Acknowledgements

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I came to Memorial knowing something about Algonquian morphosyntax but very

LEARNING WORDS BEFORE LEARNING GRAMMAR: A CASE STUDY OF PASSIVES AND UNACCUSATIVITY IN NORTHERN EAST CREE FIRST LANGUAGE ACQUISITION

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by

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Abstract

This longitudinal case study of a child learning Northern East Cree (NEC) (Algonquian; polysynthetic) focuses on the development of the passive construction and unaccusativity from 4;06 – 5;10. The passive is acquired over three stages: (i) productive use of morphology and reliance on unanalyzed chunks; (ii) active analysis of the passive construction (errors, self-correction, passive-active alternations) and (iii) mastery of passive grammar marked by an increase in complexity. A set of intransitive verbs that can be unaccusative or unergative are also investigated, with a focus on causative alternations, the range of verbs used, and the development of morphological complexity in utterances, using a measure of Mean Length of Utterance by morpheme. There is an overall increase in grammatical and morphological complexity at 5;06, as expected in U-shaped development. These findings do not support nativist hypotheses that the ability to form passives and unaccusatives matures at a given age (Maturation Hypothesis).

Keywords: acquisition; passive; unaccusative; Algonquian; Cree; morphosyntax; longitudinal; polysynthetic

little about language acquisition. Yvan Rose taught me a great deal about the study of language acquisition, and about letting the data speak for itself. He was always ready to discuss any data point or pattern with me. He furthermore provided a ton of technological support. (Thanks also to Greg Hedlund for his technological wizardry, and to Kelly Burkinshaw for her readiness to help trouble-shoot while working in the field!) I really enjoyed the discussions in Yvan's classes, and that he would let us knit during lectures. My sister, I'm sure, also thanks him that I managed to finish knitting her Christmas present in time for the holidays.

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The linguistics department at Memorial University is a wonderful place to study. I had a really great time learning from and working with so many of the faculty members. I was glad to spend some time working on my teaching skills with Phil Branigan, who is always ready for a discussion of Algonquian syntax and Swedish film. The department as a whole is a very helpful and friendly place. Any work that I presented was always received with enthusiastic discussion and insightful comments. Thank you, everyone! Thanks also to the audience at the 2012 annual conference of the Canadian Linguistic Association in Waterloo, Ontario and to the Linguistics Department at the University of

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Of course, language work requires language teachers, and I had several. I extend my thanks to Luci Bobbish-Salt, who met with me not only in person but also frequently answered my questions over email and the phone. Her experience working with linguists and her explanations of Cree grammar could not have been more welcome! Elsie Duff worked with me for many long days, discussing just about every *piyi*-derived word I could find. Her patience and her sense of humour made me always look forward to our meetings. Alice Duff not only met with me to discuss Cree, she also provided practical assistance to me during my time working at the school board. I was so honoured that she brought her class to hear my talk in the library! The fieldwork presented in this thesis is the result of two trips to Chisasibi. I am thankful to Daisy Herodier and Annie Bearskin for facilitating each of those trips, and to the Cree School Board for generously providing me with workspace and tea. I loved all of the food, also! It was such a luxury to stay at Susan Runnels' home, and share meals with her. She provided everything a body might want – books, tea, treadmill, Stanley Cup hockey games, lively discussion, walks along the river, and bug spray. I loved every minute in Chisasibi – I always felt so welcomed by everyone I met, and I truly think it is one of the most beautiful spots in the world. What a treat.

In my professional opinion, my family is amazing. (Having been written in a Master's thesis, it is now an undeniable fact.) My immediate and extended family is made up of just about the sweetest, most loving, most supportive people on this green earth. I wouldn't be who or where I am today without them. I love you, all! If theses had

dedications, this one would be dedicated to "all those weirdos in Alberta." Just kidding. (But serious.) Eric, you are such an encouragement to me. Thank you for caring for me so well, for bringing me cheesecake and flowers when I experienced that horrid technological melt-down, for reading novels to me beside the lighthouses of the province, for going to school in a place that is sunny in February, for finding your way to Newfoundland for a summer, for having lovely, helpful ideas about appendices and spreadsheets, and for all of the ball games we'll attend all through the future. I sure do love you. Jen Holmes Curran, I really value your long-distance friendship and support, and all of our fun challenges. You're the best. For real.

