English is also the preferred language in media entertainment and billboard postings. Written

¹⁶ This number is the estimated population in 2012, as published on the Grand Council of the Crees website (<http://www.gcc.ca>).

advertisements rarely appear in Cree syllabics, which is the primary written representation of East Cree (discussed in detail in the next section). There are East Cree speakers who know French, but they are a minority. English and French are for the most part the primary languages of instruction in the schools, but liiyiyuymuwin is still the language of interaction amongst students. liiyiyuymuwin has also been, and remains, widely used in the schools as a major component of primary and secondary education.

2.3.2 Cree syllabics and roman orthography

East Cree has two written forms: syllabics and roman orthography. The syllabic writing system is one that was first introduced by missionaries in the 1800s. A modernized version of this system is widely used today in Cree society and is the primary written representation of East Cree. Today's syllabic form has changed since its introduction and use in the Christian Bible. The syllabics currently in use are a standardized form that was developed in the second half of the twentieth century. This modern version has been adopted by all East Cree communities because it is closer to reflecting EC sounds by including finals and vowel length markers (i.e. diacritics), that distinguish EC from other Cree dialects. However, the syllabics do not always represent the sound perfectly. As a standardized form, it is rather the etymology of the words that is represented. The current standardized syllabic form is

shown below in Figure 3.

	▽ e	△ i	△ ii	▷ u	▷ uu	△ a	△ aa			° u	" h
	▽ we	△ wi	△ wii	▷ wu	▷ wuu	△ wa	△ waa				
▽ pe	▽ pwe	△ pi	△ pii	▷ pu	▷ puu	△ pa	△ paa	△ pwa	△ paa	△ pwa	△ pwa
U te	U twe	∩ ti	∩ tii	∩ tu	∩ tuu	∩ ta	∩ taa	∩ twa	∩ taa	∩ twa	∩ twa
q ke	q kwe	ρ ki	ρ kii	∩ ku	∩ kuu	∩ ka	∩ kaa	∩ kwa	∩ kaa	∩ kwa	∩ kwa
∩ che	∩ chwe	∩ chi	∩ chii	∩ chu	∩ chuu	∩ cha	∩ chaa	∩ chwa	∩ chaa	∩ chwa	∩ chwa
∩ me	∩ mwe	∩ mi	∩ mii	∩ mu	∩ muu	∩ ma	∩ maa	∩ mwa	∩ maa	∩ mwa	∩ mwa
∩ ne	∩ nwe	∩ ni	∩ nii	∩ nu	∩ nuu	∩ na	∩ naa	∩ nwa	∩ naa	∩ nwa	∩ nwa
∩ le	∩ lwe	∩ li	∩ lii	∩ lu	∩ luu	∩ la	∩ laa	∩ lwa	∩ laa	∩ lwa	∩ lwa
∩ se	∩ swe	∩ si	∩ sii	∩ su	∩ suu	∩ sa	∩ saa	∩ swa	∩ saa	∩ swa	∩ swa
∩ she	∩ shwe	∩ shi	∩ shii	∩ shu	∩ shuu	∩ sha	∩ shaa	∩ shwa	∩ shaa	∩ shwa	∩ shwa
∩ ye	∩ ywe	∩ yi	∩ yii	∩ yu	∩ yuu	∩ ya	∩ yaa	∩ ywa	∩ yaa	∩ ywa	∩ ywa
∩ re	∩ rwe	∩ ri	∩ rii	∩ ru	∩ ruu	∩ ra	∩ raa	∩ rwa	∩ raa	∩ rwa	∩ rwa
∩ ve	∩ vwe	∩ vi	∩ vii	∩ vu	∩ vuu	∩ va	∩ vaa	∩ vwa	∩ vaa	∩ vwa	∩ vwa
∩ the	∩ thwe	∩ thi	∩ thii	∩ thu	∩ thuu	∩ tha	∩ thaa	∩ thwa	∩ thaa	∩ thwa	∩ thwa

Figure 3. East Cree syllabics chart (courtesy of eastcree.org)

The corresponding roman script is used to supplement the syllabics for individuals (including speakers) who are not literate in syllabics. It is also used for keyboarding on computers. Northern East Cree (NEC) and Southern East Cree (SEC) each have their own standardized spellings of words, reflecting pronunciation differences. Since the first standardization attempts and the printing of the first East Cree dictionary in 1987, recent changes made in the Northern Dialect have resulted in an even greater contrast between the Northern and Southern Dialect spellings. Northern Dialect spelling has been modified to more closely reflect the language as spoken by the Elders.

Table 1 below illustrates the differences in Northern and Southern EC dialects, as well as the difference in pronunciation and how it is reflected in the written Cree syllabics and roman orthography (used with permission from Junker, MacKenzie & Brittain, 2012).

Table 1. Cree syllabics and roman orthography in East Cree

English	Southern Inland	Southern Coastal	Northern
<i>man</i>	ᓃᓂᓄ ^o naapeu	ᓃᓂᓄ ^o naapeu	ᓃᓂᓄ ^o naapaau
<i>Cree</i>	ᓃᓂᓄ ^o iinuu	ᓃᓂᓄ ^o iyiyuu	ᓃᓂᓄ ^o iyiyiu
<i>thing</i>	ᓃᓂᓄᓄ ^o chekwaan	ᓃᓂᓄᓄ ^o chekwaan	ᓃᓂᓄᓄᓄ ^o chaakwaan
<i>on the side</i>	ᓃᓂᓄᓄᓄ ^o napate	ᓃᓂᓄᓄᓄ ^o napate	ᓃᓂᓄᓄᓄᓄ ^o nipitaa

One difference worth noting in respect to spelling and pronunciation is that often where the Northern Dialect has a short *i* vowel, the Southern has a short *a*. This is due to a merge of *a* and *i* in the Northern Dialect.¹⁷ The Northern long *aa* corresponds to two vowels in the Southern Dialect: *aa* and long *e* (*e* is always long, so it is not spelled *ee*). There are also differences between the two Southern Dialects, for example their respective word for 'Cree': the Coastal communities pronounce it with a *y* whereas the Inland groups say it with an *n*. There are other minor spelling differences such as those seen in the ending of the word for 'Cree': *-uu* for the Southern Coastal dialect and *-iu* for the Northern Dialect.

¹⁷ This merge also affects the Southern Coastal Dialect. See Dyck, Junker & Logan (2010) for a discussion.

2.3.3 Grammatical distinctions

2.3.3.1 Gender

Other than dialectal differences in spelling conventions, in general East Cree has certain grammatical aspects to be considered. The first is grammatical gender. While other languages such as French have a feminine/masculine classification of things and persons, East Cree grammatical gender does not take into consideration whether persons and animals are female or male. Rather, this grammatical gender classifies according to an animate/inanimate distinction. Animate classifies all persons and living beings (i.e. animals and insects). Certain plants and non-living objects can also be animate, while others are inanimate. For example, a pair of pants and trees are considered animate, while a pencil and blueberries are inanimate. For non-Cree speakers, determining whether an object is animate or inanimate may be quite difficult, as the answer is not always intuitive or obvious.

2.3.3.2 Transitivity

The second grammatical consideration is the transitive/intransitive distinction, which determines verb endings. Transitivity is determined based on the number of roles a verb has. If it has only one role, it is called intransitive. An example of an English intransitive verb would be *she sleeps*, where the only role is that of the sleeper. If the verb has two or more roles, it is called transitive. An example of an English transitive verb is *to see*, because in the phrase *he sees her*, there are two roles: the seer and the seen.

2.3.4 East Cree verb classes

There are four verb classes in East Cree that are created based on the combination of *animacy* and *transitivity*: *transitive animate verbs (VTA)*, *transitive inanimate verbs (VTI)*, *animate intransitive verbs (VAI)*, and *inanimate intransitive verbs (VII)*. Most verbs in their respective classes have specific forms, and usually can be identified by their endings. Significantly, verbs make up 80% percent of words in the East Cree dictionary. The other 20% of words fall into the classifications (i.e. parts of speech) of *nouns*, *pronouns*, *preverbs* and *particles*.

It is worthwhile to mention here that when verbs are cited in the EC dictionary they are given in a basic third person form. This is because there is no infinitive in Cree. Throughout this project, the same convention is adopted, and the simplest least-inflected forms of verbs are used as examples and in analysis. Also worth mentioning is that East Cree verbs can often express in just one word what English or French do in a complete sentence. Table 2 below illustrates Northern Dialect examples of all four EC verb classes (used with permission from eastcree.org reference grammar, Junker, MacKenzie & Bobbish-Salt (2000-2012)):

Table 2. East Cree (Northern Dialect) verb classes

	Animate	Inanimate
Intransitive	misinaasuu (VAI) ᑭᑭᑦᑭᑦ 'it (anim) is written on, her/his name is on something, s/he is registered'	misinaataau (VII) ᑭᑭᑦᑭᑦᑦ 'it is written'
Transitive	misinihwaau (VTA) ᑭᑭᑦᑭᑦᑦᑦ 's/he writes, makes designs on it (anim)'	misiniham (VTI) ᑭᑭᑦᑭᑦᑦᑦᑦ 's/he writes, records it'

2.3.5 Word structure

In general, East Cree word structure can be laid out as having identifiable “sections” or positions in which different morphemes may occur to form a word stem. A complete word consists of a word stem plus affixes for inflection. Examples (1-4) show how a stem can take different inflections. Example (1) shows the simplest inflected form, third person, with the morpheme -u, which is the adopted convention for dictionary entries. Examples (2-4) have more complex inflection: (2) shows third person plural, with inflection morphemes -u and -h, and (3) and (4) show third person inanimate obviative¹⁸ inflected forms, with an obviative morpheme -yi inserted before the person and plural markers.

Examples of inflectional morphology on the stem *misinaataa-*:

- (1) *misinaataa-u* (VII)
is.written-3
'it is written'

¹⁸ Cree does several things grammatically that English does not. Obviation is one of them. In EC speech events (i.e. stories or conversations), only one third person character can be proximate. All other third persons being referred to in that speech event are obligatorily marked for obviation. Very specifically, this is a marking of non-topicality on additional third person characters who are not the focus of the speech event (Junker, 2004b; Junker, MacKenzie & Brittain, 2012).

- (2) misinaataa-**u-h** (VII)
is.written-**3-P**
'they (inanimate) are written'
- (3) misinaataa-**yi-u** (VII)
is.written-**OBV-3**
'it (obviative) is written'
- (4) misinaataa-**yi-u-h** (VII)
is.written-**OBV-3-P**
'they (obviative inanimate) are written'

A stem itself is usually made up of different identifiable parts, also called morphemes. These stem-forming morphemes occur in different positions: *initial*, *medial*, and *final* positions and can be called initial/medial/final morphemes, or simply initial/medial/final for short.¹⁹

First, I will introduce *initials*.²⁰ The initial morpheme *miichi-* is related to 'eating' and 'food'. This morpheme typically occurs in the initial position of the stem as demonstrated in the examples in (5), consisting of inanimate nouns and various verbs:

- (5) Initial **miichi-**
- | | | |
|-------------------------------|---------|----------------------------------|
| miichim (ni) | íŕʌ | 'food' |
| miichiu (vai) | íŕ° | 's/he, it (anim) eats it' |
| miichisuu (vai) | íŕʃ | 's/he, it (anim) eats' |
| miichisuunaahtikw (ni) | íŕʃá"ŕ° | 'table' |
| miichisuhaau (vta) | íŕʃ"á° | 's/he provides food for her/him' |

¹⁹ Although some morphemes appear to occur in more than one position, for example in the initial position of one word, but in the final position of another word, this does not mean that it is a case of free order where any morpheme can occur in any slot and the word would still have discernable meaning. Syntax does matter. The example of the word/morpheme *mihkw* 'blood, red' demonstrates this (*mihkw-aau* [vii], *minaaki-mihkw-aanaau* [vta], *amisku-mihkw* [na]).

²⁰ Initials are also often called "roots" in traditional Algonquian linguistics terminology.

Primary derivation happens when morphemes combine to form a simple word stem. The VII *wiipuskaau* 'it is an area that has been ravaged by a forest fire', shown in (8) is an example. This verb can be broken down into two distinct morphemes that are not words unto themselves: the initial *wiipu-* 'dark/black', and the final *-skaa-* that denotes an abundance of something (e.g. harvestable materials) in an area.²²

(8) Primary derivation

wiipu	skaa	u
INITIAL	FINAL	personal suffix
STEM		INFLECTION

Secondary derivation occurs via a similar process, except this time the stem of a readily recognizable word like *wiipuskaa-u* is used, and a morpheme like *-kimaa-* referring to 'lake', attaches itself to form a secondary derived stem, as in (9) *wiipuskaakimaa-u* 'it is a lake in an area that has had a forest fire'. In other words, the existing stem *wiipuskaa-* that was primarily derived from an initial (*wiipu-*) and final (*-skaa-*) now becomes a new derived initial, and the other morpheme that is a final (*-kimaa-*), attaches itself to form a secondary derivation.

²² *-skaa-* can be further analysed as a complex final consisting of a medial *-sk-* and an abstract final *-aa-*. See section 6.1.3.4 in chapter 6 for more details.

(9) Secondary derivation

wiipu	skaa	kimaa	u
INITIAL	FINAL		
INITIAL		FINAL	personal suffix
STEM			INFLECTION

Finally, composition is a process where two or more words combine to form a new word. This also happens when a stem combines with a preverb. The noun *chishaayaakupimii* 'bear grease, fat' seen in (10) below is created when two words combine to form a new one.

(10) Composition

chishaayaakw 'bear'	+	pimii 'grease'
STEM		STEM
chishaayaakupimii 'bear grease, fat'		
STEM		

Further combinations with compound words are also possible. As shown in (11), the compound noun *chishaayaakupimii* can be made into a verb by combining it with a verb final such as *-hcaa-u*.

(11) Compound combination

chishaayaakw 'bear'	+	pimii 'grease'		
STEM		STEM		
chishaayaakupimii 'bear grease, fat'		+	hcaa process final	u personal suffix
STEM			FINAL	INFLECTION
chishaayaakupimiihchaa 's/he renders grease from bear fat'				
STEM				

The richness of derivation and composition make the Cree language very productive in terms of forming new words and adapting current ones to name previously unnamed things that were not a part of traditional Cree society. It is a process that speakers commonly use to name modern objects and events such as those related to modern technology (i.e. computer, or internet). For example, proposed words for a computer include *nitiwaapihchikin* for a desktop computer, and *nitiwaapihchikinsh* (with diminutive inflection) for a laptop computer. The word for computer is derived from the combination of the VTI *nitiwaapihtim* 's/he goes to get it' with the concrete noun final *-chikin* (an ending often found in nouns that describe tools), an etymology that is a reflection of the role of computers in the internet age.

2.3.7 Research Focus

My research pertaining to geography and land descriptive words focuses on *Inanimate Intransitive Verbs* (VII) and *particles of location* (p, location), particularly because in conjunction with location particles, VII is the primary verb class used in land description. With that in mind, I now provide a more detailed explanation of VIIs and particles of location.

As briefly noted in the general description above, VII are verbs that have only one role (intransitive), where the subject of the verb does not act on a grammatical object because there is simply no object. Furthermore, the subject of the verb is always inanimate. In addition, VIIs are readily identifiable by their stem final, the morpheme occurring before any inflectional morphemes. Most VIIs end in a vowel

Like verbs or nouns, particles of location can be simple or complex in composition. As we have seen, EC words can string along different morphemes that have separate meanings but, when occurring together, become very specific in description. The particle *aapihtaamitin* 'halfway up the mountain' seen above in (13) is an example of a complex particle of location. This particle of location is made up of the initial *aapihtaa-* 'half' and the final *-mitin* 'mountain'.

This concludes our presentation of the structure of *liyiyuyimuwin* necessary to understand the present document. Of course, the grammar of *liyiyuyimuwin* is much richer, so the interested reader is invited to consult the *Interactive East Cree Reference Grammar* (Junker et al., 2000-2012).

Now that the cultural, personal and linguistic contexts have been laid out, let us proceed with the rest of this discussion by presenting the literature review in the next chapter.

Chapter 3: Literature Review

In anthropological and ethnographic work, there has long been interest in the study of cultures and their relationship with their material environment (Sapir, 1912). Yet, as Basso (1996) suggested, it would seem that the link between what cultures make of their landscape, and how landscape shapes them is often relegated to secondary considerations in some, not all, ethnographic work. Closer attention to this relationship from a linguistic point of view gives the possibility of offering further insight into a culture's perceptions of their surrounding environment.

In this chapter, I examine a series of works that come out of different fields and disciplines, but that I feel are nonetheless pertinent to my investigation of liyiyuymuwin and its link to liyiyu worldview. My interdisciplinary approach is strongly influenced by the work of Basso (1996) whose research methods are rooted in both in ethnography and linguistics (i.e. ethnolinguistics). In line with Basso (1996), my research approach is one that considers linguistics as an integral part of understanding what culture makes of place. This is explored in section 3.1.

In section 3.2, the anthropological works of Preston (2002), Tanner (1979), and Denton (2007) are examined. Preston (2002) and Tanner (1979) are ethnographic studies that present the liyiyu worldview and perceptions of the land, while Denton (2007) is an exploration of Cree place-names. Denton (2007) here serves as a bridge into the linguistic works of Mailhot (1974), Denny and Mailhot (1976), Junker (2003), and Junker (2007).

Section 3.3 examines works in linguistics. Mailhot (1974), followed by Denny and Mailhot (1976), are morpho-semantic investigations into Innu geography verbs taken

to show geography as a salient semantic knowledge category. Junker (2003) examines East Cree verbs related to 'thinking', and Junker (2007) explores East Cree 'memory' words. Junker (2003) and Junker (2007) both make arguments that there is a strong connection between language and salient Cree cultural values.

In section 3.4, we move on to linking language with ways of thinking in cognitive linguistics where Levinson (1996a) has identified that different languages can operate, conceptualize and communicate spatial perception differently. And finally in section 3.5, we take a look at Levinson's (1996a) three linguistic frames of reference (FoR), a model that will be used as a tool in assessing how East Cree possibly conceptualizes space in relation to land description.

3.1 BASSO's Research Approach

From a methodological perspective, Basso (1996) writes that the ethnographers' job is to determine and grasp people's understanding of place by looking at the ways people express that particular understanding. Furthermore, it is also ethnographers' duty to elaborate on the "whys" of those expressions and their overall importance in the broader scope of things. Basso states that "... naturally occurring depictions of places are treated as actualizations of the knowledge that informs them, as outward manifestations of underlying systems of thought, as native constructions wrought with native materials that embody and display a native cast of mind" (p. 110).

In addition to semiotic representations such as the metaphorical expression of songs, dance, and ceremonies that express culture, the linguistic representations can reflect how people organize themselves in culture. And in identifying that certain

ethnographic approaches could benefit from linguistics as part of constructing

"...principled interpretations of culturally constituted worlds..." Basso (1996) writes:

If anthropology stands to benefit from an approach to cultural ecology that attends more closely to the symbolic forms with which human environments are perceived and rendered significant, so, too, there is a need for an expanded view of a linguistic competence in which beliefs about the world occupy a central place. If it is the meaning of things that we are after—the meaning of words, objects, events, and the claims people make about themselves—language and culture must be studied hand in hand. (pp. 69-70)

And so, there is a need to use both ethnography and linguistics to understand what culture makes of place. Specifically, place shapes people and people sense place, and it is therefore by looking at how sensing is expressed not only through metaphorical expression, but also through language that we can more appropriately fashion an interpretation of people's understanding of place (Basso, 1996). "Cultural constructions of the environment ... will remain largely inaccessible unless we are prepared to sit down and listen to our native consultants talk—not only about landscapes, which of course we must do, *but about talking about landscapes as well*" (Basso, 1996, p.68, emphasis my own).

According to Basso (1996), people do certain things in relation to their geographical environment, amongst them three very distinguishable things. The first of three is the simple observation of the land itself, and reflexion upon what goes on around it. Second is the interaction with the land and making use of it in a physical sense, and third is the oral communication that happens between members of the community about the land. According to Basso (1996), out of the three listed types of interaction, the most significant is the interaction people have with one another on a day-to-day basis discussing, describing and assessing their land environment through speech. In his words,

...it is obvious that events in the last mode—communicative acts of topographic representation—will be most revealing of the conceptual instruments with which native people interpret their natural surroundings. And though such representations may be fashioned from a variety of semiotic materials (gestural, pictorial, musical, and others), few are more instructive than those which are wrought with words. (p. 73)

In his work with *Western Apache of the Cibecue region on the Fort Apache Indian Reservation in Arizona*, Basso (1996) explores place-names and the role they play in Western Apache culture through everyday discourse. According to Basso, there have been many studies revolving around the significance of toponyms in different societies, but little work has been done in anthropology and linguistics to investigate place-name usage, or “placenames” as in “...the actual use of toponyms...” in ordinary dialogue (p. 76). For Western Apache, place-names in the context of historical tales occupy a central part in how the community organizes itself and perceives its local environment. It is through the associated historical tales and stories of named places that the moral character of the people is shaped, and as a result, a cultural understanding of themselves within that environment emerges.

Basso's beginnings in studying Western Apache place naming practices originally came from a suggestion made by Ronnie Lupe, the chairman of the White Mountain Apache Tribe. It had been requested that an Apache map project encapsulating the local traditional knowledge of places and their respective names be undertaken. Having previously worked many years on various ethnographic projects with the Western Apache, Basso agreed to take it on. The map project involved visiting the numerous place-name locations under the guidance and expertise of local Cibecue consultants. Interviews were conducted on place-names and their associated stories, and further observation was done specifically on how name-places were used in everyday communication between members of the

community. His work on Western Apache place-names was one of the results of the Cibecue map project, which was conducted intermittently over the span of five years.

Subsequently, through his work with the Western Apache, Basso (1996) observed specifically that through place-name representation, the land served to ease out undesirable social behaviors within the Western Apache community. Said otherwise, Western Apache's understanding of the land is one that, amongst many other things, controls social norms of behaviour for the purpose of harmonious living. For Basso, this was explicit of how Western Apache had constructed the land to have meaning, and how the land in turn shaped them. More specifically, "...Western Apache conceptions of the land work in specific way to influence Apache's conceptions of themselves, and vice versa, and that the two together work to influence patterns of social action" (p. 67).

Western Apache place-names are traditionally linked to historical tales that serve a specific purpose. Basso (1996) first of all explains that there is fundamental differentiation of types of speech in Apache. Of speech types, there exist three main categories identified as *ordinary talk*, *prayer*, and *narrative* or *story*. The category of *narrative* can then be further divided into the sub-categories of *myth*, *historical tale*, *saga*, and *gossip*. Paramount here is what is said of the *historical tale* type of narrative, which differs distinctly in purpose and style from myths, sagas and gossip. Bypassing altogether what the aims and contexts are of the other genres of narrative, *historical tales* are simple in style and usually take only a few minutes to tell as opposed to the other types of narrative that are laden with particular story-telling linguistic features. The Western Apache term for historical tales ('ágodzaahi) can be directly translated to mean 'to tell of that which has happened.' The main

purpose of historical tales is to "...criticize social delinquents (or, as the Apaches say, to 'shoot' them with an arrow), thereby impressing these individuals with the undesirability of improper behavior and alerting them to the punitive consequences of further misconduct" (p. 50). This happens partially because historical tales tied to places are moral stories where the main characters of the stories suffer the consequences of their poor judgment and behavior. Therefore "shooting" people with these lessons actively teaches and warns troubled people of the possible harm of their actions.