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Table of Contents

List of Figures

List of Abbreviations

0	third person inanimate
1	first person
2	second person
3	third person
1/2	first or second person (speech act participant)
1>3.PL	first person subject; third person plural object
1sS	first person singular subject
3sO	third person singular object
3sS	third person singular subject
ADJ	adjective
ADV	adverb
APPLIC	applicative
ARTCL	article
CAUS	causative
CIN	Conjunct Independent Neutral
CONJN	conjunction
DESID	desiderative
DETRANS	detransitivizer
DIR	direct (theme)
DYN	dynamic
EMPH	emphatic
ENG	English
FUT	future
HAB	habitual
IC	initial change
IIN	Independent Indicative Neutral
IMP	Imperative
IMPERS	impersonal

INAN	inanimate
IND	indicative
INTENS	intensifier
INV	inverse (theme)
LOC	locative
M	mood
MED.RFLX	medio-reflexive
N	noun
NA	animate noun
NAD	obligatorily possessed noun
NEG	negative
NI	inanimate noun
OBJ	object clitic
OBV	obviative
P,AFF	affirmative particle
P,CONJN	conjunction particle
P,DEM	demonstrative
P,DEM.DST	distal demonstrative
P,DEM.FOC.LOCATION	focused location demonstrative
P,DEM.LOCATION	location demonstrative
P,DEM.PXL	proximal demonstrative
P,DEM.REM	remote demonstrative
P,DEM+G.PXL	proximal gestured demonstrative
P,DISC	discourse particle
P,EMPH	emphatic particle
P,INTJ	interjection
P,MANNER	manner particle
P,NEG	negative particle
P,NUM	number particle
P,QST	question particle

P,QUANT	quantity particle
P,TIME	time particle
P,WH	*wh*-particle
PASSIVE.1/2	first or second person passive (SAP)
PASSIVE.3	third person passive (non-SAP)
PL	plural
POL	politeness
POSS.PRON	possessive pronoun
PREP	preposition
PRF	perfective
PRO	pronoun
PRO,FOC	focus pronoun
PRO,HES	hesitation pronoun
PRO,INDEF	indefinite pronoun
PRO,WH	*wh*-pronoun
PVB	preverb
PVB,CJ	conjunct preverb
SM	subject-verb agreement marker
THM	theme
VAI	animate intransitive verb
VAI+O	transitive AI verb
VBZ	verbalizer
VI	intransitive verb
VTA	transitive animate verb
VTI	transitive inanimate verb
VTR	transitive verb

Chapter 1 – Introduction

In this thesis I present a study of the acquisition of two syntactic phenomena in Northern East Cree (NEC) (Algonquian), namely the passive construction and a set of intransitive verbs, the latter being of two types (unaccusative and unergative). This thesis project is situated within the broader context of the Chisasibi Child Language Acquisition Study (CCLAS), which is located at Memorial University's Department of Linguistics and the Cree School Board in Chisasibi, Quebec (www.mun.ca/cclas). CCLAS is the only longitudinal acquisition study to be undertaken for an Algonquian language.[1] Thus, CCLAS project output contributes significantly to the existing literature on Algonquian acquisition.

There is a growing body of research on the acquisition of polysynthetic languages, to which this thesis contributes.[2] Particularly well represented in this literature is the acquisition of Inuit languages (e.g., Fortescue 1985; Allen 1989; Allen & Crago 1989; 1992a; 1992b; Fortescue & Lennert Olsen 1992; Allen & Crago 1993; Allen 1996; Allen & Crago 1996; Allen 1998; Crago & Allen 1998; Allen 2000; Crago & Allen 2001; Skarabela & Allen 2002; Swift & Allen 2002; Allen & Schröder 2003; Skarabela & Allen 2004; Zwanziger, Allen & Genesee 2005; Allen 2007; Skarabela & Allen 2010). The

1 Of note, Upper & McKay undertook a preliminary study of Oji-Cree (Algonquian) acquisition, which has yielded some various publications (Upper & McKay 1987a; Upper & McKay 1987b; Upper & McKay 1988; Mellow 1989; Upper 1993; Hack & Mellow 2007). As the quality of the source data calls into question the reliability of the findings, I do not discuss this literature in this thesis; see Brittain & O'Neil (submitted) for further discussion.

2 I adopt a non-technical definition of polysynthesis, where the defining feature of a polysynthetic language is that verbs are highly complex (e.g., arguments are cross-referenced on the verb, which also bears, for example, adverbial information). See Chapter 2 for more discussion.

Inuktitut literature sets a very high standard of academic rigour and has been significantly influential on the methodology I adopt in this thesis, particularly the work of Allen & Crago (1989; 1996). Mayan acquisition has been studied to a similar degree (e.g., Pye 1979; 1980; 1983; 1985; Pye, Ingram & List 1987; Pye & Quixtan Pox 1988; 1989; Pye & Rekart 1990; Pye 1990a; 1990b; 1991a; 1991b; León 1994; Pye, Loeb & Pao 1996; Pfeiler & Martín Briceño 1997; Brown 1998; León 1998; 1999a; 1999b; Brown 2000; Pye 2001a; 2001b; Pfeiler 2002; 2003; Pye & Mateo 2006; Pfeiler 2007; Pye 2007; Pye et al. 2007; Pye et al. 2008). There have been acquisition studies of a number of other polysynthetic languages as well, such as Quechua (Courtney 1998; 2002; Courtney & Saville-Troike 2002; Courtney 2006; 2008; 2010), Dëne Sųłiné (Cook 2006), Mohawk (Feurer 1980; Mithun 1989), and Navajo (Saville-Troike 1996; Courtney & Saville-Troike 2002; Gentner & Boroditsky 2009).