To clarify, the telling and use of such historical tales is described to be a Western Apache hunting metaphor for hunting arrows, where people that go against Western Apache norms of social behaviour are "hunted" and then "shot" with these moral stories. Furthermore, some Apache view historical tales to, "...like arrows, leave wounds—mental and emotional wounds—and that the process of 'replacing oneself' is properly understood as a form of healing" (p. 60).

The Western Apache landscape is dotted with locations that have been given proper place names to which some of these historical tales are attached. When an individual is not behaving within the norms of acceptable Western Apache moral conduct, community members can use the discursive practice of "stalking with stories." This consists of mentioning the place name in order to summon the moral lesson contained in the historical tale associated to it. This discourse can take a very elliptic and obscure form to outsiders, being as simple as a comment like "it happened at *T'iis Cho Naasikaadé* (Big Cottonwood Trees Stand Here And There)," and this suffices to act on a transgressing person. Once stories, via the mention of the place name, are "shot" into those who behave inappropriately, they are then

forced to identify their wrong behaviour in order to correct it, and hopefully to not repeat it again. It is through the association of specific stories to the landscape that the land itself becomes an active agent in regulating unwanted behaviours that disturb Apache norms of moral conduct (Basso, 1996).

Basso shows that new associations are also regularly created, and used in the same discursive way. He mentions a place-name that had been recently created after a young man tried to battle an eagle as it swooped down to take the fish the young man had caught and placed on narrow point of sand while he fished some more. It is a couple of years after the young man had been badly wounded by the eagle that one of his uncles gave this point the Apache name 'Itsá Ch'iyaa'itoolé (Eagle Hurtles Down). Basso's analysis predicts that further reference to this story via the new place name in a dialog can be expected to be used to metaphorically "shoot an arrow" in order to regulate someone's behavior, or to offer comfort and understanding of a difficult situation where someone would have been wounded for challenging someone or something much too powerful. Other examples given by Basso are places within the community that have been named in English (e.g. Desert Storm, Too Far Away) but nevertheless still have a story behind them.

Using the land to instill and reinforce social norms of behaviour is one of the ways Western Apache have constructed their surroundings to have meaning, and in return, their surroundings have shaped aspects of their way of being. It is through imagining the land and speaking of it that Western Apache keep that ancestral knowledge within the modern context of current living, and therefore how their way of seeing the world is also expressed.

It is at this point that I question whether liyiyiuch use, or have used place-names to moderate social behavior as the Western Apache do. I know that in the Cree world the land is viewed as having healing properties where even only imagining about the land has immediate beneficial consequences. In today's modern context, the elders of my community suggest that when confronted with difficult life situations and hardships, people should retreat and spend some time out on the land. The elders say, and I have experienced it, that the land is therapy for troubled minds and hearts. The land is also a great reminder of traditional societal values such as the inherent need for the connectedness of people and all living things.

In the literature, there is some indication that the land can often act as a regulator for unwanted individual behaviors. As observed, but briefly mentioned by Niezen (2009) who conducted some ethnographic research with the liyiyiuch of liyiyiu Aschii, "The problem of discipline and communication of values seem to be more easily handled in the forest environment. In the bush, there are, above all, practical limitations to inappropriate behavior" (p. 67). And in the words of James Bobbish, a long-time community leader in Chisasibi, "The bush tends to be a natural disciplinarian..." because young people are aware that there are boundaries to misbehavior when out in the bush. The disrupting behaviours they might learn in the community do not fit with the ones that need to be demonstrated out on the land, and so they adapt them to function in that environment (cited in Niezen, 2009, p.67).

The above is but a brief mention of how the land itself can serve to "correct" undesirable behavior antecedent to the traditional Cree norm of moral conduct. Toponyms certainly have had their purpose in carrying forward traditional liyiyiu knowledge in liyiyiu society, and in teaching proper conduct. But were the place-

names themselves ever used in discourse as “arrows” to “shoot” people with in order to modify behaviour? I have myself not observed that in modern community life. The intriguing question remains if there would be, or has been in the past, paralleling discourse practices to those of the Western Apache, in East Cree. This is a question that I ask because I do think that an exploration of place-name usage in East Cree discourse is worthy of further research. It is unfortunate however that it remains beyond the scope of this thesis.

3.2 Iiyiyiu Culture and Worldview of the land

For Iiyiyiuch of Iiyiyiu Aschii, the importance of the Cree language in the cultural interaction with the land is as strong as it is for the Western Apache. Preston (2002) makes the argument that the East Cree language for the Cree of Eastern James Bay is central in the culture’s interaction with the land and therefore can offer a window view into the culture’s intricate perception of their environment, and into how the environment has shaped them.

Preston (2002), a forerunner in the field of ethnography concerning the Cree of Eastern James Bay, demonstrates that narratives, including song and spiritual rituals, are evidence that language does indeed reflect the East Cree “ethos” and attitude towards their environment. In his words, language is “a vehicle for the expression of attitudes” (p. 174). From an anthropological view of things, Preston (2002) elaborates on the foundations upon which the Cree way of seeing the world is based.

Preston, whose research work was done in the 1960s, uses the stories told to him by his primary informant and “teacher” John Blackned, a Cree man from

Waskaganish, to draw out a sense of what the Cree hunter's attitude is towards the land. Preston's humanist approach and inspiration comes from Edward Sapir's work.

Preston (2002) writes that from an outsider's perspective, the northern boreal forest landscape is often seen as barren and cruel in offering very little for survival. And often attached to this image of harshness is the idea that starvation was the ultimate threat to subsistence, and that survival was primed by fear, and was the sole motivation for effective action and decision-making. However, Preston (2002) argues that there is no evidence to suggest that that is the Cree view towards their environment. Rather, he more accurately suggests that narratives are evidence, despite hardships and tragic events of starvation—a reoccurring theme in Cree narratives—that the Cree have always revered the land and that negative feelings or perceptions toward the natural environment are not part of the culture's overall views.

To further the understanding of the Cree worldview vis-à-vis the land environment, Tanner (1979) addresses how Cree traditionally approach space. To situate Tanner (1979), let us first quickly explore the premise of his research. The core of his research was based on wanting to see if he could make a link between Cree cultural religious and moral beliefs, and the practical outcomes that result from material factors. Tanner (1979) embarked on his research journey with the Nichicun²³ sub-group of the Mistissini Cree at a time when community members were increasingly making the transition from the fur trade to wage-earning jobs. Recognizing that the Cree way of life was rapidly changing as a result of

²³ The group Tanner calls the Nichicun sub-group is a group that traditionally hunted in the Nichicun area northeast of where the Mistissini community is located. The Hudson's Bay Company once operated a fur trading post in that area (Tanner, 1979; 1987).

development and modernization, Tanner was interested in documenting aspects of the traditional Cree lifestyle while it still proved viable, and was more or less independent from outside influences. Despite the rapid changes that were quickly affecting how Mistissini people lived their lives at that time, the majority of families still actively pursued hunting and trapping as a way of life.

According to Tanner (1979), Cree geographical conceptualization is very well integrated within cultural knowledge, "...but there is little in the way of an explicit conception of cosmography outside of a religious or mythic context" (p. 89). So by looking at certain cultural rituals like Walking Out ceremonies, and ones practiced for controlling weather conditions, Tanner is able to draw out certain conclusions about the Cree worldview by establishing that ritual action, rooted in cultural knowledge, is an expression of deep rooted beliefs on how the land environment is, and needs to be considered. Said otherwise, rituals and the specific practices involved in the use of space by hunting groups are implicit of Cree beliefs and conceptions of the surrounding world.

In the broader scope of his research Tanner (1979) examined religious ideology and the "mode of production"²⁴ in his ethnographic study with the Mistissini Cree of James Bay. He essentially explores the practices of the nomadic culture of the Cree peoples and conveys the importance of spiritual ideas and their role in the Cree way of life. In his book chapter *The Ritualization of Space*, Tanner shows how certain ritual practices can offer a window view into Cree conceptions and beliefs about their land environment. Specifically, Tanner seeks to emphasize the link between spiritual

²⁴ According to the Encyclopedia of Marxism, the mode of production is "The method of producing the necessities of life (whether for health, food, housing or needs such as education, science, nurturing, etc.)," and more specifically "The Mode of Production is the unity of the productive forces and the relations of production" (<http://www.marxists.org>).

ideas or “symbolic knowledge” and the modes of production, via rituals or “symbolic action”, which result in a “practical outcome” (pp. 88-89).

Preston (2002) and Tanner (1979) are examples of ethnographic works that successfully portray the Cree worldview towards the land environment. They both identify cultural expressions as insight to Cree cultural beliefs and understandings of the land. Preston (2002) demonstrates this with Cree narrative stories and songs, using the contained messages to unearth how people really see their world. Tanner (1979) does so by explaining that the meaning of certain rituals can help shed light on the complexities of the knowledge liyiyiuch have about their natural environment.

For instance, Tanner (1979) briefly touches on how the four directional winds are named after the four spirits associated with each wind. And because the different winds, more specifically the wind spirits, have different temperaments to which certain weather conditions are associated, certain rituals would be performed either to provoke or appease the wind spirits in order to influence the oncoming weather. What can be understood from Tanner (1979) is that elaborations on such spiritual beliefs not only help to understand the meaning of weather patterns, and the cultural knowledge that goes with it but also allows for a link to be made to the broader idea of how people conceptualize and know their environment to be.

Here, I suggest that Tanner’s observations and findings could however be taken in another direction where, from a linguistic point of view, the link between cultural expression and liyiyiu understanding of the land could have been made by looking at the cultural reasons for which the names of the four winds are derivatives of the wind spirits names. In other words, looking at how the names of the winds correspond with the wind spirits names could arguably be seen as an expression of the deep-

rooted knowledge that shape liyiyiu understandings of the world, and in turn how the environment shapes liyiyiu perception.

Preston (2002) and Tanner (1979) do not specifically make the link between linguistic expression and perception of place. They do however demonstrate that the Cree worldview manifests through cultural expressions such as narratives and religious rituals, as their research comes from an anthropological background and not a linguistic one. From this, it would seem that there is possibility of deeper discoveries and understanding of cultural world perspective if we take a linguistic approach into language to help unravel some of its mysteries.

Bringing us closer to a linguistically based investigation is Denton (2007) and his work on Whapmagoostui²⁵ Cree toponymy. In his work on liyiyiu place-names with the most northern James Bay Cree community of Whapmagoostui, Denton (2007) identified toponymy "...as a useful starting point for understanding Cree perceptions of the environment..." (p. 143). Not only do place-names serve as markers and reminders of the historical and cultural significance of the land, they are also telling of the Cree worldview. In a land environment that has been occupied and utilized by countless generations of hunting groups, one of the ways place-names have significance is in helping hunters and travelers to be reminded of how to navigate and understand the land. In a practical way, these place-names operate quite efficiently, not only by operating as geographical reference points, but for example, these can also be indicators for appropriate locations for various land related activities (i.e. hunting, camping, berry picking). This is quite significant because

²⁵ Whapmaagoostui (also know in English as Great-Whale) is just north of Chisasibi, and is the most northern East Cree community. As opposed to other communities, it is the only Cree community to border the southern coast of Hudson's Bay. See Chapter 2 of this thesis.

various localities across a large territory have been named and remembered, and further transmitted and integrated into Cree cultural consciousness as altogether meaningful places.

The essay by Denton (2007) on Whapmagoostui place-names is a summary of previous work and studies done in the 1990s to identify “land-use and occupancy” in the Whapmagoostui area. Data had been gathered in two phases. The first phase consisted of surveys using maps and interviews. The second process involved the recording of more detailed interviews with local knowledge experts such as Elders and active hunters regarding the stories associated with identified place-names.

In all, Denton (2007) identified various types of toponyms: descriptive place-names that describe the geographical features of the land, names that indicate locations of harvestable animal species or materials used for traditional hunting tools, names that make reference to past events or people, and place-names that are connected to legends, myths, and spiritual activity.

Of the different place-name types, the descriptive ones that refer to the physical features of the geography seem to be more than less telling of liyiyiu ways of knowing and regarding the land. These types of place-names often make direct reference to particular features of the land, such as bodies of water, quality of terrain, types of vegetation, and so on. Based on the descriptive nature of these toponyms, an experienced land person is usually able to decipher that these are explicit references to either places where harvestable fauna or vegetation can be found, or that a certain travel route is safe. In other words, the description in a place-name is an inference of what the area could be utilized for. While some place-names are obvious in their exact description of visible features of the land, others are not.

For example, some place-names describe the shape of lake bottoms for example. This would indicate aspects like whether fish can be caught in it during the frozen winter months, or if there is guarantee of safe travels on that particular lake (Denton, 2007).

It would remain however, that descriptive place-names are semantically embedded with what are the most salient and relevant aspects for Iiyiyiuch to intrinsically be able to subsist, while other types of place-names act as keepers and reminders of the cultural past and present. Not only do place-names remind the people of their ancestry, they also form a "...network of messages containing both practical information and a breath of spiritual and moral counsel" (Denton, 2007, p. 154). Denton (2007) is closer to, but not yet at a linguistic investigation. He does however make the link between what is in a place-name and the cultural saliency of the land for Iiyiyiuch of Whapmagoostui.

3.3 Linguistic investigations into language and worldview

Mailhot (1974) who has worked with the Innu language²⁶ is not convinced that place-names are useful in identifying cultural perceptions of the geographical environment. Mailhot (1974) identifies the area of geography as a salient semantic category for Innu, and claims that it is reflected in the morphology of the language, and therefore can be threaded out through semantic analysis. In other words, since a culture's conceptualization of the physical land is considered semantically embedded in cultural thought, a different approach is needed in exposing how land concepts are cognitively organized.

²⁶ Innu is a sister language to East Cree. See section 2.3 of chapter 2 in this thesis.

From a semanticist point of view, Mailhot (1974) suggests looking at geography terms that directly describe and refer to the actual physical environment, rather than “toponymized” words that are perhaps more indicative of the cultural practices and history of people and places. Furthermore, toponyms, even descriptive ones, are problematic for semantic analysis because they may have become lexicalized in the language and at best are only implicit of true semantic meaning. Hence, specifically treating descriptive verbs are promising of clearer and more accurate results.

In her treatment of geographical terms, seen here as offering a direct link into Innu conceptualization and organization of space, Mailhot (1974) has focused on verbs rather than nouns because Innu verb derivation – consisting of an initial, medial, and the II (intransitive inanimate) abstract final *-a*²⁷ points to a very rich database of “...lexical items and concepts” (p. 318). According to her, nouns in themselves hardly say anything about land perception and remain quite simple in the sub-categorization of geography.

According to Mailhot (1974), the purview of geography as a knowledge category is extremely salient in Innu traditional ways of thinking. However, geography as a semantic category is far from being outlined within strict parameters. Rather, this domain is considered to be central and interconnected with other loosely defined areas such as flora and fauna. Perhaps a way to better define these domains is partially based in a morphological approach. The data analysed by Mailhot (1974) come from findings of a previous research study done in collaboration with Peter

²⁷ II abstract final *-a-* is identified by Mailhot (1976) as “one of three abstract finals which occur with a variety of roots and medials,” and is one that “refers to spatial states” (Denny & Mailhot 1976, p. 91).

Denny on Innu descriptive geography terms. Mailhot (1974) specifically makes medials the object of her analysis.

To demonstrate how loose the broader semantic category of geography is Mailhot suggests as an example, the medial morpheme of *-askamik-* appearing in verbs like *massekw-askamik-a-w* 'it is swampy terrain', which according to Mailhot, straddles the limits of both the geography and botanical domains. The association of this verb to a particular domain or semantic category becomes clearer when Mailhot tests medial *-askamik-* in attested forms with different finals. She establishes that the Innu word for peat moss is *massekw-askamik-w*. Further attested are also formulations for specific types of moss: *wisaw-askamik-w* 'Shreber's moss', and *wapicew-askamik-w* 'reindeer moss'. Hence, the medial *-askamik-* refers to 'terrain' or 'area' in the context of geographical space, and to 'moss' or 'lichen' in the botanical context. The medial becomes specific to respective domains by way of the final morpheme alone. She concludes that the final morpheme *-a-* (*massekw-askamik-a-w*) refers to spatial extension, while the final *-w* (*massekw-askamik-w*) is a nominal final thus found in botanical terms (1974, p. 320).

In such a case, Mailhot (1974) identifies verb medial morphemes as the referents for "physical phenomenon" (p. 318) at the land level (e.g. topographic features, vegetation, etc.). Medials are the evidence for how Innu cognitively organize and prioritize semantic categories such as geography. However, medials that refer to the environment can border more than one loose geographic semantic category, and can either be in direct relation to the description of the geographical landscape (i.e. lakes, mountains, etc.) or remotely related. Examples of broad semantic categories that fall under the umbrella category of geography can include flora, fauna, land

formations, water bodies, and so on. What distinguishes these “borders” of semantic categories is the association of the verb medial to a final morpheme. In other words, medials that have loose semantic meaning often become specific by way of its final morpheme.

Finals are discussed in a limited extent in this short essay, except to say that finals define medials in their semantic meaning, where medials by themselves have a tendency to straddle related semantic domains, but become specific when occurring with certain finals. In geographical descriptive verbs specifically, the final morpheme distinguishes for example whether the verb (via its medial) is specific to describing a geographic phenomenon (e.g. forest, lake, cliff, etc.), or is perhaps pointing to substances of likeness of that phenomenon. Mailhot gives the example of the medial *-askw-* that can be found in verbs that have to do with geographical description and those that pertain to organic material. When appearing with spatial final *-a-* (*-askw-a-*), this combination refers to the idea of ‘forest’ and appears in many geography descriptive verbs: *min-askw-a-w* ‘it is a wooded/tree area’, *pis-askw-a-w* ‘it is a wooded valley’. Followed by the final *-an* (*-askw-an*), this occurrence refers to materials made of wood, or objects representative of trees or wooden sticks (i.e. human or animal torso and limbs): *wak-askw-an mistikw* ‘the stick is bent’, *cinw-askw-an miciwap* ‘it is a tall tipi’ (1974, p. 320). Subsequent work from Denny and Mailhot (1976) treat these finals in relation to medials in more detail.

In further treatment of geography descriptive verbs, Denny and Mailhot (1976) follow Mailhot (1974) in saying that in Algonquian intransitive inanimate verbs (VII),²⁸ “abstract finals” can define the meaning of medials.

In Denny and Mailhot (1976), attempts are made to semantically analyze some of the abstract morphemes found in the Algonquian verb, including what they call “premedials” and abstract finals. The authors take data from multiple Algonquian languages such as Innu (collected by Mailhot), Ojibwa (Piggot & Kaye, 1973), Plains Cree (Wolfart, 1973), Swampy Cree (Ellis, 1962), and Menomini (Bloomfield, 1962). Specifically treated in the analysis is what they call premedial *-a-* and abstract II (intransitive inanimate) finals *-a-* and *-i-*. The Innu medial *-kam-* meaning ‘liquid’ is used as the model medial to explore premedial *-a-* because *-kam-* can occur with and without it. Medial *-kam-* also occurs with both abstract II finals “...which condition its meaning, and which thereby condition the role of premedial *-a-*” (p. 91).

They discover that the difference between abstract inanimate intransitive (II) finals *-a-* and *-an-* is that they can distinguish between spatial and non-spatial states respectively. Of particular interest here is how abstract II final *-a-* “...marks spatial states in contrast to a considerable variety of non-spatial states, particularly mental states, time states, and states of substances” (p. 93).

When final *-a-* occurs with medial *-kam-* (*-kam-a-*), it “...[refers] to a spatial extent of liquid, commonly a body of water...” (p. 93). Important to note also is the appearance of abstract II final *-i-*. When occurring with medial *-kam-*, as in *-kam-i-*, it specifically refers to liquid itself, not a body of water. According to Denny and Mailhot (1976), final *-i-* occurs rarely and therefore no specific meaning can be attributed.

²⁸ See section 2.3.4 of chapter 2 on the background of *Iyiyiyimuwin* for definition of these terms.

Denny and Mailhot (1976) also suggest that, in addition to conditioning medial morphemes, abstract finals may also determine the role of premedial morphemes. In this case premedial *-a-*, when occurring with medial *-kam-* (and abstract final *-a-*: *-a-kam-a-*) denotes extrinsic properties of a body of water, and when absent from *-kam-* verbs (*-kam-a-*), usually denote intrinsic properties.²⁹

Focus is given to premedial *-a-* specifically in its occurrence, or not, with medial *-kam-*, and the abstract II final *-a-* (spatial extension final). Contrasts are made between all occurring forms. Included below as Table 3 is the table used to summarize their findings on the distinctions of the combinations.

Table 3. Innu verb medial *-kam-* combinations (from Denny & Mailhot, 1976, p. 98)

<p>-kam-aw <i>body of water: intrinsic properties</i> size shape orientation travel route qualities geological configuration clarity</p>	<p>-a-kam-aw <i>body of water: extrinsic properties</i> qualities of adjacent land qualities from associated particulate matter</p>
<p>-kam-iw <i>liquid: intrinsic properties</i> coldness clarity qualities from particulate matter closely associated with water broken flow (in lake)</p>	<p>-a-kam-iw, -(i)tew <i>liquid: extrinsic properties</i> warmth qualities from particulate matter color hardness freshness/foulness dirtiness flavor quantity</p>

²⁹Denny and Mailhot (1976) offer the following for clarifications for intrinsic/extrinsic properties of a body of water: "*Intrinsic*: size, shape, orientation, travel route qualities, geological configuration, clarity. *Extrinsic*: qualities of adjacent land, qualities from associated particulate matter" (p. 94) (see Table 3 of this section).

I take on Mailhot's (1974) and Denny and Mailhot's (1976) generalizations in chapter 6 of this thesis, and examine to which extent their analysis also applies to the East Cree language.

According to Junker (2003), East Cree also encodes cultural perspective and worldview within its lexicon. In her morphosyntactic assessment of East Cree verbs, Junker (2003) demonstrates that Cree verbs related to 'thinking' contain "...semantic universals for mental predicates..." (p. 168), but can also specifically reflect the Cree way of thinking in reflecting salient cultural values. From the combination of corpus analysis of over 500 words, and interviews with EC speakers, a thorough investigation is done of EC words containing the *-eyi-* morpheme that "classifies a large number of words as mental processes" (p. 190). Amongst words containing the *-eyi-* morphemes were words whose meaning encompassed "shamanistic thought processes," and reference to the Great Spirit.