Previous studies based on the CCLAS corpora have focused on the speech of a child code-named Ani (2;01.12 – 3;08.24). Ani's acquisition of the NEC stress system has been examined (Swain 2008; Rose et al. 2010), as has her acquisition of segments and syllable types (Thorburn 2010; Thorburn in press), and her acquisition of intransitive verbal inflection (Terry 2010; with a broad overview of her linguistic development provided in Rose & Brittain 2011).

This thesis is the first investigation of the speech of an older child, code-named Billy (4;06.08 – 5;10.18). I show that Billy's acquisition of the passive construction progresses in three stages, following a U-shaped development path (Marcus et al. 1992). I show that Billy relies on unanalyzed chunks (words) in Stage I (4;06 – 5;00), that he is

undertaking active analysis of his language in Stage II (5;02-5;05) and that his linguistic abilities progress significantly in Stage III (5;06 – 5;10). In other words, I show that he acquires passive *words* (morphology) before he acquires passive *syntax*.

With respect to Billy's acquisition of a sub-set of unergative and unaccusative verbs, I show that Billy produces no errors in his productions, and he demonstrates a command of the syntactic difference between unaccusative and unergative verbs at least by 5;06, but perhaps much earlier. I further show that the complexity of his utterances increases sharply at 5;06.

Taken together, the evidence from passives and intransitive verbs suggest that Billy undertakes analysis of NEC morphosyntax around age 5;00, and that by 5;06 he has come to understand a significant amount about the grammar of his language. These observations are problematic for the theory that the ability to construct passive and unaccusative verbs requires the maturation of innate principles in the brain, the Maturation Hypothesis (Borer & Wexler 1987; Wexler 2004). The Maturation Hypothesis does not predict any evidence of analysis, nor does it predict a U-shaped development path in child language, both of which are present in Billy's speech.

As NEC is an understudied language, a significant contribution of this project comes from my fieldwork with native speakers (adults) in Chisasibi, QC. I include previously unreported distinctions within the passive system and uses of the passive construction, as well as new data about so-called "relative root" verbs (Bloomfield 1957) and the medio-reflexive construction. As such, this thesis stands alongside other CCLAS project work as a contribution to our understanding of NEC, and to Algonquian as a

whole.

The outline of this thesis is as follows: In Chapter 2 I give a brief overview of the Cree language. In Chapter 3, I summarize the methodology adopted by the CCLAS project and the methodology I adopt for this thesis. In Chapter 4, I provide an in-depth discussion of the literature on the acquisition of the passive construction and the Maturation Hypothesis, as well as a description of the passive in NEC. In Chapter 5, I present an analysis of Billy's acquisition of the passive construction, and in Chapter 6 I discuss his acquisition of a subset of unaccusative verbs. I offer concluding remarks and directions for future research in Chapter 7.

Chapter 2 – Overview of Northern East Cree

East Cree is a dialect of the Cree-Montagnais-Naskapi dialect continuum, a Central Algonquian language (MacKenzie 1980). It is spoken in the James Bay region of northwest Quebec by approximately 14 000 people (Brittain & MacKenzie 2010). The CCLAS project is located in the town of Chisasibi, Quebec, which has a population of approximately 4 000. Northern East Cree (NEC) is the principle language of the community (3 400 report speaking a language other than English or French in the home),[3] though most residents are also second-language speakers of English; in a minority of homes French is the second language, or both French and English are spoken (Statistics Canada 2007). For the purposes of this thesis I will refer to the continuum of Cree dialects as 'Cree', and to the particular dialect of Chisasibi as 'NEC'.

3 Some Inuktitut is spoken in Chisasibi, as well, but the community is overwhelmingly Cree-speaking.

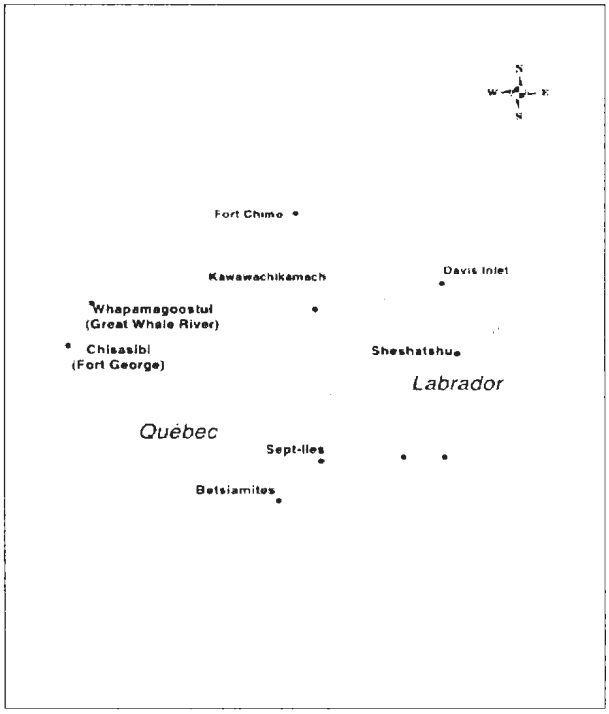

Figure 1: Map of Quebec-Labrador peninsula[4]

Cree can be loosely defined as polysynthetic, in that the arguments of a verb are co-indexed with a morpheme in the verb through agreement relationships, and noun incorporation is a common (though somewhat limited) process.[5] Because nominal referents are cross-referenced on the verbal complex (head-marking, cf. Nichols 1986), argument dropping is common, and many utterances consist of a verb alone. Consider the following NE Cree sentence (1).