The semantic primes of THINK, KNOW, and WANT (Wierzbicka, 1996) were also shown to be reflected in EC and to further support hypotheses of their universality in language. Intriguing here is Junker's conclusions that "the absence of potentially insulting words for a lack of intelligence, and the fact that other rational concepts, such as judging, did not involve thinking, all echo a central value of Cree culture, namely respect for others" (2003, p. 190). What is reflected in the language, how people talk about certain things, seems to reveal the way in which they organize themselves and their values (i.e. culture). Simply put, the intricacies of language and its makeup can often show how people think about, and fashion their world.

In later work, Junker (2007) partly identifies that there is a strong connection between the cognitive concept of 'memory' and land, which is encoded in a particular

discourse type. As part of a cross-linguistic survey of 'memory' words in EC, she explores how narratives, or more specifically stories associated with place-names, also encode 'memory' concepts. Junker demonstrates that "The semantics of memory is not just encoded in pure lexical items, it is also pervasive in some grammatical items" (p. 1). For example, the Cree lexicon encodes certain 'memory' words related to 'remember', 'remind', and 'forget', while grammatically there are two formulations that encapsulate the concept of 'memory' through the use of absentative demonstratives and a certain evidential marker.

In her elaboration on how East Cree talks about 'memory' Junker (2007) identifies story telling and toponyms, rooted in strong oral tradition, as direct links to the idea of 'memory'. In Cree story telling, there are two types of narratives: ᑎᑦᑦᑦᑦᑦᑦ (tipaachimuuwin) and ᑦᑦᑦᑦᑦᑦᑦᑦ (aatiyuuhkaan). Both serve different purposes and are used to tell about different times of the past. Tipaachimuuwin is a type of story located in the time frame of the not-too-distant past, perhaps spanning a few generations. Stories like this are usually about known people or events that can be actively remembered, either as direct witnessing or by transmission from someone who has witnessed what is being talked about. Aatiyuuhkaan stories are the equivalents of what is known in English as legends, myths, or creation stories, and are only told during certain times of the year.

Junker (2007) explains that toponyms (or place-names) are landmarks that are often representative of certain events and stories, and in a very real sense are keepers of cultural history in the sense that they can evoke or trigger certain memories of the ancestral past. They are varying types of place-names, each having different purposes in the stories they help remember. Some specifically describe the

landscape and inform of the navigational nature of the land, while others can serve as moral guides and constant reminders of salient Cree values. The example provided by Junker (2007) “shows that toponyms and their associated stories were a way to record knowledge and retrieve it in a holistic way. This knowledge...can be as much about the land as it is about proper social and moral conduct” (p. 259).

With the focus of her paper being on “memory,” Junker (2007) uses the example of the toponym and its associated story specifically to demonstrate that the East Cree language discourse practice of telling stories associated with place-names are a *reminder* of liyiyiu cultural values and bring forth the historical and ancestral memory. On the one hand, Junker’s (2007) argument is support for my argument that the language has features that encapsulate liyiyiu world beliefs and reflect how liyiyiu organize and know the world to be. And on the other, it can be seen as a link to identifying how liyiyiu talk about the land in relation to place-names, bringing us back the question proposed in section 3.1 (this chapter) on place-name usage in discourse. Having already said that this question is not further explored in this thesis, I hope to lay out the ground for such a research to take place one day. I do propose here that looking at the linguistic features of East Cree can unearth culturally salient semantic domains such as geography as proposed by Mailhot (1974) and Denny and Mailhot (1976). More specifically however, my project will explore what exactly within the domain of geography is the more salient of categories. In other words what are the more culturally important landmarks and geographical distinctions encoded in the East Cree lexicon. This brings us to the next section on land description of location and orientation.

3.4 Orientation and location

In linking language with ways of thinking we move on to cognitive linguistics where Levinson (1996a, 1997a, 2003) has identified that different languages can operate, conceptualize and communicate spatial perception differently. Specifically, Levinson identifies that "...languages make use of different frames of reference for spatial description" (Levinson, 1996a, p.109), and that linguistic frames of reference "...are systematically distinguished in the grammar or lexicon of different languages..." (p. 135). Levinson's (1996a) findings revolve around the revived Sapir-Whorf hypothesis on linguistic relativity, in which he seeks to identify whether a particular frame of reference coded in the language is also used across the modalities, including non-linguistic areas such as memory recall, recognition, and "...even unconscious gesture" (p. 109). In order to evaluate whether the "same" frame of reference is used across modalities, Levinson (1996a) first treats how the various disciplines (i.e. linguistics, philosophy, brain sciences, psychology) define and understand frames of reference, with special attention to the linguistic frames of reference. In order to arrive at a cross-linguistic alignment of all frames of reference, he redefines and disambiguates the linguistic FoR and proposes three distinct ones: "absolute," "relative" and "intrinsic." This distinction is maintained in Levinson (2003), a book he authored that has two purposes. The first purpose is to introduce spatial coordinates used in language and cognition, a subject that according to him has been understood differently across the disciplines. The second purpose is to use identified spatial coordinates (i.e. frames of reference) to explore the question of how language and thought are related. The premise of Levinson's (2003) (and 1996a) research question is that space perception is linguistically expressed differently

across the languages of the world, which according to him implicates that habitual cognition, or preferred ways of thinking, also varies across cultures.

Levinson (1996a) notes that his survey of the three suggested linguistic frames of reference are only relevant to linguistic spatial description on the horizontal plane, and exclude the notions of “*in* and *on*,” concepts that according to him, are otherwise separately treated and documented in other literature. Levinson also excludes the vertical axis from consideration because, although languages have distinct ways of describing vertical orientation and placement, these often intersect, and therefore can be viewed as being more or less universal in conceptualization, at least in the documented languages.

Having established concrete definitions for the three linguistic frames of reference, Levinson (1996a) is then able to compare these across modalities and disciplines to answer his question, or more justly what he calls Molyneux’s question, of whether or not a specific spatial frame of reference can be utilized by all modalities. In other words, if the “central spatial model” used by the sensory, perceptual and cognitive machines is the same as expressed by “output systems” such as language. Levinson (1996a) concludes that the preference in one linguistic frame of reference will also be the one preferred in non-linguistic tasks, hence confirming the Whorfian hypothesis that language indeed shapes ways of thinking.³⁰

3.5 Levinson (1996a) three linguistic frames of reference

Levinson’s (1996a) “intrinsic,” “relative” and “absolute,” are defined as follows:

Intrinsic Frame of Reference Informally, this frame of reference involves an object centered coordinate system, where the coordinates are

³⁰ For a recent discussion of how Whorf has been misrepresented see Leavitt (2011).

determined by the “inherent features,” sidedness or facets of the object to be used as the ground or relatum.... “facets,” as we shall call them, have to be conceptually assigned according to some algorithm, or learned on a case-by-case basis, or more often a combination of these. The procedure varies fundamentally across languages. [...]. But whatever the procedure in a particular language, it relies primarily on the conceptual properties of the object: its shape, canonical orientation, characteristic motion and use, and so on. (pp. 140-141)

Relative Frame of Reference The relative frame of reference presupposes a “viewpoint” *V* (given by the location of a perceiver in any sensory modality), and a figure and ground distinct from *V*; it thus offers a triangulation of three points and utilized coordinates fixed on *V* to assign directions to figure and ground. English “The ball is to the left of the tree” is of this kind of course. Because the perceptual basis is not necessarily visual, calling this frame of reference “viewer-centered” is potentially misleading, but perhaps innocent enough. [...]

The coordinate system, centered on viewer *V*, seems generally to be based on the planes through the human body, giving us an *up/down*, *back/front* and *left/right* set of half lines. [...]. Although the position of the body of viewer *V* may be one criterion for anchoring the coordinates, the direction of gaze may be another, and there is no doubt that relative systems are closely hooked into visual criteria. [...].

But this set of coordinates on *V* is only the basis for a full relative system; in addition, a secondary set of coordinates is usually derived by mapping (all or some of) the coordinates on *V* onto the relatum (ground object) *G*. The mapping involves a transformation which may be 180° rotation, translation (movement without rotation or reflection), or arguably reflection across the frontal transverse plane. Thus “the cat is in front of the tree” in English entails that the cat *F* is between *V* and *G* (the tree), because the primary coordinates on *V* appear to have been rotated in the mapping onto *G*, so that *G* has a “front” before which the cat sits. [...]

Not all languages have terms glossing *left/right*, *front/back*. Nor does the possession of such a system of oppositions guarantee the possession of a relative system. Many languages use such terms in a more or less purely intrinsic way (even when they are primarily used with deictic centers); that is, they are used as binary relations specifying the location of *F* within a domain projected from a part of *G* (as in “to my left,” “in front of you,” “at the animals front,” “at the house’s front,” etc.) The test for a relative system is (1) whether it can be used with what is culturally construed as a ground object without intrinsic parts, and (2) whether there is a ternary relation with viewpoint *V* distinct from *G*, such that when *V* is rotated around the array, the description changes.... (Levinson, 1996, pp. 142-143)

Absolute Frame of Reference Among the many uses of the notion “absolute” frame of reference, one refers to the fixed direction provided by gravity (or the visual horizon under canonical orientation). Less obviously of psychological relevance, the same idea of fixed directions can be applied to the horizontal. In fact, many languages make extensive, some almost exclusive, use of such an absolute frame of reference on the horizontal. They

do so by fixing arbitrary fixed bearings, "cardinal directions," corresponding one way or another to directions or arcs that can be related by the analyst to compass bearings.

[...].

The conceptual ingredient for such systems are simple: the relevant linguistic expressions are binary relators, with figure and ground as arguments and a system of coordinates anchored to fixed bearings, which always have their origin on the ground.³¹ (Levinson, 1996a, p. 145)

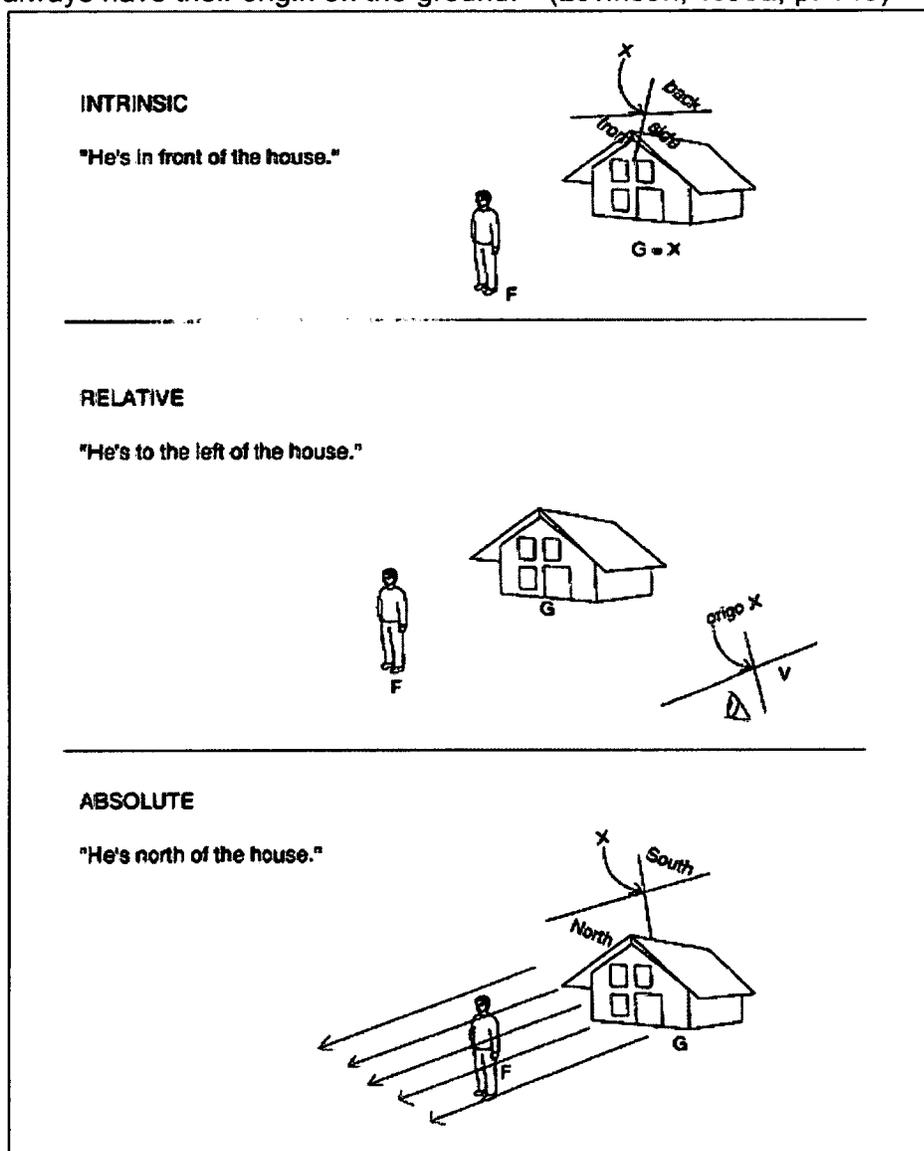


Figure 4. Levinson's three linguistic frames of reference model (1996a, p. 139)

³¹ What he means by "origin on the ground" here is not the physical ground, but rather the argument "ground" of the relator.

Although Levinson (1996a) uses the terms *intrinsic*, *relative* and *absolute* for the three linguistic FoR, there has been debate over the taxonomy used to describe reference frames. Other suggested terminologies include “object-centered” for intrinsic, “observer-centered,” or “viewer-centered” for relative, and “environment centered” for absolute (Bohnmeyer, 2009; Newcomb & Huttenlocher, 2000). It is further suggested that the intrinsic and absolute frames of reference be grouped as “allocentric” as opposed to “egocentric,” that is the observer-based (relative) frame of reference (Bohnmeyer, 2009).

Newcomb and Huttenlocher (2009) found that “The viewer/object/environment taxonomy differs most notably from the intrinsic/relative/absolute taxonomy in whether a viewer versus the other classification is seen as fundamental or whether the number of differentiated referents is taken to be the more important distinction” (p. 189). They conclude however that it is to be seen if one variant of the taxonomies give certain advantages over the other in how testing results are presented, and further question if these differences are even crucially important. Furthermore, Newcomb and Huttenlocher (2009) posit that there might be more than just three linguistic frames of reference. For them, other methods of describing spatial locations include description using compass related points, and linguistic descriptions such as “in the middle of,” otherwise what they call “viewpoint-independent” where a location or object is “in between” referent points.

The distinctions between Levinson’s *intrinsic* and *relative* FoR might be made a little clearer if we take a look at an empirically based investigation that set out to distinguish the parameters upon which the linguistic FoR are defined. Watson, Pickering and Branigan (2006) explore the difference between what they term

“Traditional taxonomy” in psycholinguistics and Levinson’s own taxonomy of *intrinsic/relative/absolute*. Up for debate specifically is how the Levinson and Traditional taxonomy defines intrinsic and relative (or deictic).

In brief, in Traditional taxonomy, the frame of reference is defined according to what is used to establish the direction and orientation parameters. In a *deictic* FoR (also known as *egocentric*) it is the speaker (e.g. “the garbage can is to the left of the bicycle”), and in an *intrinsic* FoR would be the reference object (e.g. “the garbage can in front of the bicycle”).

Levinson’s defining parameter is “the argument structure of the description” (p. 2354). If it is a “binary” argument where there is a reference object to where the figure object is located, then it is an *intrinsic* FoR. If it is a “ternary” argument where there is the reference object, the figure object, and the speaker or viewer, then it is a *relative* FoR (Watson, Pickering & Branigan, 2006).

According to Watson, Pickering and Branigan (2006), the distinction between the two taxonomies is that Traditional taxonomy considers descriptions like “the rock is to the right of the bike” and “the bike is in front of me” as using the same deictic FoR, while Levinson considers descriptions like “the rock is in front of the bike” and “the bike is in front of me” as both intrinsic. Based on two experiments using a “confederate priming paradigm,” Watson, Pickering and Branigan (2006) provide evidence in support of the Traditional taxonomy’s defining parameters, but suggest the possibility of further investigation.

Levinson (1996a) has also shown that in spatial reasoning and assessment some languages primarily use FoR systems like the “absolute” system, a system set upon specific angles such as the English cardinal points orientation model of

"*north/south/east/west.*" For Levinson, this breaks longstanding assumptions that all languages utilize "a 'relative' or viewpoint-centered" frame of reference like the English "*left/right/front/back*" in spatial orientation and description (p.134).

Example languages that operate in an absolute system for spatial orientation and description include Guugu Yimithirr of Australia (Levinson 1997b), and Tenejapan Tzeltal (Levinson 1996a) of Mexico, both unrelated. Guugu Yimithirr uses an absolute system that is more or less equivalent to the English cardinal points, except that in this Australian language, the fixed angles on the geographic terrain are thought of in terms of "quadrants," not points, each corresponding and glossed as *north/south/east/west* (Levinson, 1997b, p. 101). According to Levinson (1997b), it would seem that Guugu Yimithirr does not prioritize any of their given directions over others, this in contrast to European traditions where 'north' is thought of as the anchor direction.

Levinson (1997b) methods in determining the above involved observing and documenting natural interactions of Guugu Yimithirr speakers in their explanations of how they describe space in their language. Tasks were also assigned to speakers to elicit linguistic spatial description. And lastly, informal experiments were conducted to assess cognitive reasoning of space that would be independent of language.

The absolute system in Tzeltal differs quite a bit, although their linguistic terms of directions when glossed in English also roughly correspond to the European notion of cardinal point directions. Because the Tenejapan natural environment is mountainous, the linguistic point of references are influenced and "... transparently derived from a topographic feature..." where "uphill" means *south*, and "downhill," *north* (Levinson, 1996a, p. 111). For reasons Levinson (1996a) explains in detail,

Tzeltal “across” is used to refer to both *east* and *west*. Distinction between both is made “periphrastically” (p. 111).

Levinson (1996a) furthermore demonstrates that certain languages will primarily use one linguistic frame of reference as a way to describe location and orientation in both the macro (i.e. landmarks in a geographical context) and micro (i.e. objects on a table) level of space. In the case of Tzeltal, Brown and Levinson (1993) explain that they had designed a task where a speaker of the language had to verbally direct another blindfolded speaker around a patio area. The informants understood what direction to go towards simply by using the “uphill/downhill” distinctions, whereas an English speaker might have solved such a task by using *left* and *right* as a way to direct someone. Another example was of a woman who was in a neighbouring village in a house she had never been and asked her husband if the hot water tap of the bathroom sink was “uphill” or “downhill.”

In these languages (i.e. Guugu Yimithirr and Tzeltal), “Speakers...can then describe an array of, for example, a spoon in front of a cup, as ‘spoon to north/south/east/(etc.) of cup’ without any reference to the viewer/speaker’s location” (1996a, p. 145). Levinson (1996a) points out that such language speakers must constantly keep track of their orientation vis-à-vis their “fixed bearings.” The way in which they do so is not yet fully understood, but the ability to do that may be due to “...a heightened sense of inertial navigation...regularly cross-checked with many environmental clues” (p. 145).

In his definition of the absolute frame of reference, Levinson (1996a) raises the important question of how these absolute systems are conceptualized by said groups. He proposes a number of scenarios of these possibilities. Polarity is one of

them where importance is given on the poles, like in Western tradition "...where *north* is the designated anchor and *east, south, west*, found by clockwise rotation from *north*" (p. 146). Others may operate by axis and assign primary and secondary importance or relevance to those axes, while others may not even have any particular anchor direction and seemingly do not privilege any one direction over the others. This evidently demonstrates further ambiguities for the likes of Levinson whose research is focused on "mapping" together language and cognition.

In chapter 5 of this thesis, I will be using Levinson's (1996a) proposed linguistic frames of reference as a model to explore East Cree to expose how liiyiuch "talk" about the land. Levinson's (1996a, 1997b, 2003) definitions of the "absolute" frame of reference is what inspires this investigation into the East Cree FoR, and shapes the hypothesis that East Cree primarily uses a coordinate system based on the sun that corresponds to the English cardinal directions in describing location and orientation on land.

Chapter 4: Methodology

4.1 Introduction

In this chapter, I discuss the methodology chosen to answer my research questions of: how liiyiuch are able to orient themselves and navigate a vast “unmarked” territory, and how liiyiyuimuwin encodes for the way liiyiuch are able to situate and describe reference points, and how liiyiyuimwin semantically organizes the knowledge category of geography. I then present how I obtained my data and the approach taken in the analysis.

My quest to uncover evidence of liiyiyu salient semantic organization in liiyiyuimuwin involves two distinct approaches: the first involves looking at how the language is used to talk about the natural geographical environment in orientation and navigation practices. More specifically, I investigate how liiyiuch orient themselves in land navigation. This is explored in chapter 5 of this thesis. The second approach involves morpho-semantic analysis of geography VIs and particles of location, taking into consideration the saliency of certain morphemes within the broader semantic domain of geography. The two separate approaches will hopefully uncover evidence of how the land environment is semantically represented in liiyiyuimuwin.

4.2 Data

Data for this study were obtained by using my personal family video and audio footage captured during family trips with my father out on the land (commonly referred to in English as “the bush”). These videos and audio files were captured as

part of a larger personal project to document my family's traditional hunting territory. The media clips I selected for this study are of my father describing the land's geographic features, and currently used travel routes. As part of this documentation process, these travel routes were also visually depicted with a pencil on 1:50,000 scale Government of Canada topographic maps (*33I04 - Lac De Salleneuve, 3G16 - Lac Fontay, 33H13 - Lac Tilly, 33J01 - Lac Foulhia*). In order to supplement the data from those media recordings, I later conducted informal interviews with my father on his perspective on how Cree view the land.

The interviews consisted of asking questions on how a Cree hunter would orientate himself out on the territory, and more specifically how one would give directions to travel on the land to a set destination. When questions were asked on land orientation and travel, the mode of travel was not considered or defined. It was assumed that travel was by foot as it was done in the traditional nomadic way. Also because the mode of travel was not specified, it could be taken to refer to snowmobile travel in the winter.

My primary interest in identifying how the idea of land is semantically organized and talked about led me to first explore the Cree orientation system using Levinson's (1996a) linguistic frames of reference (FoR) model to identify if East Cree encodes any of the three evidenced FoR identified by Levinson. His tests with different language groups showed that that there was a preferred frame of reference used in linguistic description of spatial arrangement. For his research, this implied that the preferred FoR used in linguistic description was the same FoR used in non-linguistic tasks such as recall memory. Said otherwise, the primary linguistic FoR used was encoded in the language and was evidence for ways of conceptualizing space on the

horizontal. With that said, the possibilities of “measuring” the Cree language in how it expresses spatial orientation could help us get a closer view into, and an understanding of, the Cree worldview as reflected in the language. My use of the Levinson (1996a) model is not meant to test for cognitive aspects but is used as a tool to help assess how the semantic domain of geography is conceptualized and encoded in the East Cree language.

An additional exercise consisted of using Levinson’s (1996a) “Figure 4.9 canonical examples of the three linguistic frames of reference” (p.139), presented in chapter 3 (Literature Review) as Figure 4, to try to elicit East Cree examples for the three different linguistic frames of reference. As a speaker of East Cree, I personally came up with examples that I thought would correspond to Levinson’s three linguistic FoR. I then asked my father if he could use those examples in describing locations on the land description level. This was followed by questions on how he would describe things on the micro level such as the position of objects in a house, and on a smaller scale scenario such as objects on a table.

Additional data come from within the frame of the eastcree.org language project where I was able to sit in a geography terminology workshop involving native Cree speakers, and consulting Elders who possess the inherent traditional land knowledge. Additionally, I was able to utilize the eastcree.org language resources such as the *The Eastern James Bay Cree Dictionary on the Web: English-Cree and Cree-English (Northern and Southern Dialects)* (ECD) and the ECD database on Field Linguist’s Toolbox by SIL International, version 1.5.5 (Toolbox). The ECD is essentially the online version of Toolbox database. Both resources provide different ways of searching the database. For example, in Toolbox I was better able to use

south side of the bay where the sun does not shine') were indicative of something additional to what the translations suggested. I understood these words as more than mere references to locations on the landscape. These words represent a very intricate way of describing and navigating the natural world, but also seem to be implicit of a specific way of seeing the world.

4.3 Approach to Data

Primary data was sorted by revisiting audio and video footage and picking out relevant segments pertaining to land description practices. This includes land area description, landmark identification, and recalling past travels and hunting trips.

The second process consisted of mining the East Cree lexicon to extract words pertaining to the semantic domain of geography. As part of my work as a research assistant on the East Cree dictionary project, I had been given the task to identify the semantic domain of some words, among which were land description, orientation and geography. Amongst these, certain geography themes or categories stood out and appeared to be salient within the domain of geography. Within those salient geography categories, certain morphemes were further identified as salient and very productive in the lexicon. Three of these morphemes were then generated into individual corpora that subsequently were used in the analysis to demonstrate the morphemes' productivity (see appendices of this thesis).

One of my hypotheses relating to the saliency of geographical morphemes was that Denny and Mailhot's (1976) findings on the morphological organization of the neighboring language Innu also applied to East Cree. I describe in greater details how I explore this hypothesis in the next section.

4.4 Testing Denny and Mailhot's (1976) hypothesis

To test East Cree against Denny and Mailhot's (1976) Innu hypothesis, I chose as a model the table used by Denny and Mailhot (*Table 5*, p. 98) to summarize Innu contrasting forms for which the morpheme *-kam-* 'liquid' occurs. Extensions of this morpheme in Innu are *-kam-(i)-* (referring to 'liquid' in general) and *-kam-a-* (referring to 'body of water' specifically). I use the model *Table 5* to sort East Cree verbs containing those same morphemes. This allowed me to account for whether or not East Cree is comparable or equivalent to Innu with respect to geography land descriptive VIs.

To test East Cree with Innu, I first had to convert the Innu orthography used in Denny and Mailhot (1976) to EC spelling standard. A conversion was necessary in order to establish a parallel between the Innu examples coinciding with EC verbs. A conversion of spellings from Innu to East Cree does not pose much difficulty for they are dialects of the same language family continuum, and are geographically neighbouring languages that are at times mutually intelligible. What also facilitates the comparison is the way in which both languages have been consistently standardized in roman orthography, with the exception of possible spelling mistakes in the EC dictionary.

The conversion process started with an initial observation that I could easily understand some of the Innu verb examples in Denny and Mailhot (1976) and translate them into Northern East Cree (NEC) and Southern East Cree (SEC). This then led me to first test general compatibility of Innu and EC verbs containing the *-kam-* morpheme (Denny and Mailhot (1976) specifically call this a medial) in

association with an initial morpheme (called “root” by Denny and Mailhot). I did this test by contrasting EC words with Innu examples found in *Table 1* and *Table 4* of Denny and Mailhot (1976, pp. 93, 96). *Table 1* looked at the occurrence of Innu morpheme *-kam-* with spatial final *-a-* (*-kam-a-*), and *Table 4* lists forms of morpheme *-kam-* with non-spatial final *-i-* and premedial *-a-* (*-a-kam-i-*), which served to identify the EC equivalents for both premedial *-a-* and non-spatial final *-i-*.

To ensure the accuracy of my intuition, I first searched EC counterpart verbs using a combination of ECD and Toolbox for provided definitions. It is sometimes faster and easier to search the online dictionary version, while Toolbox offers more precise searching options. As a preliminary demonstration of the conversion process *Table 4* and *Table 5* below show the Innu examples from Denny and Mailhot (1976) for which I found EC equivalents in the ECD and Toolbox databases for both Northern and Southern Dialects.

Table 4 *-kam-a-w* ‘body of water’ (*Table 1*, Denny & Mailhot, 1976, p. 93)

Innu	NEC	SEC
mis(i)-kam-a-w ‘great lake’	mishi-kim-aa-u ‘the lake is large’	*example not found in ECD
cino-kam-a-w ‘long lake’	chinu-kim-aa-u ‘it is a long lake’	chinu-kam-aa-u ‘it is a long lake’
wawace-kam-a-w ‘lake with many bends’	waawaachi-kim-aa-u ‘it is a winding lake’	waawaachi-kam-aa-u ‘it is a winding lake’
wawiye-kam-a-w ‘round lake’	waauyaa-kim-aa-u ‘it is a round lake’	waawiye-kam-aa-u ‘it is a round lake’
pito-kam-a-w ‘twin lake’	piihtiwi-kim-aa-u ‘the lake is close to another lake’	piihtuu-kam-aa-u ‘the lake sits close to another lake’
takotaw(i)-kam-a-w ‘summit lake’	tihkuhtaauhchi-kim-aa-u ‘the lake is on top of the mountain’	tahkutaauhchi-kam-aa-u ‘the lake is on top of the mountain on high ground’
wase-kam-a-w ‘clear water lake’	waashaa-kim-aa-u ‘water is clear’	waashe-kam-aa-u ‘it is clear, transparent liquid’

Table 5. *-a-kam-i-w, -a-kam-(i)te-w* 'liquid' (Table 3, Denny & Mailhot, 1976, p. 96)

Innu	NEC	SEC
apw-a-kam-(i)te-w 'warm liquid'	aapuw-aa-kim-ita<u>a</u>-u 'the liquid is warm'	aapuw-aa-kam-ite-u 'it is warm liquid, after heating'
cis-a-kam-(i)te-w 'hot liquid'	chiishw-aa-kim-ita<u>a</u> 'the liquid is warm'	chiishuw-aa-kam-ite-u 'it (liquid) is warm'
picise(y)-a-kam-(i)te-w 'steamy liquid'	piichishaa-y-aa-kim-ita<u>a</u>-u 'there is steam rising from hot water'	piichishe-y-aa-kam-ite-u 'it is warm liquid, after heating'
asissiw-a-kam-i-w 'muddy water'	sischiiw-aa-kim-i-u 'the water is muddy' water'	sischiiw-aa-kam-u-u 'the water is muddy'
wap-a-kam-i-w 'white liquid'	waap-aa-kim-i-u 'it is white liquid'	sischiiw-aa-kam-u-u 'the water is muddy'
mac-a-kim-iw 'bad, foul water'	mich-aa-kim-i-u 'it is bad water, dirty liquid'	mach-aa-kam-u-u 'it is bad water, dirty liquid'
wisik-a-kam-i-w 'foul water'	wiisik-aa-kim-i-u 'it is sour, bitter liquid'	wiisak-aa-kam-u-u 'it (anim) is bitter liquid'
win-a-kam-i-w 'dirty water'	wiin-aa-kim-i-u 'the water is dirty'	wiin-aa-kam-u-u 'it is dirty water'
mis-a-kam-i-w 'a lot of liquid'	mihch-aa-kim-i-u 'there is a lot of liquid, the tide is high'	mihch-aa-kam-u-u 'there is a lot of water, the water is deep'

By comparing EC with Innu examples I was able to reach satisfactory consistency and conversion of the Innu *-kam-a-* and *a-kam-i-* combinations. The Northern East Cree (NEC) equivalents are *-kim-aa-* and *-aa-kim-i-* respectively, where in NEC, long final *-aa-* (noted as VII final in Junker, Salt & MacKenzie, 2006) is the equivalent of Innu spatial extension abstract final *-a-*, and *-i-* remains *-i-* as the non-spatial final identified by Denny and Mailhot (1976). In further observation, third person inflection *-w* in Innu equals to third person inflection *-u* in EC³³. The same method of contrasting Innu and EC verbs containing morpheme *-kam-* was used to establish that Innu premedial *-a-* (as in *-a-kamaw/-a-kamiw*) corresponds to long *-aa-*

³³ In Innu standard orthography this *-w* is represented with a raised *u* (^u). In Cree syllabics it often corresponds to the final *-u* (▷) or little *u* (°).

in NEC and SEC (as in *-aa-kimaau/-aa-kimiu* and *-aa-kamaau/-aa-kamuu*). Table 6 below summarizes the EC equivalents of Innu spelling of the above-mentioned morphemes:

Table 6. Innu morpheme equivalency in Northern and Southern East Cree

Dialect	premedial	medial	spatial/ non-spatial final	third person inflection
Innu	-a-	-kam-	-a/-i-	-w
NEC	-aa-	-kim-	-aa/-i-	-u
SEC	-aa-	-kam-	-aa/-u-	-u

Having established that East Cree is compatible with Innu as shown above, this provided a basis of consistency to classify East Cree example verbs into the Innu model (*Table 5*) for the morphemes *-kam-a-w* and *-kam-i-w* in their occurrences or non-occurrences with premedial *-a-* as given by Denny and Mailhot (1976, p. 98). Henceforth in this description of these morphemes, in subsequent chapters, the EC converted spellings will be used.

Next, I used searches, created filters, and sorted my data in the Toolbox database for further analysis. By using filters to sort search results I am able to obtain very precise verbs according to how I choose to filter results. During this process I also performed morpheme analysis to better define morpheme meanings. Furthermore by cross-referencing my results and manipulating the searches I was able to see patterns emerge. This will be discussed in detail in chapter 6 of this thesis.

4.5 Limitations of the study

The purpose of this thesis is to show how East Cree language encodes for the particular way liyiyiuch observe and semantically organize their natural world (i.e. the semantic domain of geography and its description). The study's limitation in this regard is that I only used one primary informant (my father), in addition to my own knowledge as a speaker. Therefore what is presented in chapter 5 reflects mainly the knowledge of one speaker, and in one dialect (Northern) of East Cree. This thesis is not specifically meant to generalize on the ways all people talk about the land. Rather, this thesis reflects my, and the East Cree language project's, many ambitions of wanting to further the documentation of liyiyiyimuwin. It is also about identifying other areas of the language that either needs further documentation, or into which future research is suggested.

In chapter 5, section 5.1.2, I present the discussion on the eastern direction as being the "anchor" direction in the EC "absolute" orientation system. I give several reasons why this would be. However as an insider to my topic of investigation of East Cree, there are certain questions pertaining to cultural and spiritual beliefs, and practices that I could not elaborate on or verify because I felt the necessity to respect the cultural and customary implicit "rules" of learning by observation. In other words, direct questioning on the whys of certain things that can be of a sensitive nature is viewed as inappropriate. Asking such direct questions particularly on the "spiritual" beliefs that underlie certain cultural practices is in my view taboo. Furthermore, my perspective on the language and culture is necessarily biased because I am reporting on my own language as an liyiyiuskwaau (Cree woman). It may have

prevented me in fully reaching the capacity to elaborate on cultural concepts and ideas that may elude some of my readers.

In respect to morpheme analysis in chapter 6, the ECD and Toolbox database had to be used with the awareness that the East Cree dictionary still has the possibility of spelling irregularities in the entries. Thus the same morpheme might not yet be spelled consistently across families of words (this work is currently underway for the next edition). Furthermore, the dictionary itself does not yet contain a full list of morphemes, nor are words segmented for morphemes, so each word or example had to be segmented and analyzed.

In addition, many of the definitions associated with entries are perhaps inaccurate, inconsistent, or simply lack specificity. This aspect also makes it a challenge in assigning concrete meanings to morphemes. I therefore limited my study to a small set of representative and salient morphemes, rather than undertaking an exhaustive analysis of all the morphemes entering the geography and land description domain. A complete morpheme analysis of all terms pertaining to geography and land description remains beyond the scope of this thesis.

Chapter 5: Direction-Orientation

In this chapter, I explore the three linguistic frames of reference (FoR) (*absolute*, *relative*, *intrinsic*) used in spatial description as defined by Levinson (1996a). I argue that in land description East Cree primarily makes use of an absolute frame of reference equivalent to the English cardinal directions of *north*, *east*, *south*, and *west*. But that in description, certain terminology used (e.g. demonstratives and certain location particles) indicates that the intrinsic and relative FoR are also used as supplements to reinforce description. The intrinsic and relative frames of reference used on their own prove to be inefficient and thereby useless in land description of location and orientation. Furthermore, I argue that in Iiyiyiu culture, the easterly direction is privileged over the other three directions, and serves as the “anchor” direction. First, in section 5.1, is a discussion of how an “absolute” FoR system is used and conceptualized in East Cree, followed by discussions of the “intrinsic” and “relative” FoR in sections 5.2 and 5.3 respectively.

5.1 East Cree absolute frame of reference

Using the FoR model proposed by Levinson (1996a), I would like to suggest that East Cree is a language that operates primarily in an absolute frame of reference in land location and orientation description.

The East Cree absolute FoR is defined by four main directions that are equivalent to the English *north/south/east/west* cardinal directions. However, instead of cardinal “points,” East Cree directions can be thought of as quadrants that are based on sun’s locations during its movement along the horizon throughout the day.

In the Cree conceptual world, like in most other parts of the world, we know that the sun rises in the 'east' and descends into the 'west'. We also know that in our part of the globe (Canada), the sun shines from the 'southern' direction even at its highest peak during mid-day. This is because of the earth's axial tilt.

Tanner (1979) briefly discusses the Cree cardinal points orientation system.

...the notion of cardinal directions is not exactly similar to European concepts, since in addition to the reference system of four winds there is a second system of four directional terms which are used for orientation with reference to the position of the sun. The first set of terms, from which the names of the winds derive, refer essentially to locations beyond the horizon. (p. 95)

Tanner goes on to say that other than the more abstract wind directions, the reference system based on the sun "is used when describing locations within sight, or when recalling journeys and giving directions" (p. 95).

Coming back to the sun's trajectory, the liyiyiu way of describing the sun's 'southerly' travel is referred to "the side where the sun walks."³⁴ The sun's "walking" path is what the East Cree directional terms describe. Accordingly, the East Cree terms for the four directions (classified as particles of location in the East Cree dictionary), shown in (14) through (17) below, make direct reference to the positions of the sun as it travels across the sky. The EC terms below are glossed according to my father's explanations of their literal meanings to help illustrate the connection between the four directions and their respective names. Beside the gloss in

³⁴ The reference to the sun's trajectory as "where the sun walks" is a description I have heard in liyiyiyimuwin (M. Natchequon; J. Neacappo). To me, this type of reference offers a rich look into Cree world beliefs. It would be worthwhile to investigate how East Cree language is used to describe natural phenomena in order to identify prevailing themes, or metaphorical concepts used (if used) in land description. For example, I speculate that describing the sun as "walking" is somehow related to the ᓂᓄᓂ (Chakapash) narratives. These are legend stories that also express the Cree worldview. In one particular tale, Chakapash, the mischievous Cree mythic "hero", attempts to snare the sun in its travel after discovering that the sun's path is constant, where the sun never stops walking the same trench-like trail.

The examples above are glossed to reflect the direct meaning of the words as explained to me by my father, but the meaning of those terms as directional terms refer specifically to coordinates grounded to quadrant directions on the earth's horizons. If we imagine a perpendicular extension from the sun down to the horizon, we would find the four Cree "sun" directions. Of course, this imaginary extension is shorter in the mornings and in the evenings when the sun "touches" the horizons, than at mid-day when the sun is at its highest and this extension is the longest and harder to imagine.

According to Levinson (1996a), cultures that base their orientation systems on a "solar compass" (e.g. Walpiri of Australia) will "...fix the system by reference to a mentally constituted orthogonal" (p. 163) because "solstitial variation" along the horizon makes that directional axes oscillate. Levinson goes on to explain how fluctuating reference points may eventually become "fixed" points in the landscape.

Once the community has fixed a direction, it remains in that direction regardless of fluctuations in the local landfall, drainage, wind source, equinox, and so on, or even removal of the subject from the local environment. Thus the environmental sources of such systems may explain their origins but do not generally explain how they are used, or how the cardinal directions are psychologically "fixed." (p. 163, footnote 53)

The English definitions for the four EC directions as found in the ECD is perhaps indication that the terms for the four directions have long been integrated and lexicalized in the language as "fixed" points of reference on the horizontal plane. Therefore they may be glossed as 'east', 'west', 'south' and 'north'. Perhaps at one time far into East Cree ancestral past were the directional terms tied to the literal movement of the sun along the horizon, but this is speculative and can perhaps be further pursued in other investigational opportunities.

- (19) aukitinaahch
 <D>Pŋă"ũ
 auki-tinaa-hch
 dark-mountain-LOC
 'dark/shade side of the mountain'

The initial morphemes *aashtihtaa-* 'sunny' and *auki-* 'dark' can occur with different finals respectively to describe different types of landmarks. Examples (20) and (21) below describe 'sunny' and 'dark' sides of geographical features respectively.

- (20) **aashtihtaa-** 'sunny side'
- | | | |
|----------------------------------|--------------------------|---------------------------------|
| aashtihtaayaah ti kw | <ŋ"Ċŋ"ŋ ^d | 'on the sunny side of the tree' |
| aashtihtaakaama awaashaau | <ŋ"ĊbĬ·<ŋ"ŋ ^o | 'on the sunny side of the bay' |
| aashtihtaakaam | <ŋ"ĊbĬ | 'on the sunny shore' |
- (21) **auk(i)-** 'dark side'
- | | | |
|----------------------------|--------------------------|---|
| aukaaht kw | <D>b"ŋ ^d | 'on the shaded side of the tree where the sun does not shine' |
| auki kaamaawaashaau | <D>PbĬ·<ŋ"ŋ ^o | 'on the side of the bay where the sun does not shine' |
| auki kaam | <D>PbĬ | 'on the shore where the sun does not shine' |

As terms used in location and orientation description, I interpret *aashtihtaa-* and *auki-* as having two meanings where the specificity of the meaning depends on the context or type of land description being done. One interpretation is that they refer to specific locations in relation to where the sunlight hits, or does not hit, the ground. Examples (22) and (23) below from the ECD demonstrate how sun references are used in language to specify locations on the land.

describe). For example, *aashtitaa-* 'sunny side' will refer to the 'north' side when describing a body of water (e.g. lake, river, bay, etc.), but to the 'south' side when describing protruding geographical land features (e.g. trees and mountains). The opposite can be said of initial *auki-* 'dark side'. It will correspond to 'south' when describing a body of water, and to 'north' when describing a tree or a mountain for example. This depiction is not the easiest to envision, as it can be confusing, especially if we are not used to conceptualizing and describing space in such a way. Figure 5 below allows for a visual explanation of how initials *aashtihtaah-* and *auk-* respectively can either refer to 'south' or 'north'.

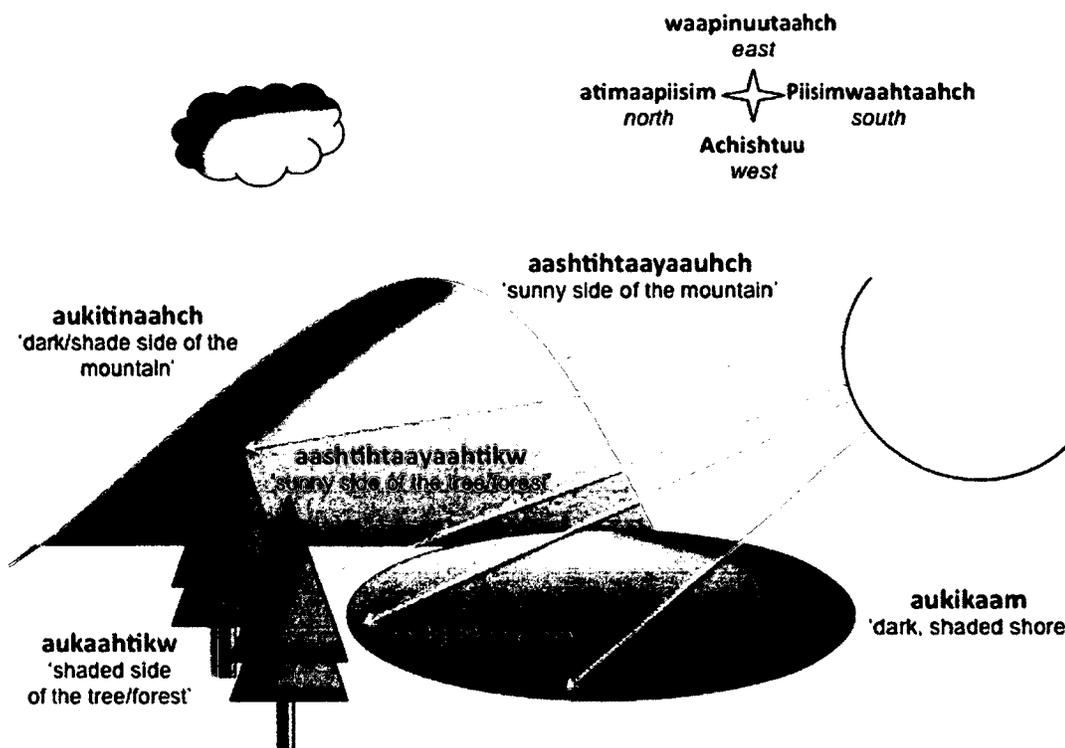


Figure 5. Correspondence of aashtihta- and auki- to 'south' and 'north'

Hence, from the diagram above we can observe that there is a logical explanation as to why there is variance in terminology correspondence because as a general rule of nature, what extends out on the vertical will cast a shadow and what extends on the horizontal can only be cast on by taller vertically extended objects such as trees. As mentioned previously, the use of aashtihta- and auki- words may be used in reference to 'north' and 'south' directions where the initials aashtihta- and auki- can both take on the meaning of 'north' and 'south'. The associated meaning of aashtihta- and auki- respectively to 'north' or 'south' depends on what landmark is being described in relation to the sunlight.