4 Thanks to Marguerite MacKenzie for the map.

5 Note that Baker excludes Algonquian languages from the class of polysynthetic languages because incorporated roots are invisible to agreement. To Baker (1996:18), Algonquian languages are best defined as "non-configurational head-marking" languages.

(1) NE CREE

Âtichinâpihîkiniwishtikwânikiwâkiniû.

âtichin-âpihîkiniw-ishtikwân-ikiw-âkiniû

on.the.back-be.opened-head-VTA.FIN-PASSIVE.3

'He is given the package of the meat from the head of a caribou that was turned upside down, cut open, cleaned out (traditionally given to a young man).'

(Bobbish-Salt et al. 2012)

Given the morphological composition of the Cree verbal complex, and its centrality to Cree grammar, the verbal domain is a natural focus for an acquisition study. Before considering how children might go about learning Cree morphosyntax, a more thorough discussion of the Cree grammatical system is in order.

Cree nouns are separated into two classes: animate, and inanimate. The class of animate nouns includes all nouns denoting sentient entities, where a sentient entity has the ability to perceive and reason (Speas & Tenny 2003). This class also includes a small number of non-sentient animate nouns, for which no easy characterization has been reached (Quinn 2001; Goddard 2002). All inanimate nouns denote non-sentient entities. Some examples are given below in (2).

(2) ANIMACY-BASED GENDER SYSTEM

a. ANIMATE

nâpâu 'man'

tâwâhîkan 'drum'

b. INANIMATE
uchâpânish 'car'

The organization of the Algonquian verb complex, maximally tripartite and minimally bipartite at any level of derivation, is acknowledged in the traditional terminology of Algonquian scholarship where components are referred to as "initials", "medials", and "finals". This structure is stable across the whole Algonquian language family (Bloomfield 1946; Wolfart 1973; Goddard 1988; Goddard 1990) (3).

(3) ALGONQUIAN VERB
Initial + (medial) + final

Initials generally contain the bulk of the lexical information of the verb, and are widely taken to be the root of the verb (Bloomfield 1946; Wolfart 1973); I maintain that assumption here and will hereafter refer to initials as "roots". Medials are subdivided into classifiers and "generic" medials (incorporated nouns, cf. Drapeau 2008; Vaughan 2010). The generic medials are often treated as roots in their own right (cf. Mathieu 2008). Finals encode information about the arguments selected by the verb: the number of arguments and their gender (animate or inanimate). I will refer to these morphemes as "verbalizers". The result is five verb classes, schematized below in (4).

(4) NE Cree verb classes

	Animate argument	Inanimate argument
Intransitive	Animate Intransitive (VAI)	Inanimate Intransitive (VII)
	subject is animate	*subject is inanimate*
Pseudo-transitive		Pseudo-transitive Inanimate (VAI+O)
		object is inanimate, no agreement
Transitive	Transitive Animate (VTA)	Transitive Inanimate (VTI)
	direct object is animate	*direct object is inanimate*

The Algonquianist literature draws a distinction between two levels of derivation: "primary derivation" and "secondary derivation". Primary derivation yields what I will call a "basic" stem, consisting minimally of a root and a verbalizer. Secondary derivation takes a "basic" stem and adds a further verbalizer, forming a "derived" stem (5).[6]

(5) Primary and secondary derivation

a. Primary derivation

Root + (medial) + verbalizer — basic stem

b. Secondary derivation

[Root + (medial) + verbalizer] + verbalizer — derived stem

Wolfart (1973) observes that many verbalizers occur in both primary and secondary derivation. He identifies very few verbalizers that are restricted to secondary derivation, such as the Plains Cree reflexive verbalizer shown in (6).

6 Secondary derivation may also add a further medial, such that both levels of derivation are bi- or tri-partite (Bloomfield 1946; Wolfart 1973; Goddard 1990).

(6) PLAINS CREE REFLEXIVES

VTA:	wâpam-	'see him'	+ **-iso-**
→ VAI:	wâpamiso-	'see oneself'	

(Wolfart 1973:63)

There are different paradigms ("orders") of verbal inflection for different syntactic and semantic contexts. Typically, matrix verbs in declarative clauses are inflected in the Independent order. Verbs are inflected in the Conjunct order in *wh*-questions (matrix clause included) and in subordinate clauses (Brittain 2001).[7] Imperative verbs are inflected in the Imperative order.

This introduction will be sufficient for a general understanding of this thesis. In each chapter, specifics of the grammar of the Cree constructions under study, the passive construction and unaccusativity, will be introduced in more detail. I go on in the next chapter to introduce my methodology, before continuing on to begin my analysis of Billy's acquisition of Cree morphosyntax.

7 Matrix clauses in declarative sentences may be inflected in Conjunct order, for example in narrative contexts. See Starks (1994) on narratives in Woods Cree.

Chapter 3 – Methodology

3.1. Introduction

In this chapter I outline the general methodology developed for this project. In each of the chapters which focus on the acquisition of specific structures, Chapter 5 (passive) and 6 (unaccusativity), I detail the specific methodologies required for the analyses. I begin by outlining my theoretical framework in §3.2, before going on to describe the methodologies in use by the Chisasibi Child Language Acquisition Study (CCLAS) for the analysis of child language in §3.3. I finish by providing an overview of methodologies that have been developed for the study of morphological acquisition in §3.4.

3.2. Theoretical framework

I adopt a generative theory of acquisition (e.g., analysis-based). Within the generative framework, there is a continuum of approaches to language acquisition. Some researchers assume that a great deal of language structure is innate, which I refer to as "nativist" (e.g., Borer & Wexler 1987, whose Maturation Hypothesis will be outlined in detail in Chapter 4). Other researchers assume that nothing is innate that can be learned, which I refer to as "analysis-based" (e.g., Pearl & Lidz 2009).[8] I take an analysis-based approach to acquisition. I further adopt Minimalism (Chomsky 1993; 1995) as the frame within which I approach patterns in Billy's acquisition of the syntax of his language.

8 A non-generative, analysis-based approach to language acquisition is referred to as the "functional" approach, which holds that cognitive processing leads to linguistic constraints, suggesting that language universals do not guide language acquisition (see, e.g., Slobin & Bever 1982).

3.3. CCLAS Methodology: PHON

Over two-and-a-half years, six participants of the CCLAS project were filmed: three from a younger cohort (participants aged roughly 2;00 to 4;06) and three from an older cohort (participants aged roughly 3;06 to 6;00). Billy is a participant from the older cohort, whose linguistic development I investigate in this thesis.

Twenty video recordings of Billy were made by then CCLAS project manager Darlene Bearskin, a native speaker of NEC. Recordings were made in her home in Chisasibi, Quebec, a familiar and comfortable environment to Billy. Each session is approximately 30-45 minutes long, and video recordings were made once or twice a month where possible from September 2005 to April 2007. The present case study considers the ten sessions listed below in (7).

(7) B3 SESSIONS UNDER STUDY

Session	Age
B3-2005-11-22	4;06.08
B3-2006-01-10	4;07.26
B3-2006-02-28	4;09.14
B3-2006-05-27	5;00.13
B3-2006-07-26	5;02.12

Session	Age
B3-2006-10-14	5;05.00
B3-2006-11-06	5;05.22
B3-2006-12-11	5;06.27
B3-2007-03-19	5;10.06
B3-2007-04-02	5;10.18

All analyses of these sessions was undertaken using the program PHON (Rose & MacWhinney in press). The child speech was segmented into utterances (records) that were transcribed into the International Phonetic Alphabet (IPA) independently by two transcribers, and were then verified by a team of two more to produce the field Actual

IPA. Luci Bobbish-Salt, a native NEC speaker and experienced linguistic consultant, listened to the child utterances and provided the target forms as well as metalinguistic commentary on each record (commentary on the context of the utterances, for example). Drs. Julie Brittain and Marguerite MacKenzie were part of these work sessions, which were recorded in .wav format. The target forms were subsequently transcribed to produce the field Target IPA for each record. The substantive content of the discussions generated by each record was entered into the Notes field. Dr. MacKenzie provided the Roman orthography for each utterance to produce the field Orthography. In addition, Cree linguistic consultant Alice Duff transcribed the utterances of the adult interlocutor into Cree orthography and provided an English translation. These utterances were then segmented and entered into the relevant PHON session, where, sorted according to time stamp, they provide the context for Billy's utterances. The adult records constitute a record of the input to which Billy is exposed; throughout this thesis the adult speech is referred to as "child-directed speech" (CDS).

After this basic data preparation was completed, Billy's utterances were parsed and coded. This involves splitting any given utterance into its component morphemes and noting both the meaning of each morpheme (e.g. 'by hand') and the type of each morpheme (e.g. initial, final...). Coding was undertaken by myself and Dr. Brittain. The CCLAS project maintains uniform conventions in assigning meaning and type using the CCLAS Auto Parser, a PHON plug-in.[9] The CCLAS Auto Parser allows the researcher to

9 Thanks to Ranjeet Kumar and to Greg Hedlund for their work on this plug-in!! Two exclamation points!!

fill in the Morpheme Meaning and Morpheme Type tiers from a database of existing morphemes. This is illustrated below in Figure 2.