So far we have seen that initials *aashtihtaa-* and *auki-* specifically mean 'sunny side' and 'dark side' respectively to describe specific locations in the geography. Furthermore these initials can also be used in orientation on the land in making reference to 'north' and 'south'. This indicates that EC grammar can, not only talk about opposing sides of prominent geographical features in relation to the sun, but also encode for sidedness in general. We will revisit this observation in section 5.2 when we explore "sidedness," and how facets play a role in the intrinsic FoR. The question will be asked if terms like *aashtihtaakaam* 'sunny shore' and *aukikaam* 'dark, shaded shore' reflect an absolute or intrinsic FoR.

5.1.2 *Waapinuutaahch* 'east' as anchor direction

In the frame of understanding the absolute system, Levinson (1996a) asks the important question of how this system is conceptualized and understood by those who use such systems. He points to the idea that certain absolute FoR have a designated "anchor" direction. In the English cardinal system, this would be *north* from which the rest of the points are found by clockwise rotation (Levinson 1996a). For various reasons that I will explain, I would like to suggest that this is the 'eastern' direction for East Cree. In the following discussion, I will also make reference to Tanner (1979) who offers additional insight as to the importance of the eastern direction in East Cree culture.³⁷

³⁷ It is worth noting that Tanner's (1979) observations of traditional camp life of the Mistissini Cree happened predominantly in a winter setting because that is the season when Cree hunting groups, still practicing the traditional nomadic lifestyle, would spend months out on the land away from the settled community.

As a first observation, one of the basic reasons why *waapinuutaahch* would be considered the anchor direction in East Cree is because East Cree makes use of the sun's position as a reference point for orientation on the land. More specifically, the sun emerges from the eastern direction where the new day is born and where everything begins.

In his observation of Mistissini *linuuch*³⁸ encampment style and organization, Tanner (1979) writes that in winter camps "...the place where the sun rises is of most importance in the orientation of the door" (p. 83). I can attest that this is a practice that is done throughout *Iiyiyiu Aschii*, and in my own community. When I was a young girl, my aunt stressed to me that when building a dwelling, the door should always face 'east'. This was at a time when, as children, my friends and I would build little *müichiwaahph* (tipis) to play in. I was reminded of the importance of the door having to face *waapinuutaahch*, or 'south' in some cases, and again later in life when I would help build all types of dwellings, even modern cabins.

In my own experiences I can recall other hints of the importance of the eastern direction in East Cree culture. In the winter, when my father and I would go about on snowshoes, he would emphasize that when I took my snowshoes off to stand them up in the snow, I should always ensure the toes of the snowshoes pointed east.³⁹ Figure 6 below shows *Iiyiyiu*-style handmade snowshoes on the left and non-*Iiyiyiu* store-bought snowshoes on the right.

³⁸ *linuu* (plural in the above) is the endonym used by the southern inland Cree for 'person' in general, or more specifically for a First Nations person.

³⁹ This is commonly done as a temporary way of storing snowshoes when not worn but needed to get around in the snow. When retired for the day, they can remain outside next to the dwelling, upright and always facing east.

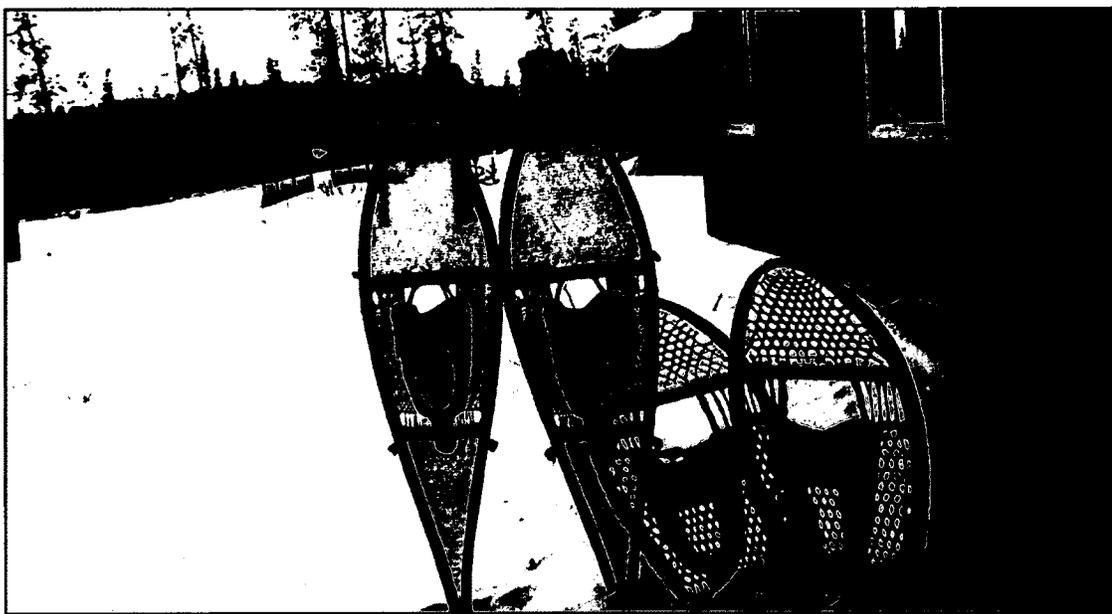


Figure 6. Cree style snowshoes on the left with pointed toe facing waapinuutaahch 'east'

Reasons for this were never given to me. Maybe this is because it is culturally understood that this is the way it is and was always so, but mostly because direct explanations are seldom given. As children we learn by observation and not by asking why things are done the way they are. This style of learning is customary in liyiyiu culture, and as my father pointed out, it was the same for him when he was a child. His father would not explain the “whys” and so it was expected for my father to learn simply by observing.

Sometime ago, my aunt hinted that there is a reason why snowshoes have to face waapinuutaahch when planted outside and not in use. But she soon stopped herself and told me she would tell me some other time. I did not dare to ask why, as direct questioning is not something that I ever felt was appropriate, but also because it is my understanding that teachings like this have their place and time. I had to respect the possibility the time and place was not then and there.

As Tanner (1979) readily points out, the orientation of dwelling doors and snowshoes to the east must of course have direct benefit and can perhaps be out of “material need”, such as the use of solar radiation for warmth in cold weather conditions. However Tanner (1979) also suggests that there are other non-material considerations as to why position to the sun, in the case of door orientation, is privileged. An example given by Tanner is the belief that hunters will fare better in their hunting if they go out into direct sunlight at sunrise.

According to Tanner (1979), there are of course other spiritual beliefs that play in the Cree tradition of door orientation to the east. He talks about beliefs such as the ones that are linked to the need to please the easterly spirits (i.e. east wind spirit and morning spirit), and the avoiding of the “unpleasant” wind spirits (i.e. *north* and *northwest* wind spirits) that are said to be in charge of harsh winter weather. For Tanner (1979) these spiritual beliefs and behaviours better explain, more than ecological reasons, why there is a need to have the door facing the sun. In his words:

The initial material conditions leading to the orientation of the dwelling doorway is the need to avoid the prevailing cold winds, but this idea of a *turning away* on material grounds has been added to with the idea of the positive orientation *towards* the southeast, and *towards* the rising sun on spiritual grounds. Thus the Cree spiritual model of dwelling orientation is more elaborate than their own material explanation; while the material explanation deals only with cold winds, the spiritual explanation is based, in the final analysis, on both cold winds and solar radiation. (Tanner, 1979, p. 104)

What is behind the favoring of the *southeast* direction has a wholly encapsulated cultural meaning as well (as related to material relationships via the need to hunt and survive). As Tanner (1979) points out, most winter animals will position themselves southeasterly (of hills, trees, etc.) to profit from sun’s warming benefits, as well as

taking shelter from the predominant sharp northwesterly winds. And so, in that phenomenon, there is an inherent indication to hunters of where to quickly and efficiently find food resources (pp. 104-105).

My father gives the example of the porcupine and the bear's behavior in the winter. During the winter months a porcupine may find itself on the north side of a mountain because there is perhaps an abundance of food for him to eat. When the warmer days of the winter come around, it will migrate to the south side of mountain where his source of food will most likely be softer and warmer because of the sun's warming rays. The porcupine will also climb up the sunny side of the tree to bask in the sun's warmth. This is why often the porcupine looks lighter in colour during that time because the sun has a bleaching effect. According to my father if you are looking for a porcupine in the winter and all of a sudden he is no longer on the north side for example, it probably means that he has now moved to the warmer south side of the mountain.

Similarly, a bear emerging from its den in late winter will head to the sunny side of a mountain or hill where there most likely will be thawed plants that are ready to eat. In the springtime, a bear will continue to spend most of his time on the sunny side. While still in the den during the latter part of the winter, once the bear starts to feel that it is getting warm enough he will move closer to the den's entrance to better feel the weather outside before he will finally emerge from its den to spend more time outside.

One last mention of the importance of the eastern direction in Cree culture has to do with how bodies of the deceased would customarily be buried. The head would be placed in the west so that they are facing waapinuutaahch 'east'.

As we can see from the discussion above, *waapinuutaahch* is an important direction in *liiyiu* culture for reasons that are varied. It most certainly has to do with the direct benefits the sun provides, but also has underlying cultural and spiritual reasons as well. Whether it is primarily out of practicality, or because it is part of the cultural way of understanding the world, *waapinutaahch* plays a significant enough role within the different areas of culture to be considered as the grounding direction in East Cree.

Tanner (1979) does explore how the other directions are perceived, but he does so within the context of weather controlling rituals and the four directional winds, not the directions themselves. He elaborates that the four winds specifically bring certain types of weather. For example, the north and west winds are harsher yet bring stable weather, whereas the south wind brings milder conditions, and the east wind entails unstable weather. He also explains the type of relationship people have with each of the wind spirits associated with the four winds.

In my personal cultural encounters when growing up, I was told at one time to never point with my finger towards the northwestern directions. The reason was never clear but it was said that it could bring harsh winds, or something of the like. Again, this is a situation where I could not ask why that was. Another example regarding the directions given to me by my father is when a bear is killed in the winter the bear's head should never be placed towards the western direction. My father himself could not tell me the reason except to say that it has been repeated to him not to do it.

In this above section I discuss the cultural importance of *waapinuutaahch* as a direction but do not give any contrary indication as to the possibilities of this being contrary. In that regard, more specific investigation in the area of how the four directions are conceptualized would have to be done in order to determine whether there is contradictory indication of *waapinuhtaahch* 'east' as a privileged direction.

5.2 liyiyiu use of the “intrinsic” frame of reference

According to Levinson (1996a) an intrinsic FoR is “an object centered coordinate system, where the coordinates are determined by the ‘inherent features,’ sidedness or facets of the object to be used as the ground or relatum” (Levinson 1996a, pp. 140-141). The East Cree lexicon does code for “sidedness” of objects and does use facets of objects to determine coordinates in describing location and orientation on the land. However, we must be careful in assessing how these facets are considered in EC and what counts as objects. I propose that in East Cree, the “intrinsic” FoR as described by Levinson (1996a) is used in land location and orientation description, but more so in remotely related contexts such as certain hunting and traveling situations, and less so in large area description contexts like travel route description. Let us explore both contexts by looking at some examples of EC words that make reference to the sidedness of things.

In the following examples, special consideration needs to be taken, as these are location descriptions of living entities in relation to the location of others in a group, namely the ‘back’ and ‘front’ positions. In other words the following examples are used to demonstrate that the EC lexicon can express a ‘front’ and ‘back’ in certain

towards which direction (i.e. cardinal direction) the house was facing. This indicated to me that his way of conceptualizing and describing space in such a situation primarily relied on an absolute frame of reference, and that perhaps the intrinsic FoR is not used in spatial description. His reasoning however demonstrates that a house, at least for traditional Cree dwellings indeed has a prominent “side” assigned, that of where the entrance is located. As we have seen in section 5.1.2, in traditional Cree built dwellings, the door is always facing the east or south.

At this point, I would like to suggest that there is an exception to the limited use of the intrinsic FoR which extends to the broader scale of land orientation and location description. The semantic domain of land navigation and travel route description offers a closer look at particles of location that encode for an intrinsic FoR. But before we move on to this exception I would like to offer more insight into my father’s spatial reasoning.

My father’s spatial assessment of location was not evident to me until I moved on to the relative FoR questions. I asked him how he would describe in Cree “he is to the left of the house.” Again he asked me what direction the house was facing. I did not indicate the direction, so he then continued to say aloud “uhpimaa achishtuu iitaahchaa (on the side of the ‘west’ side), assuming the house is facing south” (J. Neacappo, interview, September 23, 2011). My father’s response showed that before he could answer or translate the intrinsic and relative example sentences, he first had to orient the house and then assess the person’s position in relation to the house. After doing so, he still described the person’s position in terms of an absolute system. This does not mean that he cannot conceptualize spatial location from an intrinsic or relative system, because he is after all fully bilingual and knows the

distinction of *left* and *right*. This might however indicate that EC might not have the lexical items to describe such systems. Or, those full EC speakers who have been raised within and still practice traditional land-related activities do not assess spatial orientation and location on a macro scale in any other way but in an absolute system. Before any conclusions can be drawn, we have yet to examine the relative FoR, which we will cover in the next section. But before we do, let us go back to that exception I previously mention.

In asking my father how travel routes are described and recounted, he mentioned a set of words used as directional terms. Further investigation into these terms seemed to indicate an intrinsic FoR. Examples (35) and (36) are used to help outline directions of a travel route by referencing the direction of water flow in a river, glossed here as ‘upstream’ and ‘downstream’. Example sentences follow each word.

(35) nitimihch

‘**upstream**, upriver’

àć" σΠΓ"υ <đć" b ▷σ"ćρσ·Δυ σ>"đρσρΓđ_x

naataah **nitimihch** aakutaah kaa ushihtaakiniwich nituhkuyinikimikw.

‘The clinic was built **upriver**’.

(36) maahmihch

‘**downstream**, down the river’

▷Π"Π"<Γà ρλ ρρ <Δ"ć" <▷"ΠΔ" ▷ć" l"Γ"υ Δć"ū_x

uutihaminanaa siipii chiki waapihtaan paaushtikuih uutaah **maahmihch** iitaahchaa.

‘When/if you reach the river, you will see some rapids on the **downstream**’.

The above argument is made on the basis that in other languages such as Tzeltal, it was identified that words like “uphill” and “downhill” easily corresponded to

'north' and 'south' and furthermore encoded an absolute FoR in spatial reasoning (Brown & Levinson, 1993; Levinson, 1996a).

As a contrast to EC, the Innu language does however use *natimit* 'upstream' and *mamit* 'downstream' as markers for absolute directions. In a consultation session for the online linguistic atlas (www.atlas-ling.ca) that runs out of the East Cree language project, two Innu speakers and research partners were consulted on their directional terms used for the four cardinal directions. Amongst the terms identified were those glossed as 'upstream' and 'downstream' but also used for 'west' and 'east' respectively. This is possible for them because in their area, rivers all flow from the west to the east, and so therefore have adopted the lexicalized meaning of 'west' and 'east'. In EC, at least in my father's case, rivers can flow from, and towards, any given direction in his territory, which means that 'upstream' and 'downstream' cannot be used as references to absolute directions.

The strategy of using designated "facets" as a relatum to which a location or other objects are descriptively located on the bigger scale of land orientation and location description is not widely used in East Cree, except for terms glossed 'upstream' and 'downstream'. This is because geographical landmarks in East Cree traditionally do not have designated "anchor" facets, as Levinson (1996a) describes, that would be based on shape or any kind of algorithm.⁴¹

On the one hand, it can be argued that 'upstream/downstream' references fall into a relative FoR because the description of a specified location point (figure *F*) in

⁴¹ Mountains, trees, or any vertical objects inherently have the up/down distinction because like any culture, Cree is seemingly no exception with regard to how it conceptualizes up/down binary opposites because according to Levinson (1996a), cultures around the world all seem to perceive the vertical and encode it in the language in one form or another. As previously mentioned, along with the *in/on* location descriptions, the vertical is not considered in Levinson's FoR model.

can be considered to be the same as the relatum G in that relatum G is based upon that informally defined “area” upon which the “anchor” facet is defined by the term *maahmihch* ‘downstream’. Said otherwise, in the context of EC travel route description, it is the point on which the traveler arrives, and not the traveler himself, that serves as the ground relatum where sidedness and the anchor facet is defined. From there the rapids (i.e. the referent) is indeed described by way of an intrinsic FoR.

Instead, terms like *aashtihtaayaauhch* ‘sunny side of the mountain’, and *aukitinaahch* ‘shade side of the mountain’ would also be used to distinguish “sides” of landmarks, but there is no indication that one side has more consideration than the other. This brings us back to the question posed earlier in section 5.1.1. The question asked if terms like *aashtihtaakaam* ‘sunny shore’ and *aukikaam* ‘dark, shaded shore’ reflect an absolute or intrinsic FoR. My response is that even if these terms encoded for sidedness, and that an anchor facet is determined by the referring term, the manner in which they are used to describe orientation and location is more closely related to an absolute FoR. Let me reiterate why.

As explained earlier, *aashtihta-* and *auki-* can be used as substitute words for talking about ‘north’ and ‘south’. In addition, they are a constant and do not vary because they reference where the sun shines (or does not shine). It is because they correspond to absolute points of references that do not change that they remain within an absolute system in describing land orientation and location.

Having identified that there is use of the intrinsic FoR in EC land orientation and location description, specifically within the semantic domain of land navigation, we

now move on to examining the “relative” FoR to see if it is lexicalized in EC, and whether it is used to describe spatial orientation.

5.3 How relative is the “relative” frame of reference in EC?

To answer the question “how relative is the *relative* FoR in EC?” we will address certain terminology that I identified, and later consulted with my father to verify whether they expressed a relative FoR. As a preliminary observation, East Cree has certain terms in its lexicon that are equivalents to ‘left’ and ‘right’. Entries in the ECD demonstrate that the ‘left’ and ‘right’ distinction is also encoded in the language. However, this does not readily indicate that EC uses the ‘left’ and ‘right’ as part of a relative system. Let us take a closer look at the examples found in the online dictionary. The examples (38) and (39) are noun words for ‘left hand’ and ‘left foot’, where the corresponding morpheme for ‘left’ is *-nimih-*.

- (38) unimihchiiwin (nid)
 ▷σΓ"ŕ'Δ^ε
 u-nimih-chii-win
 his/her-left-hand-NOM.final
 ‘his/her left hand’
- (39) nimihtinisit (ni)
 σΓ"∩σΓ'^ε
 nimih-tin-sit
 left?-foot
 ‘left foot’

Below are entries in the ECD glossed as ‘right hand’ in (40) and ‘right leg’ in (41) where ‘right’ is identified by the morpheme *-nihiiu-*.

(40) unihiiwin (nid)
 ▷σ"ΔΔ^ε
 u-nihii(u)-win
 her/his-right-NOM.final
 'her/his right hand'

(41) unihiiukaat (nid)
 ▷σ"Δ▷ḃ^c
 u-nihiiu-kaat
 her/his-right-leg
 'her/his right leg'

So far we have identified the morphemes that correspond to 'left' and 'right'. If we were to look for evidence of 'left' and 'right' being used in spatial description, particles of location would give us more precise indication. Example (42) below makes specific reference to the 'left side'.

(42) nimihtinihch (p, location)
 σΓ"∩σ"^u
 nimih-tini-hch
 left-?-LOC
 'on the left side of the body'

Example (43), is put into context with an example sentence that describes the 'left side' in relation to one's manual ability with regard to that particular side.

(43) nimihch (p, location)
 'on the left'

Γ^d ▷č" σΓ"^u Δč"ḷ <ḃč" <ḃσ ρḃr"▷^c <ḃ" ḃrσ~r"Δḷ^s
 mikw utaah **nimihch** iitaahchaa aakutaah aashi kischihut aah
 iichishishtihichaah.

'S/he can only do beadwork using her/his **left** hand'.

Example (44) and (45) below respectively demonstrate how ‘on her/his left hand (side)’ and ‘on her/his right hand (side)’ would be used to talk about locations.

(44) unimihchiiwinihch (p, location)

▷ċ" ▷σΓ"Ĥ·Δσ"ᵛ <ċċ" Δċ"ĭ ḃ <ċσᵛᵛσᵛᵛᵛ

utaah **unimihchiiwinihch** aakutaah iitaahchaa kaa akushtiniyich.

‘Here, **on her/his left hand** side is where the roof was leaking’.

(45) unihiiunihch (p, location)

<σᵛᵛᵛ" ▷σ"Ĥ·Δσ"ᵛ Δċ"ĭ <ċċ" ḃ <Λᵛᵛᵛ" ▷ċᵛᵛᵛ

anitih **unihiiwinihch** iitaahchaa aakutih kaa apiyichh utaamh.

‘There, **on his/her right hand** side, is where his/her dog sat’.

Sorting through the ECD examples has not brought us closer to identifying a relative FoR but has shown that the conceptualization and use of ‘left’ and ‘right’ for spatially describing locations is more akin to an intrinsic FoR.

Levinson (1996a) explains that even if a language encodes for ‘left’ and ‘right’ and uses them to describe location, it does not necessarily mean it reflects a relative system. It could reflect an intrinsic FoR because of the nature of the argument.

There is a distinction between “the apple is to Bill’s left” and “the apple is to the left of the tree.” The first example is judging the apple’s location via Bill’s own *left* side (i.e. a binary argument). No matter where the viewer (the one making the locational judgment) stands, the apple (figure) will still be to Bill’s *left* (relatum), given that Bill does not move. It is making the judgment via the sidedness distinction where the anchor facet is “Bill’s left” where the apple can be found. “The apple is to the left of the tree” however, is gauging the location according to the ego (i.e. ternary argument), where the *tree* is the relatum, the *apple* is the figure, and the *ego* is the origin of the coordinate system. If the viewer moves to a spot where the tree now

stands between the *ego* and the *apple*, the description changes. The apple is no longer to the left of the tree. It is now behind it.⁴²

The examples coming from the ECD on how East Cree talks about 'right' and 'left' demonstrate that 'left' and 'right' is used only in relation to someone else's hands and for describing locations on someone's body ('right' or 'left' sides), or locations in close proximity to that person. Furthermore, the above examples only show evidence for 'left' and 'right' being used in an intrinsic way, and not in a relative sense.

According to my father, there is no equivalent term for the general 'right' and 'left' side of things in Cree. They are simply not used for description of location, at least not on the broader land description level. He says that the only time such words would be used is when describing someone working with something in their hands for example. There is the possibility of saying things like "chinihiunihch 'in your right hand'." As with the ECD examples above, my father attests that *nimihch* and *unihiiunch* specifically mean 'left hand' and 'right hand' respectively. The only evidence I found with my father on the possible use of 'left' and 'right' again fell within the context of a small-scale description situation. I asked him how we would instruct someone over the phone to get his glasses in his house for example. Example (46) below is an excerpt of his description.

⁴² This also because in English culture trees in general are not assigned any prominent facets. This is the same for Cree.

(46) ᐃᑦᑦ ᐱᑦᑦᑦᑦᑦ ᐃᑦᑦ ᑦᑦᑦᑦᑦ, ᐃᑦᑦᑦ ᐃᑦᑦ ᑦᑦᑦᑦᑦ ᐃᑦᑦᑦ ᑦᑦᑦᑦᑦ ᐃᑦᑦᑦᑦ ᐃᑦᑦᑦᑦᑦ ᐃᑦᑦᑦᑦᑦ
ᐃᑦᑦᑦᑦ ᐃᑦᑦᑦᑦᑦ...

aati piihchichaayinaa an chishtukin, anitaah aah chiihchaayaach uutaah
iitaahchaa **chihiiwinihch** ishtaau anitaah nipaawin...

'When you go in at the door, over there in the corner of you **right hand side**,
there's a bed'....

My father also assured that some people in the same context of description can
more easily say something like "...uutaah **atimaapiisim** iitaahchaa aah
chiihchaayaach, **achishtuu** iitaahchaa. 'at the **north** side corner, on the **west** side
(i.e. northwest corner)'."

Further questions on the use of 'left' and 'right' were not pursued. Instead I asked
my father how he would describe locations of objects on the micro level, as opposed
to the macro level (i.e. land description level). In an informally devised task, I asked
him how he would describe objects on a table in relation to other objects. For
example, I asked him to describe a set of house keys in relation to a television
remote control. Normally, in everyday situations there is really no need to put things
in relation to each other. This is applicable in English as much as it is in
liiyiyuymuwin. If it was needed, a simple description like "bring me the remote
control that is on the table, next to my tea mug" suffices because it is assumed that
people know where to search within a small visually defined area.

However, in wanting to identify how EC describes locations in relation to other
objects on a small scale, the informal exercise with my father resulted in some
interesting observations, namely in identifying the words *aashtimitaah* and *wishtaah*
that indicate a relative system of location description. We will examine these words
next but before doing so, let us briefly explore the word *uhpimaa* 'to the side, beside'

that came up in my father's description of objects in proximity to one another. Below in (47) is the example sentence from the ECD for uhpimaa.

(47) uhpimaa

◁σĆ" ▷"ΛĪ <idĆ" b ▷"r rρJ^u ◁^e ΛΓ"Δρ^e_x

anitaah **uhpimaa** aakutaah kaa uhchi chikimuch an piimihiikin.

'The screw was attached **to the side**'.

My father's use of uhpimaa is similar in that it is a non-specific location description. It just says that *something* is beside *something else*. It does not specify an exact location except to help explain that *it* is *on the side* of the relatum. What makes the meaning of uhpimaa specific is the demonstrative gestures that usually accompany its use.⁴³ In his explanations, my father used uhpimaa both with the intrinsic 'on your left hand side' (i.e. '*on the side* of your left hand side') and with the absolute 'on the south side' (i.e. '*on the side* of the south side'). Uhpimaa then is used to complement location description.

Now, we move on to the first set of particles of location identified as possible words reflecting a relative FoR. They appear in examples (48) and (49).

⁴³ The use of gestures is a big part of talking about the land and describing it. In observing my father in describing directions, I noticed that every time he gestured toward a named direction that his demonstrative gesture was towards the direction he was talking about. Levinson (1997b) notes that previous studies of Guugu Yimithirr showed that gestures were supplementing linguistic description of directional reference. For Levinson (1997b), the implication of such findings "...demonstrates clearly that [directional reference] is not simply a linguistic system but a broader communicative one" (p. 103). To do a cross-linguistic and cross-cultural study of East Cree with other languages like Guugu Yimithirr of Australia, either from a linguistic or cognitive linguistic approach, would no less result in fascinating findings and would overall contribute to the documentation of East Cree and add to the repertoire of the world's documented languages.

(48) aashtimitaah (p, location)

◄ᑎᑎᑦᑦ

'on this side'

(49) wishtaah (p, location)

ᐃᑦᑦ

'behind something'

Put into context of use, these words indicate that the description itself happens within the visual field of the *speaker/viewer*. In other words, the particles of location above are used in situations where either the description is visual, meaning that both *speaker/viewer* and *hearer* can see the area, or in a description situation such as giving land navigation instructions. In the latter scenario, the *speaker* has to be certain that the *hearer* accurately reaches the location where he or she will be able to see what was instructed to him/her. The *speaker* speaks as if he or she would be there with the *hearer*.

If I take the example sentence offered in the ECD "aashtimitaah chimitaau niichinaan 'our house is on this side'," 'on this side' implies that the house is located in relation to a relatum that puts the house in between the *speaker* and the relatum itself. The examples (50) and (51) below give an example sentence of aashtimitaah and wishtaah put into context.

(50) aashtimitaah

ᐃᑦᑦ ◄ᑎᑎᑦᑦ ◄ᑦ ᑎᑎᑦᑦ ᑦᑦ ᑎᑎᑦᑦ ◄ᑦᑦ ᑦᑦ ◄ᑦᑦᑦᑦ ᑦᑦᑦᑦᑦᑦ

uutaah aashtimitaah an mishtikw kaah chimisut aakut kaa ashtaayaan nichikhiikin.

'Over here **on this side** of that standing tree is where I put my axe'.

(51) wishtaah

àċ" Δ"ċ" ĩĩ-ċ"ċ" <ċ" ħ -ċ"ĳĳ <ċ" <ĳĳ

naataah **wishtaah** miichiwaahp akuutaah kaa waapihmikw an atim.

'Over there **behind** the tipi is where I saw that dog'.

From the examples above, it is made clear that particles of location such as aashtimitaah and wishtaah indicate a relative FoR. As an example of a land description scenario, example (52) is an excerpt of navigation instructions. Below, aashtimitaah appears in the diminutive form.

(52) aashtimitaahshiish (p, location, *dim.*)

<ĳĳ àĳĳĳ <ĳĳ ħĳĳĳĳĳĳĳĳ, >ĳĳ" ĳĳĳ <ĳĳĳĳĳĳĳĳ ĳĳĳĳĳĳĳĳĳ

aati naatiminaa an kaapishkutinaashich, uutaah maakw **aashtimitaashiish** mishtikw chimitaau...

'When you walk towards the little hill, over here then **on this side** there is a wooden pole'...

The example above is only relevant if the *speaker* knows the position of the person s/he is directing. In this case there is a need to imagine the person within the area. In both scenarios, the area described is necessarily an area that is defined by the limits of the visual field.

As a summary to this section, I suggest that the relative FoR system is not readily used in land description. It is not a favored way of describing location because description of the land necessitates that instructions be explicit and very specific. The relative FoR does not do that. It is, in other words, irrelevant and useless in a land description and orientation situation when used by itself. However, it is used as a secondary description to the absolute system of description as a way to reinforce or supplement primary description.

Furthermore, the relative FoR is used only within a visually defined context, where the description itself needs to be within the visual limits of both *speaker* and *hearer*. Relative FoR descriptions can be used to describe a scene where location of material objects are described in *relation* to one another, or to one's self, or to someone else. The relative FoR is not appropriate to use in land description when giving travel directions, recalling past journeys, or instructing travel routes. Describing things by way of a relative FoR "would be a very weak description" (J. Neacappo, interview, September 23, 2011).

5.4 Summary of findings

In this chapter I have demonstrated that the primary FoR used in location and orientation description is an absolute FoR. Its coordinate origins are based on the four "sun" direction that correspond to the English cardinal points of *north/south/east/west*, and are therefore glossed as such. I have also argued that the absolute FoR system of description is supplemented by landmark description which at first glance seems to be an intrinsic FoR description. However, upon closer investigation the description of these landmarks are often done by way of an absolute description, which was demonstrated by terms such as 'sunny side' (*aashtitaa-*) and 'dark side' (*auki-*).

I have also identified that there is an exception to the absolute description demonstrated by the use of terms glossed as 'upstream' and 'downstream'. These suggest that this type of reference uses an intrinsic system, meaning that the intrinsic FoR is used in EC and is coded for but is still limited in land location and orientation description. I have also noted that objects such as canoes are assigned

“facets” by way of their “canonical orientation” from which locations can be assessed in an intrinsic FoR. Traditional Cree dwellings also have a preferred “side”: the entrance side of the dwelling. My data shows that it is not referred to as the “front” as it is in English, but as ‘the side where the entrance is’ (<ᑭᑦ ᑲᑦᑲᑦ ᑲᑦᑲᑦᑲᑦ).

There are also other words such as the particle of location *aashtimitaah* ‘on this side’ that describe locations in terms of a relative FoR, which like the intrinsic FoR is limitedly used in land description contexts. It is however used to reinforce and support primary descriptions done via the absolute system.

This concludes the discussion on direction and land orientation description. The following chapter presents some of the intricacies of East Cree geographical descriptive VIs and particles of location.

Chapter 6: Geography

6.1 Geography as a salient semantic category

liiyiyimuwin offers an indication of how liiyiuch fashion their landscape to have meaning. The natural environment has always played an intimate role in the way liiyiuch have organized themselves as people and as a culture. liiyiyimuwin is the tool that allows the connection to be established between liiyiuch and the land. And it is that tool that gives us an indication of what the land signifies to liiyiuch and how it is semantically represented in language. More specifically, the words used in describing the land indicate which semantic domains are the most salient for liiyiuch. In this chapter, I explore a corpus of words used in the context of land description, where special attention is given to verbs (VIs) and particles of location.

In section 6.1.1 of this chapter I elaborate on the ways in which, within the scope of the East Cree language project, we started to identify relevant and salient categories under the semantic domain of geography. This part serves as a precursor to the geography morpheme discussion that appears later in the chapter.

In section 6.1.2, I compare liiyiyimuwin with Innu-aimun (Innu) with respect to Mailhot's (1974) and Denny and Mailhot's (1976) findings that describe the semantic domain of geography as a salient knowledge category for Innu. They argue that certain morpheme combinations are direct evidence of how Innu conceptually organizes the domain of geography. I test the compatibility of East Cree with Innu by using Denny and Mailhot's (1976) summarizing table (*Table 5*, p. 98) as a template in which I place EC equivalents of 'liquid' and 'body of water' verbs.

Furthermore, in section 6.1.3, I highlight how the productivity of certain geography morphemes in EC is evidence of liyiyiu ways of semantically categorizing the land. I demonstrate that the semantic domain of geography is conceptualized as an interconnected whole resulting from relationships, rather than as “parts” that can be classified separately. That said, families of words are nonetheless identifiable in the form of recurring morphemes. In the geographical domain, some of these recurring morphemes are indications of how liyiyiuch semantically categorize and understand the land to be.

6.1.1 Identifying salient geography categories in the East Cree dictionary

In my work as a research assistant with the East Cree language dictionary project (eastcree.org), I started to identify salient geographical categories that would serve to code Cree word entries in the East Cree dictionary. Topic codes (TPs) help to sort and organize entries in the ECD database, and will be used in the future to create other more specific language tools like thematic dictionaries.

The entries I was working on fell under the umbrella category of geography. The TPs identified included ‘landform’, ‘land description’, ‘orientation’, and ‘travel’. These domains are identified as primary areas that use land description words. For instance, when people travel out on the land, land description discourse happens automatically because people will necessarily talk about where they are to travel, or might observe certain scenery and describe it to their fellow travelers, or even recall the journey later on. Within that discourse is a myriad of land descriptive words.

In the previous chapter (chapter 5), I talk about what is described in a travel route. This includes how people situate themselves (‘orientation’), locations on land

in a travel route ('travel'), landmark description ('landforms') and the observation of cyclical or non-permanent environmental processes such as the tide or snow and ice formations ('land description'). In other words, the 'land description' TP is used when coding words that describe non-permanent features of the land, as opposed to permanent ones, which fall under the category of 'landform'. The 'landform' TP is for words that primarily describe the semantic categories of 'lake', 'mountain', 'ridge', 'point', 'muskeg', 'river', and others.

A word is coded under 'orientation' if it is used in describing orientation methods on the land, or describes a fixed or approximate location on a surface area of the land. In the previous chapter of this thesis, we explored words like *aashtihtaa* 'sunny side', the four "sun" directions, and 'upstream/downstream'. These types of words are coded 'orientation', of which another example is *aapihtiwaauhch* 'half way up the hill'. Basically, words are coded as 'orientation' if they describe points of reference.

The topic code 'travel' is for when the land is described in relation to travel. Because topic codes in the ECD database have not yet been consistently established, I propose that 'travel' be used for land description in relation to travel, and 'transport' for coding transportation tools such as *uut* 'canoe', or *asaamich* 'snowshoes'. An example of a 'travel' word is *ispihtipaakin* 'the water is the right depth for travelling, for setting and checking fish net'.

The TP categories identified above have the potential to offer a glimpse into the *liiyiu* conception of the land because traditionally, the Cree world was anchored in an ecosystem where harvestable goods (e.g. plants and animals) and the means to

travel on the land were essential to the Cree way of life. If we look at the broader category of geography as it is expressed in the proposed TPs, it would seem that they reflect what is salient and valuable to that particular Cree way of life.

In the process of assigning English Topics to Cree words, I initially thought that the TPs were a possible indication of how the Cree worldview is reflected in language. Later, however, I became aware that these were English categories probably devised from an English way of conceptualizing the geography. The only way we can get closer to TPs reflecting the way liyiyiuch understand the geography is to have speakers who possess that traditional knowledge of the land to come up with the categories and TPs. It would perhaps be counter-intuitive to have them come up with “categories” because in the liyiyiu way of seeing the world, things operate in terms of relationships, and not necessarily as “parts” that make a “whole.” The natural world, in the traditional Cree view, is seen as the ecosystem that it is. However, with respect to TPs the ideal approach is to formally consult with Cree speakers and have them assign appropriate Cree words that reflect the Cree geographical conceptualization of the land. Hence these words or concepts would ideally be used as the TPs for word entries in the database.

An alternative approach to “categories” and TPs is to start identifying word families within a semantic domain by looking at the common morphemes that occur in words. This way the categories and TPs assigned to code words are defined by the language itself, and not necessarily from preconceived English terminology. A practice approach of this kind will be explored further in section 6.1.3 when I examine four examples of morphemes that prove very productive in geography

descriptive words, and furthermore give an indication of how word families are formed within a semantic domain.

6.1.2 Compatibility of liyiyuyimuwin with Innu-aimun

Mailhot (1974) identifies the area of geography as a salient semantic category for Innu, claiming that it is reflected in the morphology of the language and can further be identified through semantic analysis. I argue here that EC is compatible with Innu-aimun with respect to the semantic domain of geography as established by early findings of Mailhot (1974) and Denny and Mailhot (1976). Denny and Mailhot (1976) have identified that certain abstract finals have discernable meaning, and when these finals occur with certain morphemes such as premedials, they can determine the role of this premedial. To help illustrate how this applies to East Cree, I give from now on the Northern East Cree equivalent of the Innu morphemes they discuss. The equivalence I have established between Innu and Cree is summarized in the Table 7 below, repeated here from chapter 4 (Methodology).

Table 7. Innu morpheme equivalency in Northern and Southern East Cree

Dialect	premedial	medial	spatial/ non-spatial final	third person inflection
Innu	-a-	-kam-	-a-/i-	-w
NEC	-aa-	-kim-	-aa-/i-	-u
SEC	-aa-	-kam-	-aa-/u-	-u

Denny and Mailhot (1976) observe that the abstract II final -aa- marks spatial states such as geographical extension, as opposed to other states such as mental, time, or substance states. This final is found in a variety of geography-related VIs, and when combined with the medial morpheme -kim- 'liquid' (-kim-aa) for example, its meaning specifically becomes 'body of water'.

In addition, Denny and Mailhot (1976) show that the morpheme *-kim-* 'liquid' can occur with a combination of premedials and stative finals, as well as process finals. More specifically, the morpheme *-kim-* takes the premedial *-aa-* (*-aa-kim-*) when the initial morpheme appearing before *-aa-kim-* (*initial-aa-kim-*) refers to extrinsic properties of *-kim-* 'liquid'. When the initial morpheme refers to intrinsic properties of *-kim-*, the premedial *-aa-* does not occur (*initial-kim-*). Furthermore, the combination of the morpheme *-kim-* and the final *-i-* (*-kim-i-*) denotes 'liquid', and the *-kim-* and final *-aa-* combination (*-kim-aa-*), 'body of water'. Both sets of combinations occur with and without premedial *-aa-*, again due to the distinction between intrinsic and extrinsic properties.

Based on Denny and Mailhot's (1976) findings, and on the fact that Innu and East Cree are dialects of the same language family, and that their grammars are very similar, I predict that the morpheme combinations that involve the morpheme *-kim-* 'liquid' is also applicable to Northern East Cree. I explore this hypothesis next.

Using Toolbox, I gathered my data for EC verbs for the various *-kim-* morpheme combinations (*-aa-kim-aa-u/-aa-kim-i-u-*, *-kim-aa-u/-kim-i-u*). I searched for 'liquid' words first by filtering for the final morpheme *-kimaau*.⁴⁴ This produced all 'body of water' words appearing in the dictionary that occur with the morpheme *-kimaau*. I then searched the database for 'liquid' by filtering for the final morpheme *-kimii*, which gave me all 'liquid' but not 'body of water' words that occur with this

⁴⁴ This morpheme can be further broken down into the morphemes *-kim-* 'water/liquid', *-aa-* VII final morpheme denoting spatial extension (Denny & Mailhot, 1976; Junker, Salt & MacKenzie, 2006), and third person inflection *-u*.

morpheme (-kimiu). My searches resulted in a total of 62 words containing the medial -kim-, 22 referring to 'body of water' (-kim-aa-) and 40 referring to 'liquid' (-kim-i-).

The next step was to sort my results, separating the endings -kimiu 'liquid' and -kimau 'body of water' and placing them in their respective boxes in the template tables shown below in Table 8 and Table 9. At this stage, I took into account whether or not the initial morphemes were descriptive of *intrinsic* or *extrinsic* properties as listed by Denny and Mailhot (1976). The preliminary sorting task of categorizing according to intrinsic and extrinsic properties consisted of looking at the definitions associated with whole verbs. If, at first glance, verbs seemed to describe intrinsic properties as listed by Denny and Mailhot (1976) (see Table 3 in chapter 3: Literature Review), then they would be listed under the heading *intrinsic*; and this same approach was applied to those that seemed to denote extrinsic properties. This was done for both -kimau and -kimiu verbs.

Table 8. Northern East Cree -kim-aa- 'body of water' verbs: extrinsic and intrinsic properties (template borrowed from Denny & Mailhot, 1976, p. 98)

-kim-aa- 'body of water' intrinsic properties	-aa-kim-aa- 'body of water' extrinsic properties
size chinu-kimaa-u 'it is a long lake' [<i>chinu- /chinw-</i> 'long'] mishi-kimaa-u 'the lake is large' [<i>mishi- /misi-</i> 'big/large'] shape	qualities of adjacent land
aashaachi-kimaa-u 'it is a hooked lake' [<i>aashaa(k)-</i> 'hook'] puutuwi-kimaa-u 'it is an oval, rounded lake' [<i>puutu-</i> 'oval/inflated'] waauyaa-kimaa-u 'it is a round lake' [<i>waauyaa-</i> 'circular', derived from <i>waau</i> 'egg'] wiikhwaa-kimaa-u 'it is the other end of the lake' [<i>wiikhwaa-</i> 'bag-shape'] orientation	mischaakw-aa-kimaa-u 'there is a lake in the swamp' [<i>mischaakw</i> 'muskeg, bog, swamp'] piku-schaak-aa-kimaa-u 'there is a lake in the swamp' [<i>piku</i> 'hole', <i>-schaak-</i> 'swamp'] ushk-aahtik-aa-kimaa-u 'it is a lake surrounded by young trees' [<i>ushkahtikw</i> 'young tree', <i>ushk-</i> 'new/young', <i>-aahtik-</i> 'tree']
tihkuhtaauhchi-kimaa-u 'the lake is on top of the mountain' [<i>tihku-hch</i> 'on top of a surface'] geological configuration mihchaatu-kimaa-u-h 'there are many lakes' [<i>mihchaat-</i> 'many'] niishu-kimaa-u-h 'there are two lakes' [<i>niishu</i> 'two'] piihtiwi-kimaa-u 'the lake is close to another lake' [<i>piihtiwi-</i> 'layer'] clarity waashaa-kimaa-u 'water is clear' [<i>waashaa-</i> 'clear']	qualities from associated particulate matter mishkushiiw-aa-kimaa-u 'body of water is full of grass' [<i>mishkushiuh</i> 'grass, vegetables, hay']

Table 9. Northern East Cree -kim-i- 'liquid' verbs: extrinsic and intrinsic properties (template borrowed from Denny & Mailhot, 1976, p. 98)

-kim-i 'liquid' intrinsic properties	-aa-kim-i, -(i)taa 'liquid' extrinsic properties
coldness tihchi-kimi-u 'it is cold liquid' [<i>tihkaau</i> 'it is cold', <i>tihchi-/tihk-</i> 'cold'] clarity	warmth
waashaayaa-kimi-u 'it is clear water' - [<i>waashaa-</i> 'clear', variant of <i>waasaa-</i> 'clear'] qualities from particulate matter closely associated with water	aahkw-aa-kimi-taa-u 'it is very hot liquid' [<i>aahku-</i> 'very, an extreme, high degree'] chiishw-aa-kimi-taa-u 'the liquid is warm' [<i>chiish(u)-</i> 'warm'] iispiht-aa-kimi-taa-u 'the liquid is a certain temperature' [<i>iispiht-</i> 'certain size (area)' or 'distance'] color
kishkiwih-kimi-u 'there is fog on the water' [<i>kishkiwin</i> 'cloud/fog']	mihkw-aa-kimi-u 'liquid is red' [<i>mihkwaau</i> 'it is red', <i>mihkw</i> 'blood']

<p>(qualities from particulate matter closely associated with water)</p> <p>piku-saachi-kimi-u 'there is an area of open water on the ice'</p> <p>piichishaa-h-kimi-u 'the mist rises above the water' [<i>piichishaa</i>- 'steam/mist']</p>	<p>(color)</p> <p>usaaw-aa-kimi-u 'the liquid is yellow, brown' [<i>usaau</i>- 'green/yellow/brown']</p> <p>wiyip-aa-kimi-u 'it is black, dark liquid, water is dark in windy weather' [<i>wiyip(i)</i>- 'dark', <i>wiyipaau</i> 'it is black']</p> <p>qualities from particulate matter</p> <p>minituush-iw-aa-kimi-u 'the water has bugs in it' - [<i>minituush</i> 'insect']</p> <p>sischiw-aa-kimi-u 'the water is muddy' [<i>sischiu</i> 'mud, clay']</p> <p>yaakaaw-aa-kimi-u 'it is sandy water' - [<i>yaakaau</i> 'sand']</p> <p>hardness</p> <p>mishkiw-aa-kimi-u 'it is strong liquid, drink' [<i>mishkiw</i>- 'hard']</p> <p>freshness/foulness</p> <p>piyaahk-aa-kimi-u 'it is clean water' [<i>piyaahkin</i> 'it is clean, pure']</p> <p>dirtyness</p> <p>mich-aa-kimi-u 'it is bad water, dirty liquid' [<i>mich(i)</i>- 'bad']</p> <p>wiin-aa-kimi-u 'the water is dirty' [<i>wiin</i>- 'dirty', <i>wiinaau</i> 'it is dirty']</p> <p>flavor</p> <p>nishishtw-aa-kimi-u⁴⁵ 'it is a rich drink' [<i>nishishtwaa</i> 'it has a rich flavour, taste', <i>nishishtw</i>- 'rich']</p> <p>shiiwaapuw-aa-kimi-u 'the water has a salty taste' - [<i>shiiwaapui</i> 'saltwater' <i>shiiwaa</i> 'it is salt or sweet']</p> <p>wiihk-aa-kimi-u 'it (liquid) tastes good' [<i>whiihkin</i> 'it is tasty']</p> <p>wiisik-aa-kimi-u 'it is sour, bitter liquid' [<i>wiisik-in</i> 'it is sour, bitter in taste']</p> <p>quantity</p> <p>mihch-aa-kimi-u 'there is a lot of liquid, the tide is high' [<i>mihchaanh</i> 'there are many, lots' <i>mihch</i>- 'big']</p>
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⁴⁵ The ECD entry of this word is spelled *nishtw*-aakimiu. This form may be a contracted spelling of the longer form *nishishtw*-aakimiu, of which the initial *nishisht*- 'rich' occurs in three other related words about 'rich liquid'. A revision of this morpheme is currently underway by the editorial team, where the suggested form is *nishisht*- as the more accurate form. The shortened form of *nishtw*- for 'rich' also occurs as the initial for the number 'three'.