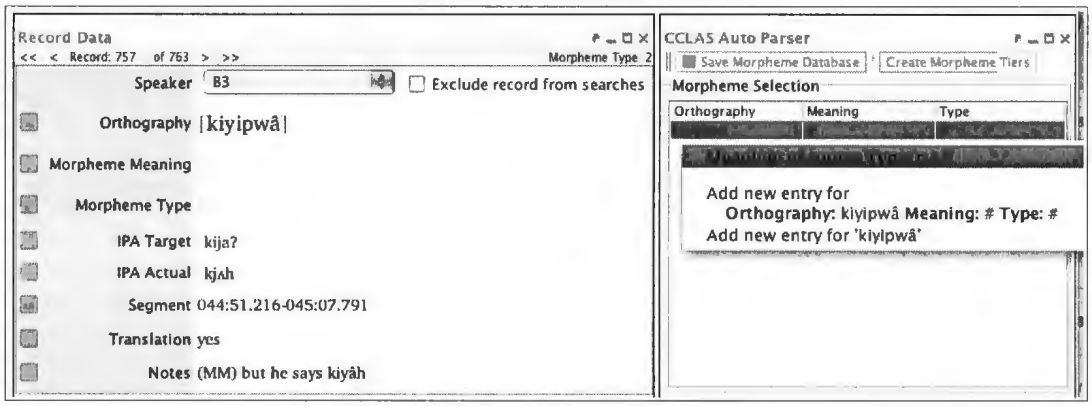

Figure 2: CCLAS Auto Parser

Once morphological analysis of the *orthography* of the child utterance was completed, a morphological analysis of the actual utterance (Actual IPA) was undertaken with the help of the PHON Alignment tool. This required the segmentation of the adult target utterance (Target IPA) into morphemes in a new tier (Target Morphology), as well as the child utterance (Actual IPA copied to Actual Morphology), marking any missing morphemes as null ('_'), as shown in Figure 3.

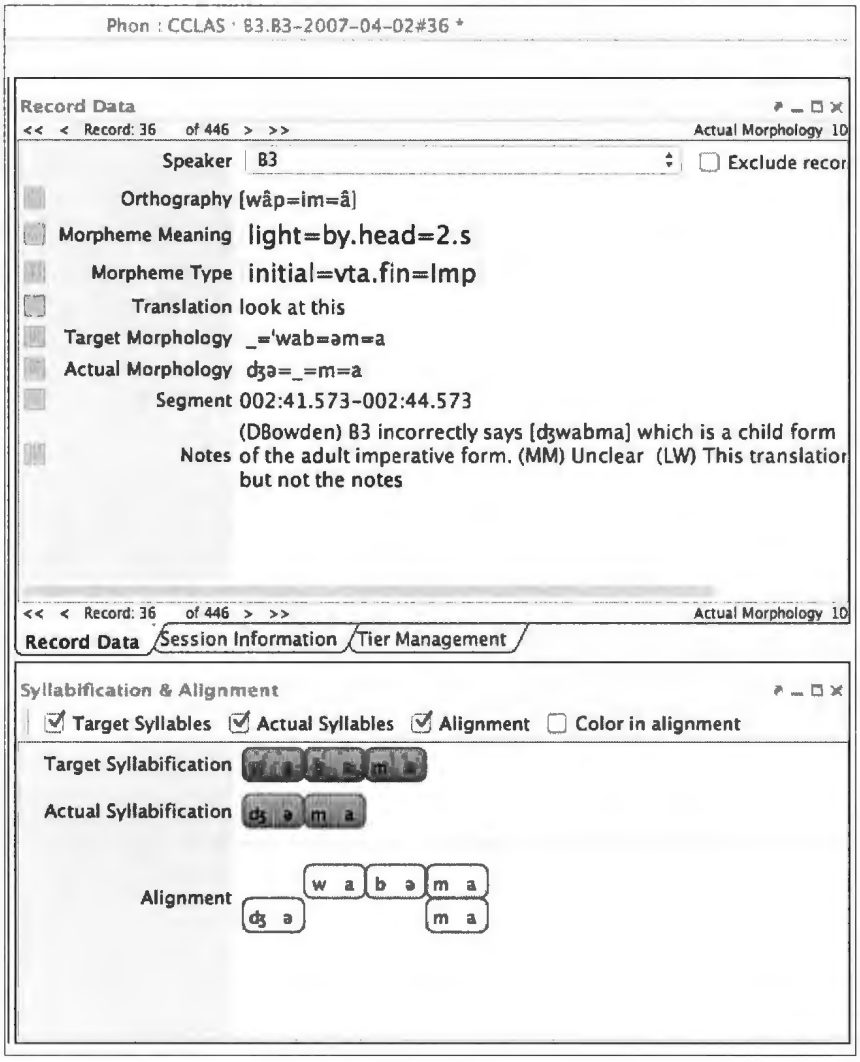

Figure 3: Example of morphological analysis

Given that the methodology laid out above ensures standardized morphological analysis and coding practices, and that PHON permits a search of any data tier, I am able to systematically investigate the corpus of Billy's linguistic development. For instance, his production of particular verbal paradigms or morphemes can be tracked by searching the

morpheme tiers (Orthography, Morpheme Meaning and Morpheme Type). A search of the Actual Morphology tier for null morphemes shows which morphemes do not appear in Billy's productions. PHON also has a customizable Report feature, by which the results of any search can be easily tabulated and quantified. For an in-depth report on the methodology of the project from its beginnings, see Brittain et al. (2007).