Once EC verbs were categorized into the template tables, I proceeded to clearly identify the initial morphemes occurring with all -kimiw/-kimaau words. This was done by searching Toolbox for the identified initial morphemes and further searching each morpheme's co-occurrence in other words in the database. By doing so I was better able to associate concrete meanings to all verb initials. That is, if an initial morpheme occurred in a set number of words (the more the better), I could more easily segment it and assign it a specific meaning.

The first step in identifying initials involved using my own linguistic intuition as an EC speaker. I verified this by using Toolbox to filter initial morphemes in their longer form (appearing before the morpheme -kim-). This ensured that I was not cutting the initials prematurely. For example, in the verb *wiipuskaakimaau* 'it is a lake in an area that had a forest fire', I readily identified the morpheme *wiipuskaau* as an existing verb on its own, but occurring here as the initial *wiipuskaa-* followed by the final morpheme -kimaau. As a speaker, I know here that *wiipuskaau* can further be broken down into *wiipu-* 'dark/black' and -skaau, an abstract morpheme that denotes an "abundance" of something (e.g. harvestable materials) in an area. However, in the process of filtering for initials I continued to search for longer versions first, then if needed, I searched for shorter forms of the initial based on my intuition.

Searching for shorter forms is a step taken to assure accuracy of initial morpheme identification. A search for *wiipuskaa-* resulted in a total of four words, *wiipuskaau* being one of them. Searching for what could be the short form of

wiipuskaa- (wiipusk-) did not produce any additional words other than those already found with wiipuskaa- as the initial.

The process of filtering for shorter forms of morphemes was particularly useful in trying to identify the genuine occurrence of the premedial -aa-, the morpheme identified by Denny and Mailhot (1976) as occurring when verbs describe extrinsic properties of liquids and bodies of water. The challenge was to determine if the -aa- appearing before the -kim morpheme was the premedial -aa- or part of the initial. For example, verbs like waashaakimaau 'water is clear' and mihkwaakimiu 'liquid is red' can both seem to appear to occur with the premedial -aa- (waashaakimaau, mihkwaakimiu). The first verb specifically describes the clarity of water, *clarity* being one of the properties listed in the *intrinsic* category of -kimaau-. The analysis predicts that it should not have a premedial. The second (mihkwaakimiu) describes the *colour* of a 'liquid', an *extrinsic* property of -kimiu verbs. The analysis predicts that its -aa- should be the premedial in question. In the following I explain my method of identifying the genuine occurrence of premedial -aa- in -kimaau- and -kimiu- verbs.

As a speaker I know that mihkwaau is the verb that describes the colour 'red', knowing that it is a verb made from mihkw, the noun word for 'blood'. Mihkwaau, however, does not translate into something like 'it is blood-like'. Rather, it means 'it is red'.⁴⁶ By searching for the short form of the initial mihk- I was able to confirm that it was an initial on its own by comparing with the number of other verbs like mihkusiu

⁴⁶ The initial that describes 'bloody' is suuhku-/suuhkw- [e.g. suuhkusiu 's/he, it (anim) is bloody'] (www.eastcree.org).

's/he, it (anim) is red' that occurs with it. This initial has two variants: *mihkw-* and *mihku-*. This process confirmed that the initial *mihkwaa-* in *mihkwaakimiu* could be shortened to *mihkw-*, therefore revealing the genuine presence of premedial *-aa-*, and thus confirming that it rightfully belonged in the *extrinsic* category under the property of *colour*.

The same search process was used for verbs like *waashaakimaa* that occur with the long *-aa-* before the morpheme *-kim-*, but that describe intrinsic properties. In all, I have identified five such verbs. They appear in italics in Table 8 above and are repeated here in examples (53) through (57) with their respective properties identified in parentheses.

- (53) *waauyaakimaa* (*shape*)
 ·<|▷↳ρĹ°
*waauya***aa**-*kimaa*-u
 circular-lake-3
 'it is a round lake'
- (54) *wiihkwaakimaa* (*shape*)
 ·Δ"·̇̇ρĹ°
*wiihk***wa**a-*kimaa*-u
 bag.shape-lake-3
 'it is the other end of the lake'
- (55) *waashaakimaa* (*clarity*)
 ·<|↳ρĹ°
*waash***aa**-*kimaa*-u
 clear-lake-3
 'water is clear'

initial *waauyaa-* 'circular', followed by empathetic *-y-*, VII final *-aa-* and inflection *-u*, which demonstrates that *waauyaa-* is the initial to which other morphemes attach, including medials and abstract finals. By following the same process of analysis, the same conclusions were attained in regard to examples (54) *wiikwaakimaau* and (55) *waashaakimaau* above.

Further confirmation of such an analysis of EC morphemes comes from Southern East Cree data. SEC has an additional vowel in its vowel inventory (see chapter 2 on the Background of *liyiyuyimuwin*). In this dialect, these initials are spelled and pronounced with a long *-e-*, not a long *-aa-*, as shown in (58-59) below. However, recall from Table 7 that the premedial is *-aa-* in the Southern Dialect, not *-e-*. As illustrated below, my segmentation is thus correct: the *-aa-* in examples (53-55) above⁴⁷ is part of the initial and is not the premedial *-aa-*.

(58) *waawiyekamaau* (*shape*)

·<Δᓴᓴᓴᓴ°
waawiye-kamaa-u
 circular-lake-3
 'it is a round lake'

(59) *waashekamaau* (*clarity*)

·<ᓴᓴᓴᓴ°
waashe-kamaa-u
 clear-lake-3
 'it is clear, transparent liquid'

⁴⁷ The Southern equivalent *wiikwaakamaau* of Northern word *wiikwaakimaau* is spelled with a long *-aa-* in the 2012 print edition of the Southern East Cree dictionary. However, a study of the morphological family of words with the initial *wiikwe-* shows that this is probably an orthographic inconsistency.

I treated the examples (53-55) above as possible exceptions to Denny and Mailhot's (1976) findings concerning premedial -aa- because they fit neatly into the intrinsic semantic properties of *clarity* and *shape* as listed by the authors, but occur with -aa- before the medial -kim-. However, upon closer investigation it appears that the long -aa- is simply part of the initial and cannot in fact be this premedial -aa-. So far, the evidence shows that EC words follow Denny and Mailhot's (1976) hypothesis.

Other possible exceptions were examples (56) and (57). If we take another look at example (56) *waashaayaakimiu* and compare it with example (55) *waashaakimaau*, they both have the initial *waashaa-* designating *clarity* of 'liquid' or 'water'. They seem synonymous. There are two differences here: a) the occurrence of the morphemes -y-aa- in *waashaayaakimiu* and not in *waashaakimaau*, and b) the difference in finals, -kim-i- 'liquid' and kim-aa- 'body of water', between the verbs. I do not believe the latter plays a big role in the occurrence of -y-aa-. What makes *waashaayaakimiu* an exception is the occurrence of the "extra" morpheme -yaa-, which can further be broken down as -y-aa-, where -y- has been identified as an epenthetic semi-vowel that is inserted between long vowels to ease pronunciation (MacKenzie & Junker, 2004). This therefore reveals the long -aa- as being an abstract morpheme in itself, and a likely candidate to being the premedial -aa-. Example (56) *waashaayaakimiu* could thus be an exception to Denny and Mailhot's (1976) premedial -aa- rule for indicating an extrinsic property. Semantically, this word indicates an intrinsic property.

describe: two describe “viscosity,” three describe “stillness,” and three describe the water being “disturbed.” Since these eight verbs do not fit any of the listed properties for Innu, and have common themes, I propose a revision of Denny and Mailhot’s (1976) extrinsic and intrinsic semantic properties (Table 5, p. 98) that would take into account my EC data on -kim- ‘liquid’ verbs. I propose that the semantic property of *movement* be added as an intrinsic property of ‘liquid’, and that *thickness* and *stillness* be added as extrinsic properties. These are represented in Table 10 below, in which the eight previously-mentioned -kim- verbs are placed under their respective suggested properties.

Table 10. Proposed properties for East Cree intrinsic and extrinsic categories of -kim-i- verbs

-kim-i- <i>intrinsic properties</i>	-aa-kim-i <i>extrinsic properties</i>
<i>movement</i> iishtaayaa-kimi-u ‘the liquid settles, is still’ [iishtaayaa- ‘calm/settle’, no shorter form, occurs in two other -kim- related VIs] kaau-kimi-u ‘there are approaching signs of wind on a body of water while it is still calm’ [kaau- ‘rough’] piichinaa-kimi-u ‘the water is disturbed, stirred up’ [piichinaa- ‘disturbed’, no shorter form, occurs in three other -kim- related verbs: 2 VIs, 1 VTI]	<i>thickness</i> pihyaakw-aa-kimi-u ‘liquid is thick’ [pihyaakw- ‘thick’, pihyaakw-aa- ‘substance is thick’, VAI: pihyaaku-siu ‘it (anim) is thick, dense’] piikw-aa-kimi-u ‘the broth is thick and rich’ [piikw- ‘thick/dense’] <i>stillness</i> shuushiw-aa-kimi-u ‘the water is smooth’ [shuushiu- ‘smooth’, shuushiwaa- ‘it is smooth’] iywaashtin-aa-kimi-u ‘there is calm, still water’ [iywaashtin ‘the wind is calm’] miyw-aa-kimi-u ‘the water is calm’ [miyw- ‘good’]

I have chosen to categorize *stillness* and *thickness* as extrinsic properties for two reasons. First, the verbs describing *stillness* and *thickness* can easily be identified as containing the abstract morpheme -aa-, considered here to be premedial -aa- because the initials naturally occur in other words without it. Second, *thickness* is not

an intrinsic property of water or natural liquids defined by morpheme *-kim-*.

Thickness is perhaps an intrinsic property of other liquids such as blood or broths, but these are described by other distinct morphemes such as *mikw-* and *-aapui* respectively. To have a certain thickness, 'water' or 'liquid' as defined by *-kim-* would have to have undergone some kind of transformation induced by other substances, thus making it an extrinsic thickness property of 'water/liquid'. In regard to stillness, it is an extrinsic property because *-kim-* in these words refers to the water in bodies of water. Out in the open environment, lake water for example, is seldom *still* except perhaps at times in the early mornings. Water therefore seems to be predominantly in some sort of "disturbance" state caused by various environmental factors, such as wind and other sources. The very topic name of "disturbed" water precisely illustrates my reasons for labeling the property of *movement* as an intrinsic category, within which appear three of the eight *-kim-* verb exceptions. Here, the first verb in the list (*iishtaayaakimiu* 'the liquid settles, is still') should be paid particular attention. I understand this word to mean that the liquid is in the *process* of calming. In other words, the water is still "moving," on its way to becoming "still." However, this is my personal interpretation and I have not verified this, so my comments here remain speculative. If it is the case that *iishtaayaakimiu* describes the property of *stillness*, then we have another exception to Denny and Mailhot (1976) based on the same reasoning used for the earlier-identified exception, of verb *waashaayaakimiu* 'it is clear water', presented in Table 9 and example (56) above. Movement of water, in particular, is coded in East Cree under the final morpheme *-chiwin*, a morpheme that is found in 101 entries in the ECD. This is perhaps further evidence that indeed

movement (of 'water/liquid') would be considered an intrinsic property of water, and *stillness* as an extrinsic property. The final *-chiwin* is taken up again in section 6.1.3 of this chapter to demonstrate its productivity.

My next step was to see if other medials that allowed for the same contrasting forms as medial *-kim-* were attested. However, I did not find any so far. Analysis of the medial *-kunik-* 'snow' for example, shows that this medial only occurs with what seems to be premedial *-aa-*. Said otherwise, there is no evidence that the morpheme *-kunik-* occurs without this premedial *-aa-*. In that regard, there is the possibility that medials like *-kunik-* only take premedial *-aa-* and do not occur without it, while other medials possibly do not take premedial *-aa-* at all. The analysis of medial *-kunik-* in the occurrence with premedial *-aa-* showed that the properties described in this combination were indeed what I believe to be extrinsic properties of snow, thus furthering evidence that premedial *-aa-* occurs in a verb when describing extrinsic properties of the medial. However, in order to determine the nature of premedial *-aa-* in regard to other geographical medials, further investigation and analysis would be needed.

I now offer a brief summary of my testing of the Denny and Mailhot (1976) hypothesis. After conversion from Innu spelling standards to East Cree roman orthography spelling standards, East Cree data confirms that the Innu abstract II final *-a-* (e.g. *kinw-a-w* 'it is long') identified by Denny and Mailhot (1976) as the morpheme referring to spatial states, is equivalent to the East Cree VII final *-aa-* (*chinw-aa-u* 'it is long'). The VII final *-aa-* in East Cree is hence understood to be the

morpheme that refers to spatial extension in geography verbs. East Cree data also supports compatibility between Innu and EC with respect to Innu premedial morpheme -a- (long -aa- in EC), where the premedial -aa- in East Cree also occurs when verbs describe *extrinsic* properties, and does not occur when *intrinsic* properties are described, with the possibility of a few exceptions. Results from the analysis of East Cree -kim- 'liquid' verbs do, however, lead to a proposed revision of Denny and Mailhot's (1976) semantic properties list, including both *extrinsic* and *intrinsic* categories, in order to account for East Cree data. The combination of the relative ease of spelling conversion and the occurrence of equivalent abstract morphemes in an equivalent morphological process leads to the conclusion that Innu and East Cree share morphological compatibility with respect to -kim- verbs, and that this may also extend to geography descriptive verbs. More specifically, evidence from East Cree supports Denny and Mailhot's (1976) findings relating to the premedial -aa- and the abstract II spatial final -aa-.

6.1.3 East Cree geography morphemes

In this section, I look at different geography-related morphemes that are very productive, meaning that they occur in a number of words in combination with various different morphemes. For example, we have the initial morpheme *naa-* 'point of land' that occurs in a family of words along with different medial classifiers, the final -*chiwin* 'movement of water' (i.e. rapids) that occurs with various initials and medials, and the concrete the final -*skaa*u (more accurately: -*sk-aa-u*) that occurs with different medials and initials to describe an 'abundance' of something in a given area. As a preliminary step in this section, however, I offer some insight into the East

Cree morpheme *-kim-* 'liquid' by first suggesting a disambiguation of its general gloss 'liquid' to specifically signify 'water' or 'lake', and second, by distinguishing it from the medial morpheme *-kaam-* that often contains the gloss 'lake' in its definitions.

When using filters to conduct my searches, I am able to obtain very precise verbs according to those filters. When filtering for the final morpheme *-kimaau*, which results only in words that have that particular ending, it appears that Denny and Mailhot's (1976) finding regarding the Innu morpheme *-kama-w* as a reference to 'body of water' is also applicable to EC. As we have seen, the EC morpheme *-kima-u* is what refers to 'body of water'. However, search results show that the morpheme combination *-kim-aa-u* very specifically means 'lake'. More precisely, findings show that *-kim-* 'liquid' can be glossed as 'water' when it appears with VII final *-aa-* because in combination (*-kim-aa-*), it is referring to the 'liquid' of a 'lake'. In other words, depending on the meaning of the verb, *-kima-* in certain verbs specifically means 'water' because a naturally-occurring lake does not generally contain any other type of 'liquid'. To confirm that the general gloss of 'liquid' becomes specific to 'water' or 'lake' in East Cree, I performed a cross-search with the English gloss 'lake' which resulted only in *-kimaau* verbs. Then I cross-searched again with the English glosses 'river' and 'muskeg'. This did not return any words ending in *-kimaau*. The categories of 'river' and 'muskeg' have their own morphemes by which they are each defined – these are *-aashtikw-* (variant: *-aastikw-*) and *-schaakw-*, respectively. Further searches reveal that different morphemes occur

when referring to types of water other than lake water. Here are some examples: *shiiwaapui* 'salt water', *kuunaapui* 'water made from melted snow', *chimuwinaapui* 'rain water', and *iyihpii* 'drinking water'. In the first three examples, the final morpheme *-aapui* occurs. This particular morpheme is also used in words that describe various 'broths'. Given that different morphemes occur when describing other types of water, it thus concluded that *-kim-aa* specifically refers to either 'lake' or 'lake water'.

One test that is often used in morpheme identification is the search for occurrences in any other position. This allows for the identification of contrasting forms of the morpheme. For example, it is useful to know if *-kim-* occurs in any other position than in the medial position before the verb class final position. Filtering for *-kim-* 'liquid' showed that the only time it refers to 'liquid' is when it occurs in the medial position before the verb class final; it does not occur in any other position. I now proceed to exploring different geography-related morphemes that are productive in geography Vlls, as well as particles of location.

6.1.3.1 Medial *-kaam-* and initial *akaam-*

When starting the process of finding the EC equivalents of the Innu morpheme *-kam-* 'liquid', I came across a medial and final morpheme *-kaam-* in EC that is often glossed as 'lake' or 'body of water'. Since the Innu spelling does not indicate vowel length, I first took this EC morpheme to be the equivalent of the Innu morpheme *-kam-* 'liquid'. However, upon closer examination, this particular morpheme is used to make reference to the 'shore' or 'side' of a body of water. The difference between *-kaam-* and *-kim-* is that *-kaam-* can be glossed as 'edge' or 'limit', becoming specific

The related morpheme *akaam-*, which occurs only in the initial position, means 'across to the other side/edge'. In contrast to *-kaam-*, which strictly refers to distinguishable 'edges' or limits of a horizontal spatial extension in an area, *akaam-* occurs when specifying a location that is across the way, on the other edge of a spatially defined area. Examples of *akaam-* appear in (66) through (69) below.

- (66) **akaamihch** (p, location)
 <ḅḡᶓᵛ
akaam-ihch
across-LOC
 'on the other side of a body of water'
- (67) **akaamiskiniu** (p, location)
 <ḅḡᶓᵛσ°
akaam-iskiniu
across-road
 'across the road, path'
- (68) **akaamishkutaahch** (p, location)
 <ḅḡᶓᵛḁḥᶓᵛ
akaam-ishkutaahch
across-fire-LOC
 'across the fire'
- (69) **akaamischaach** (p, location)
 <ḅḡᶓᵛᶓᵛ
akaam-ischaach
across-muskeg-LOC
 'across the muskeg'

The productivity of morphemes such as *-kaam-* and *akaam-* show that geography morphemes are very productive and can occur with a number of other morphemes to describe different aspects of the land. It also shows that the semantic domain of

geography is conceptualized as a relationship between all things, rather than as separate “parts” that combine to work together. The productivity aspect of different geography-related morphemes is explored next with the following morphemes: the initial *naa-* ‘point of land’, the final *-chiwin* ‘movement of water’, and the concrete final *-sk-* ‘abundance’.

6.1.3.2 Initials *naa-* ‘point of land’ and *michishtaawaa-* ‘very long point’

First, let us explore the initial *naa-* that refers to the geographic land formation of ‘point’. In my corpus of geographic words, I identified *naa-* as one of the initial morphemes that is very productive because it occurs with a variety of medials that “classify” the type of land that *naa-* ‘point’ qualifies. In total, the initial *naa-* occurs in 15 entries glossed as ‘point’. Table 11 below summarizes some of its forms. See Appendix B for the complete list of entries containing the initial *naa-*.⁴⁸

Table 11. Productivity of the initial morpheme *naa-* ‘point of land’

naayaau	naa-y-aa-u point-y-VII.Final-3	‘it is, has a point, projection on something’
naaschiwikaau	naa-schiwik-aa-u point-mud-VII.Final-3	‘it is a muddy point’
naasikwaau	naa-sikw-aa-u point-ice-VII.Final-3	‘it is a point of ice’
naayaapiskaau	naa-y-aapisk-aa-u point-y-rock-VII.Final-3	‘it is a point of solid rock, outcrop point’
naayaauhkaau	naa-y-aauhk-aa-u point-y-sand-VII.Final-3	‘it is a point of sand’

The morpheme *naa-* occurs in the initial position of the stem, but it can also be found in further-derived words like *chiihkaanaayaau* seen in (70) below. This is a

⁴⁸ Thank you to Frances Visitor and Anna Blacksmith for the first pass in analyzing these morphemes during the www.eastcree.org geography workshop in November 2011.

case of what is called secondary derivation (see section 2.3.6 in chapter 2 of this thesis), whereby the initial *chiihkaa-* is added to an existing stem *naayaa-*, which now acts as a final.

- (70) *chiihkaanaayaau*
chiihkaa-[naa-y-aa]-u
 prominent-[point-y-VII.Final]-3
 'it is a prominent point of land'

The definition above is a proposed revision of the ECD definition, 'it is a sharp point of land'. I propose the English gloss 'prominent' to disambiguate 'sharp'. *Chiihkaa-* means 'it stands out', akin to something like 'clearly visible' or 'visually obvious', and is found in other words that describe 'strong' smells and 'clear' sounds, seen in (71) and (72) below.