3.4. Acquisition methodology: productivity criteria

The PHON Report feature allows the researcher to easily track the emergence of any given morpheme in the corpus. The result is a spreadsheet giving all of the utterances in which a morpheme appears. However, the production of a morpheme is not equal to the acquisition of that morpheme and the associated grammar. Thus, it is necessary to define what "acquired" means.

Following Fortescue & Lennert Olsen (1992) and Allen & Crago (1989), I adopt the following criteria of morphological productivity, listed from strongest to weakest (8).

(8) CRITERIA OF MORPHOLOGICAL PRODUCTIVITY

1. The morpheme in question is wrongly attached to its stem.
2. The morpheme in question appears in the transcript on at least two different stems, and preferably with two stems of phonologically different types so that two allomorphs of the morpheme are required.
3. Alternatively, the stem appears with a different morpheme attached in the same place, elsewhere in the transcript.

(Allen & Crago 1989:50; cf. Fortescue & Lennert Olsen 1992;138-139)

Any morpheme that met the first criterion in a single session was analyzed as acquired. However, a morpheme must appear twice in order to meet the second and third criteria. If a morpheme appeared once in a single session and did not meet these criteria, no decision was made, but the use of the morpheme (productive or not) was noted. Measuring the acquisition of syntax was similarly constrained by productivity criteria, which are introduced with respect to each of the constructions under study in this thesis in Chapters 5 and 6.

Having introduced Cree and the CCLAS project, I continue in the next chapter to a discussion of the acquisition of passive constructions in languages of the world.

Chapter 4 – Background to passive acquisition

4.1. Introduction

In this chapter, I consider Billy's acquisition of what I refer to as "passive" morphology in NEC. I begin with a brief look at the passive construction in languages of the world in §4.2. I then continue with an overview of previous approaches to passive acquisition in the literature in §4.3. In §4.4 I provide a description of the morphology in question in Cree-Montagnais-Naskapi. I will point out that the nature of the construction in question is debated in the Algonquian literature, and provide examples from NEC to give the reader an idea of the behaviour and function of passive morphology.

4.2. Passives in the world's languages

Following Keenan & Dryer (2007:328), I assume that passives are derivations of verb phrases. Wichmann (2007) describes passives as constructions in which the patient argument is promoted to subject, while valency is decreased by one, as in (9).

(9) ACTIVE AND PASSIVE SENTENCES

a.	Mary slapped John.	ACTIVE
b.	John was slapped.	PASSIVE
c.	John was slapped by Mary.	PASSIVE WITH AGENT IN A BY-PHRASE

(Keenan & Dryer 2007:325, ex. 1)

Most typically, passive constructions form intransitive verbs from transitive verbs, and

the agent is unexpressed, as shown above in (9b). Cross-linguistically less common are impersonal passives (passives of intransitive verbs), as well as passives of ditransitive verbs (Keenan & Dryer 2007; Siewierska 1984).

Keenan & Dryer (2007:352) define the passive as a construction in which the existence of the subject of the corresponding active sentence is still entailed by the passive. In other words, as essential feature of passives is that they entail an agent, even if the argument is unexpressed. Passive constructions will be discussed in more detail in §4.4.

4.3. Passive acquisition literature

Passive acquisition has been considered from nativist and analysis-based perspectives. In this section I give an overview of the literature, with a focus on studies of non-Indo-European languages. I begin in §4.3.1 with a discussion of the nativist approach and follow in §4.3.2 with a discussion of analysis-based approaches.[10]

4.3.1. Nativist perspectives: The Maturation Hypothesis

The most well-known and certainly the most influential nativist theory with respect to passive acquisition is the Maturation Hypothesis, developed by Borer & Wexler (1987). Borer & Wexler liken the human language capacity to other biological processes in the human body, such as secondary sexual characteristics, which mature over time *as*

10 As this is a longitudinal study of a non-Indo-European language, I do not discuss a number of experimental and cognitive studies regarding the acquisition of passives. For information about these studies I refer the reader to the excellent overview provided in Ud Deen (2011).

governed by the biological program. They propose that the language faculty is an analogous system, such that the principles of grammar *mature*, following the biological program of the language faculty.[11]

The Maturation Hypothesis asserts that children *do not learn* language. Every stage of child language is grammatical, based on the principles available at that time. As more principles mature, children engage in *re-evaluation* of their language, adjusting as necessary to incorporate the new principle. There are no hypotheses in child language learning, and there is no back-tracking – all language is innate, but grows more complete and adult-like as more principles mature. Thus, language learning is linear (not U-shaped, as suggested by Marcus et. al 1992). To demonstrate the mechanics of their proposal they turn to the acquisition of passive constructions. Their argument assumes a Government & Binding (G&B) (Chomsky 1981) analysis of passive constructions, which I outline below.