- (71) *chiihkaamaakun*
chiihkaa-maakun
 strong-smells
 'it smells strong, a lot'

- (72) *chiihkahtaakun*
chiihkaa-htaakun
 clear-sounds
 'it sounds clear'

The geographical concept of the land formation of 'point' is represented in *liiyiyuymuw*in by different initials, *naa-* being just one of them. As a contrast, let us examine the initial morpheme *michishtaawaa-*, which after consultation with *liiyiyu*

elders,⁴⁹ I propose be glossed 'very long point', with *naa-* remaining as 'point'. The distinction between *naa-* and *michishtaawaa-* is the length of the point. Furthermore, the initial *michishtaawaa-* functions the same way, and occurs in the same place(s), as the initial *naa-*. Evidence from a word list generated by the English gloss 'point' (see Appendix B)⁵⁰ shows that both initials can occur with the same classificatory medials. The initial *michishtaawaa-* occurs in eight words in my corpus, five of which occur with the same classificatory medials as *naa-*. This contrast is presented in Table 12 below.

Table 12. Contrast of initials *michishtaawaa-* 'very long point' and *naa-* 'point of land' in occurrence with classificatory medials

Classificatory medial	Initial <i>michishta-</i>	Initial <i>naa-</i>
<i>-hkup-</i> 'willow'	<i>michishtaawaa-hkup-aa-u</i> 'it is a very long willow point'	<i>naa-hkup-aa-u</i> 'it is a willow point'
<i>-sikw-</i> 'ice'	<i>michishtaawaa-sikw-aa-u</i> 'it is a very long point of ice'	<i>naa-sikw-aa-u</i> 'it is a point of ice'
<i>-aapisk-</i> 'rock'	<i>michishtaawaa-y-aapisk-aa-u</i> 'it is a very long rocky point, stony point, with rocks on it'	<i>naa-y-aapisk-aa-u</i> 'it is a point of solid rock, outcrop point'
<i>-aauhk-</i> 'sand'	<i>michistaawaa-y-aauhk-aa-u</i> 'it is a very long point of sand'	<i>naa-y-aauhk-aa-u</i> 'it is a point of sand'

6.1.3.3 Final *-chiwin* 'movement of water'

The final *-chiwin* is another morpheme that proves very productive, and furthermore demonstrates how *liiyiuch* semantically organize the geographical domain. Words that end in *-chiwin*, glossed 'moving water', describe things like rapids, the tide, and different types of water flow. The corpus of *-chiwin* words

⁴⁹ This consultation with the Elders was done through the East Cree language project geography terminology workshop (www.eastcree.org).

⁵⁰ I thank Delasie Torkornoo (www.eastcree.org) for his help in automatically formatting these.

exported from the ECD database has 101 entries, three of which are particles of location, and the rest of them VIs. Represented below in Table 13 are but a few examples (see Appendix C for the complete list).⁵¹

Table 13. Productivity of final morpheme *-chiwin* 'water movement'

chiihkaawaachiwin (vii)	chiihkaa-waa- chiwin loud.sound- rapids	'there is a sound of rapids in the distance'
ministikuchiwin (vii)	ministiku- chiwin island-water.flow	'the current flows around an island'
niihtaachiwin (p,loc.)	niihtaa- chiwin below- rapids	'below the rapids, downriver'
kischisaaachiwin (vii)	kischisaa- chiwin high.steep.rock.cliff- water.current	'it is a steep, high falls'
mishtichiiwaachiwin (vii)	mishti-chiiwaa- chiwin a.lot-goes.back- tide	'the tide is really low'

There is another morpheme worth mentioning here, not solely in terms of being productive, which it is, but also in the context of how geographical areas are described in East Cree. As we have seen thus far, geographical aspects of the land can be described according to physical properties (i.e. *intrinsic* and *extrinsic*), according to geographical shape (e.g. *naayaau* 'point'), and can be semantically categorized according to things like movement of water (e.g. *-chiwin*). Next, I examine the final morpheme *-sk-*.

6.1.3.4 Final *-sk-* 'abundance'

The final *-sk-* is found in many VIs and denotes an 'abundance' of something.

Example (73) below is a description of an area where fish are in abundance.

⁵¹ Thank you to Frances Visitor and Anna Blacksmith for the first pass in analyzing these morphemes during the www.eastcree.org geography workshop in November 2011.

- (73) kukimaaskaau (VII)
 kukimaa-sk-aa-u
 lake.trout.abundance-VII.Final-3
 'there is an abundance of lake trout'

Denny and Mailhot (1976) identify this final -sk- as a “concrete final referring to spatial states [meaning] *abundance of...*” (p. 92). Though not part of this analysis, the argument can hence be made here that the morpheme -skaau can be further broken down as seen in (74):

- (74) -skaau
 -sk-aa-u
 abundance-VII.spatial.extension.final-3
 'abundance in a spatially extended area'

When I first encountered this morpheme in previous research, my instinct as to its meaning was that -sk- occurred in words that describe an abundance of generally harvestable materials and food resources. In other words, my “harvestable hypothesis” was about the morpheme combination -sk-aa-u in that it described, first of all, an abundance of things in a given *land* area, and secondly, things that are of use to people. It turns out that what is being described as “an abundance” does not have to have immediate useful purposes for people. It is a morpheme that indeed strictly describes an “abundance of...” (Denny & Mailhot, 1976, p. 92). Furthermore, the area of abundance need not be “on land” but can be in the air or in/on the water.

During the East Cree language project geography workshop, I had the chance to consult with Elders from Whapmagoostui. They assured me that the final morpheme combination of -skaau describes an abundance of things in an area, but they also

specified that it could be used to describe an area above ground (or water), or in the water. Thus something like *mintuushkaau* seen in (75) below can very well be said and be perfectly understood.

- (75) *mintuushkaau*
mintuush-sk-aa-u
 insect-abundance-VII.final-3
 'abundance of insects in one area'

The English word 'abundance' used in the gloss is somewhat misleading because there is an undertone in the English definition that suggests "abundance" connotes something desirable, or as the Oxford American Dictionary would suggest, "a very large quantity of something," as in "the plentifulness of the good things of life." My initial presumption that *-skaau* described something "useful" came partially from my understanding of the English definition. But disregarding its undertones, the gloss 'abundance' here is taken to simply mean "a very large quantity of something," even if it describes something unpleasant such as insects.

In the context of hunting for certain desirable animal species, *-skaau* verbs are used to describe the type of vegetation these animals like to eat or hide in, rather than to describe the animal itself as abundant. For example, when describing a place where rabbits or ptarmigan are in abundance, the primary thing described is the animal's food source (e.g. the kind of willow that rabbits like to eat). The generic verb to describe an abundance of willows in an area is *niipsiiskaau*, *nipsii* being the noun for 'willow'. The ECD contains the entry *waapushuskaau*, meaning 'there is an abundance of rabbits'. However, according to our language / linguistic consultants, this would not necessarily be the primary way of describing an area where rabbits

may be plentiful. If a hunter wants to describe the best place to snare rabbit, s/he will describe a place where there is an abundance of the type of willow close to which rabbits are likely to be found. In this sense, the abundance of harvestable material referred to in the verb stem initial is not relevant to humans, but to the animal itself. It is an indirect way of talking about the desired harvestable animal resources (in this case, rabbits).

6.2 Summary of findings

Within the eastcree.org language project, it is our observation that initials in geographical VIs and particles of location often refer to the physical qualities (i.e. qualifiers) of what is being described, and that medials classify the nature of the landform (e.g. -kim-aa 'lake', -aapisk- 'rock/mineral', -schiwi- 'mud'). Finals have the function of specifying the relationship between the qualifying initial and the classifying medial in concretizing the sense of a word itself. For example the seemingly abstract final -aa- in geography VIs defines the role of the initial and medial relationship, giving the forming word specific meaning. It is through the relationship of these morphemes that we can identify the salient semantic geographical categories in East Cree.

In achieving compatibility between Iiyiyuyimuwin and Inuu-aimun we can comfortably say that this VI abstract final -aa- in East Cree is equivalent to the Innu abstract II final -a- denoting "spatial states" where in East Cree, geography VI final -aa- refers to spatial extension in particular.

Furthermore, preliminary attempts to search for geography VII (in addition to -kim- 'liquid') that would account for contrasting forms of premedial -aa- was partially successful. Most other medials seem to occur either with or without the premedial. For example we found that the medial -kunik- 'snow' only occurs with what seems to be premedial -aa-. The properties described in this combination were indeed extrinsic properties of snow, thus furthering evidence that premedial -aa- occurs in a verb when describing extrinsic properties of the medial.

It was also demonstrated that various search techniques in the database led to the finding that the East Cree morpheme combination -kim-aa-u specifically meant 'lake', and that some East Cree -kim- verbs could not be easily listed under Denny and Mailhot's (1976) *extrinsic* and *intrinsic* semantic properties. The exceptions found hence lead to a proposed revision of the Denny and Mailhot (1976) semantic properties to take into account EC data on -kim- 'liquid' verbs.

Finally, I highlighted the idea that different geography-related morphemes in their productivity showed that these morphemes could help to identify word families that reveal how the natural land environment is semantically represented in liyiyuyimuwin. That said, this concludes our summary of chapter 6, leading us to the next chapter where I conclude on the findings and the implications of this research.

Chapter 7: Conclusion

This thesis presented a linguistic investigation into how liyiyiuch of liyiyiu Aschii talk about the natural land environment. The investigation into the particular discourse practice of “land talk” revealed that the preferred frame of reference used in location and orientation description is an absolute frame of reference system anchored to the four sun directions (equivalent to English cardinal directions), and that the direction of waapinuutaahch is shown to be privileged over the other three directions. In navigation discourse practice, the method of describing a travel route involves setting the initial direction in which a traveler must set out by making reference to an “absolute” direction. This is typically followed by landmark references that are primarily situated via the absolute system, sometimes supplemented by the lesser-used intrinsic and relative systems of location description. In a land navigation context, the latter frames of reference demonstrate a certain imprecision and vagueness in situating crucial landmarks and land locations.

Morphological investigation into the language surfaced evidence of how the domain of geography is represented within the liyiyiu lexicon and discourse by identifying the specific productiveness of certain morphemes that are representative of important semantic categories. This morphological investigation also highlighted the fact that certain broadly defined geographical morphemes become specific by way of their relationship in word arrangement. This leads to the generalized conclusion that specific morpheme combinations can express how the domain of geography is organized and encoded in liyiyiyimuwin, and perhaps how it is conceptualized in the liyiyiu worldview.

By first testing liyiyuyimuwin with the Innu-aimun hypothesis that abstract II final -a- denotes “spatial states”, and then finding evidence for it in East Cree, we can conclude that East Cree abstract VII final -aa- refers to spatial extension in geographical descriptive verbs. Further comparison with Innu-aimun on premedial -a- showed that East Cree medial -kim- verbs also followed the hypothesis put forth by Denny and Mailhot (1976), but that exceptions to the rules were found. Furthermore, other medials that allowed for the same contrasting forms as medial -kim- were not attested.

On a broader scale, the words and discourse used in “land talk” reflect the intricate relationship liyiyiuch have with the natural world. Words like those containing the contrasting initial morphemes of aashtitaa- ‘sunny side’ and auki- ‘dark side’ speak to how liyiyiuch approach the land in practice and in philosophy. The particular internal arrangement of the language further suggests how liyiyiuch consider the land environment. It is through the demonstrated processes in this thesis research that we can perhaps make it clearly understood that liyiyuyimuwin is the tool that allows for a clear connection between liyiyiuch and the land, an inherent part of liyiyiu identity. In other words, the language contains the “instructions” of how to approach, and interact with, the land. It is out of that understanding that the motivation to further the documentation and preservation of liyiyuyimuwin was born – so that our future generations may continue to *know* how the language has guided liyiyiuch in the liyiyiu way of life.

Appendix A: NEC *extrinsic* and *intrinsic* properties

<p>-kim-aa- 'body of water' <i>intrinsic</i> properties</p> <hr/> <p>size</p> <p>chinu-kimaa-u 'it is a long lake' [<i>chinu-/chinw-</i> 'long'] mishi-kimaa-u 'the lake is large' [<i>mishi-/misi-</i> 'big/large']</p> <hr/> <p>shape</p> <p>aashaachi-kimaa-u 'it is a hooked lake' [<i>aashaa(k)-</i> 'hook'] puutuwi-kimaa-u 'it is an oval, rounded lake' [<i>puutu-</i> 'oval/inflated'] shaakiwi-kimaa-u 'it is a narrow lake' [<i>shaakiwaa</i> 'it is narrow'] waawaachi-kimaa-u 'it is a winding lake' [<i>waawaachi-</i> 'winding', <i>waawaa-</i> 'curvy/zigzag/wiggle'] waayiyu-kimaa-u 'it is a curved, semi-circular lake' [<i>yaayiyu-</i> 'bend/turn/curve'] waauyaa-kimaa-u 'it is a round lake' [<i>waauyaa-</i> 'circular', derived from <i>waau</i> 'egg'] wiikwaa-kimaa-u 'it is the other end of the lake' [<i>wiikwaa-</i> 'bag-shape']</p> <hr/> <p>orientation</p> <p>tihkuhtaauhchi-kimaa-u 'the lake is on top of the mountain' [<i>tihku-hch</i> 'on top of a surface']</p> <hr/> <p>geological configuration</p> <p>mihchaatu-kimaa-u-h 'there are many lakes' [<i>mihchaat-</i> 'many'] niishu-kimaa-u-h 'there are two lakes' [<i>niishu</i> 'two'] piihtiwi-kimaa-u 'the lake is close to another lake' [<i>piihtiwi-</i> 'layer'] pimichi-kimaa-u 'lake lies across (is perpendicular to the view or path of the speaker)' [<i>pimich</i> 'sideways']</p> <hr/> <p>clarity</p> <p>waashaa-kimaa-u 'water is clear' [<i>waashaa-</i> 'clear']</p>	<p>-aa-kim-aa- 'body of water' <i>extrinsic</i> properties</p> <hr/> <p>qualities of adjacent land</p> <p>mischaakw-aa-kimaa-u 'there is a lake in the swamp' [<i>mischaakw</i> 'muskeg, bog, swamp'] miywaa-misk-aa-kimaa-u 'lake bottom is nice' [<i>miywaa-miskaau</i> 'the bottom of the lake has sand or pebbles', <i>miywaa</i> 'it is nice', <i>miyw-</i> 'nice/good', <i>-misk-aa-</i> 'bottom/land of body of water'] piku-schaak-aa-kimaa-u 'there is a lake in the swamp' [<i>piku</i> 'hole', <i>-schaak-</i> 'swamp'] siihtaaskwaa(y)-aa-kimaa-u 'lake is surrounded by a dense forest' [<i>siiht-aask-waayaa-u</i> 'the woods are dense', <i>siiht-</i> 'tight', <i>-aaskw-</i> 'forest/woods'] ushk-aahtik-aa-kimaa-u 'it is a lake surrounded by young trees' [<i>ushkaahtikw</i> 'young tree', <i>ushk-</i> 'new/young', <i>-aahtik-</i> 'tree'] wiipu-skaa-kimaa-u 'it is a lake in an area that has had a forest fire' [<i>wiipuskaau</i> 'it is an area that has been ravaged by a forest fire', <i>wiipu-</i> 'dark/black', <i>-skaau,</i> 'in abundance in an area']</p> <hr/> <p>qualities from associated particulate matter</p> <p>mishkushiw-aa-kimaa-u 'body of water is full of grass' [<i>mishkushiuh</i> 'grass, vegetables, hay']</p>
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<p>-kim-i 'liquid' <i>intrinsic properties</i> coldness</p>	<p>-aa-kim-i, -(i)taa 'liquid' <i>extrinsic properties</i> warmth</p>
<p>tihchi-kimi-u 'it is cold liquid' [<i>tihkaau</i> 'it is cold', <i>tihchi-/tihk-</i> 'cold'] clarity</p>	<p>aahkw-aa-kimi-taa-u 'it is very hot liquid' [<i>aahku-</i> 'very, an extreme, high degree'] aapuw-aa-kimi-taa-u 'the liquid is warm' [<i>aapuw-</i> 'warming process', like melting of ice/snow]</p>
<p>waashaayaa-kimi-u 'it is clear water' - [<i>waashaa-</i> 'clear', variant of <i>waasaa-</i> 'clear'] qualities from particulate matter closely associated with water</p>	<p>chiishw-aa-kimi-taa-u 'the liquid is warm' [<i>chiish(u)-</i> 'warm'] iispiht-aa-kimi-taa-u 'the liquid is a certain temperature' [<i>iispiht-</i> 'certain size (area)' or 'distance']</p>
<p>kishkiwih-kimi-u 'there is fog on the water' [<i>kishkiwin</i> 'cloud/fog']</p>	<p>piichishaa-(y)aa-kimi-taa-u 'there is steam rising from hot water' - [<i>piichishaa-piyu</i> 'it creates steam, vapour, is steamy', <i>piichishaa-yaau</i> 'it (ex mist) rises above the water']</p>
<p>piku-saachi-kimi-u 'there is an area of open water on the ice'</p>	<p>color</p>
<p>piichishaa-h-kimi-u 'the mist rises above the water' [<i>piichishaa-</i> 'steam/mist']</p>	<p>mihkw-aa-kimi-u 'liquid is red' [<i>mihkwaau</i> 'it is red', <i>mihkw</i> 'blood']</p>
	<p>usaaw-aa-kimi-u 'the liquid is yellow, brown' [<i>usaau-</i> 'green/yellow/brown']</p>
	<p>waap-aa-kimi-u 'it is white liquid' - [<i>waapaau</i> 'it is white', <i>waap(i)-</i> 'light']</p>
	<p>wiyip-aa-kimi-u 'it is black, dark liquid, water is dark in windy weather' [<i>wiyip(i)-</i> 'dark', <i>wiyipaau</i> 'it is black']</p>
	<p>qualities from particulate matter</p>
	<p>minituushi(w)-aa-kimi-u 'the water has bugs in it' - [<i>minituush</i> 'insect']</p>
	<p>ministikw-aa-kimi-u 'it is a lake full of islands' [<i>minishtikw</i> 'island']</p>
	<p>miskumii(w)-aa-kimi-u 'there is ice in the water' [<i>miskumii</i> 'ice']</p>
	<p>sischiiw-aa-kimi-u 'the water is muddy' [<i>sischiu</i> 'mud, clay']</p>
	<p>suupu-(w)aa-kimi-u 'it is soapy water' [<i>suup</i> 'soap, from English 'soap']</p>
	<p>yaakaaw-aa-kimi-u 'it is sandy water' - [<i>yaakaau</i> 'sand']</p>
	<p>hardness</p>
	<p>mishkiw-aa-kimi-u 'it is strong liquid, drink' [<i>mishkiw-</i> 'hard']</p>
	<p>freshness/foulness</p>
	<p>piyaahk-aa-kimi-u 'it is clean water' [<i>piyaahkin</i> 'it is clean, pure']</p>

	<p>dirtyness</p> <hr/> <p>mich-aa-kimi-u 'it is bad water, dirty liquid' [<i>mich(i)</i>- 'bad'] wiin-aa-kimi-u 'the water is dirty' [wiin-'dirty', <i>wiinaau</i> 'it is dirty'] flavor</p> <hr/> <p>nishishtw-aa-kimi-u 'it is a rich drink' - [<i>nishishtwaa</i> 'it has a rich flavour, taste', <i>nishtw</i>- 'rich'] saap-aa-kimi-u 'it is strong liquid (used only with negative: it is weak tea, coffee)' - [<i>saapi</i>- 'strong', <i>saapin</i> 'it is strong (always used with negative: it is weak)'] shiiw-aa-kimi-u 'liquid is salty or sweet' [<i>shiiwaa</i> 'it is salt or sweet', <i>shiiuhtaakin</i> 'salt'] shiiwaapuw-aa-kimi-u 'the water has a salty taste' - [<i>shiiwaapui</i> 'saltwater' <i>shiiwaa</i> 'it is salt or sweet'] wiihk-aa-kimi-u 'it (liquid) tastes good' - [<i>wiihkin</i> 'it is tasty'] wii-schii-paakw-aa-kimi-u 'the water has a swampy taste to it' [?- unsure of morphemes, has <i>ischii</i> 'earth', perhaps - <i>paakw</i>- referring to 'water'] wiisik-aa-kimi-u 'it is sour, bitter liquid' - [<i>wiisik-in</i> 'it is sour, bitter in taste'] quantity</p> <hr/> <p>mihch-aa-kimi-u 'there is a lot of liquid, the tide is high' [<i>mihchaanh</i> 'there are many, lots' <i>mihch</i>- 'big']</p>
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Appendix D: -skaau 'abundance'

- ◁"ᑦᑦᑦ° aahchikuskaau vii ♦ there is an abundance of seal
 ◁ᑦᑦᑦ° amiskuskaau vii ♦ there is an abundance of beaver
 Δᑦᑦᑦᑦᑦᑦ° iiyiahtikuskaau vii ♦ it is an area of black spruce trees
 ᑦᑦᑦ° kaakuskaau vii ♦ there is an abundance of porcupine
 ᑦᑦᑦᑦᑦ° kukimaaskaau vii ♦ there is an abundance of lake trout
 ᑦᑦᑦᑦᑦ° maanitaaskaau vai ♦ there are lots of strangers, visitors
 ᑦᑦᑦᑦᑦ° michipikuskaau vii ♦ there is thick area of shrubs, bush
 ᑦᑦᑦᑦᑦ° minihikuskaau vii ♦ it is an area of white spruce trees
 ᑦᑦᑦᑦᑦᑦᑦᑦ° mischaakwahtikuskaau vii ♦ it is an area of trees in a swamp
 ᑦᑦᑦᑦᑦ° mistikuskaau vii ♦ there are lots of trees, it is a forest
 ᑦᑦᑦᑦᑦ° niipisiiskaau vii ♦ it is an area of willows
 ᑦᑦᑦᑦᑦ° nimischiiskaau vii ♦ there are many thunderstorms
 ᑦᑦᑦᑦᑦ° piyaasiiskaau vii ♦ geese are plentiful
 ᑦᑦᑦᑦᑦ° piyaaskaau vii ♦ there is an abundance of ptarmigan
 ᑦᑦᑦᑦᑦ° siipiiskaau vii ♦ there are many rivers
 ᑦᑦᑦᑦᑦ° tikwaachiiskaau vii ♦ there is early morning frost
 ▷ᑦᑦᑦᑦᑦᑦᑦᑦ° ushaauhchaashiiskaau vai ♦ there is an abundance of red fox
 ▷ᑦᑦᑦᑦᑦᑦᑦᑦ° ushkahtikuskaau vii ♦ it is an area of young trees
 ▷ᑦᑦᑦᑦᑦᑦᑦᑦ° uwichiiskaau vii ♦ it is mountainous; there are many mountains
 ◁ᑦᑦᑦᑦᑦᑦᑦᑦ° waapimaakuskaau vii ♦ there is an abundance of whale
 ◁ᑦᑦᑦᑦᑦᑦᑦᑦ° waapushuskaau vii ♦ there is an abundance of rabbits
 ◁ᑦᑦᑦᑦᑦᑦᑦᑦ° wiipuskaau vii ♦ it is an area that has been ravaged by a forest fire
 ◁ᑦᑦᑦᑦᑦᑦᑦᑦ° wishkwaaskaau vii ♦ it is an area of birch trees

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