In English and Hebrew, passive constructions may be either adjectival, or verbal (Borer & Wexler 1987). Adjectival passives are lexically derived, while verbal passives undergo a syntactic transformation (Wasow 1977). In verbal passives, the passive morpheme absorbs accusative Case, as well as the external θ-role, which may optionally be applied to the object of a *by*-phrase. The internal argument θ-role is maintained, requiring the projection of an internal argument position.[12] However, while the internal

11 Borer & Wexler's (1987) goal is to address weaknesses in the prevailing nativist hypotheses of language acquisition, particularly the Continuity Hypothesis (Pinker 1984). The Continuity Hypothesis holds that humans are born with an innate knowledge of all of the principles of Universal Grammar, and that these principles are constant throughout the development of language. However, Borer & Wexler observe that such a theory does not account for the fact that children learn linguistic constructions in an observable order, for example active sentences before passive. In proposing an ordered maturation of principles, they seek to solve this ordering issue.

12 The θ-Criterion (Chomsky 1981) states that "each obligatory θ-role selected by a predicate must be

argument is assigned a θ-role in internal argument position, it cannot receive Case, since accusative Case has been absorbed. This requires that the internal argument Move to the external argument position (Williams 1980; Williams 1981) to receive nominative Case. The movement results in the creation of an Argument-chain or A-chain.

It is the formation of an A-chain that is the crucial fact for Borer & Wexler's theory. A-chain formation is required in verbal passive constructions, but not in adjectival passive constructions, which are derived in the lexicon. This distinction explains the difference between adjectival passive and verbal passive acquisition in the two languages: verbal passives are acquired later than adjectival passives because the principle that permits their formation, the principle of A-chain formation, matures later than principles required for the derivation of adjectival passives.

Borer & Wexler find supporting evidence for their theory from another widely-observed characteristic of passive acquisition: English children comprehend and produce passives of actional verbs (verbs denoting an action) (10a) earlier than passives of non-actional verbs (verbs denoting an experience) (10b) (Maratsos et al. 1985; de Villiers, Phinney, & Avery 1983; see also Berwick & Weinberg 1984; Pinker 1986).

(10) PASSIVE OF ACTIONAL & NON-ACTIONAL VERBS

a. The doll was combed (by Mary). ACTIONAL

b. The doll was liked (by Mary). NON-ACTIONAL

(Borer & Wexler, 1987:132, ex. 1, 2)

assigned to a referential expression" (e.g., DP).

Borer & Wexler point out that passives are potentially ambiguous between a verbal and an adjectival passive reading. They find that early passive productions in child speech are only those passives that have an adjectival reading (ambiguous or not). They further observe that participles of non-actional verbs make poor adjectives in English (11), and that unambiguously adjectival passives do not admit of *by*-phrases (12).[13]

(11) a. PARTICIPLE OF ACTIONAL VERB
the doll appears combed; the combed doll; combed though the doll was, Janie recombed her.

(Borer & Wexler 1987:135, ex. 7a)

b. PARTICIPLE OF NON-ACTIONAL VERB
*the doll appears seen; *the seen doll; *seen though the movie was, John decided to go again.

(Borer & Wexler 1987:135, ex. 6a)

(12) ADJECTIVAL PASSIVES DO NOT ADMIT OF *BY*-PHRASES
a. the closed door (*by Peter)
b. the torn doll (*by Peter)

(Borer & Wexler 1987:136, ex. 8c-d)

Borer & Wexler propose that, at an early stage, there is a semantic restriction [+SR] on adjectival passives, which excludes the formation of passives of non-actional verbs. Thus,

13 See Fox and Grodzinsky (1998) for a study of the transmission of θ-roles to *by*-phrases in child language, and the interaction of θ-role transmission and non-actional verbs. As NEC passives do not permit *by*-phrases this paper will not be discussed further in this thesis.

children first produce adjectival passives of only actional verbs, as in (13).[14]

(13) ELICITED PASSIVES 2;00-4;00 (HORGAN 1975)

a. tree is blowed down
b. tree is broken
c. a ball be kicked
d. the car's parked
e. lamp got kicked
f. the tree's smashed
g. that was colored
h. the window's breaked again

(Horgan 1975; as in Borer & Wexler 1987:147, ex. 27)

Similary, Borer & Wexler give evidence from elicited productions that Hebrew-speaking children produce adjectival passives before verbal passives (Borer & Wexler 1987:157). This pattern in English and Hebrew passive acquisition is accounted for by the Maturation Hypothesis. Specifically, Borer & Wexler argue that the principle which allows A-chain formation does not mature until a later stage in language development. Because children do not yet know that arguments can move in the syntax, they understand all subjects to be base-generated as external arguments. This is true of the subjects of (lexical) adjectival passives, but not of (syntactic) verbal passives, which are base-generated as internal arguments.

14 At a later stage a principle matures to rule out (13a) and (13c), both ill-formed adjectival passives of actional verbs. This principle is taken to be unrelated to the development of the passive (Borer & Wexler 1987:148).

4.3.1.1. Maturation in current theory: The Universal Phase Hypothesis

The Maturation Hypothesis is framed in terms of Government and Binding theory (Chomsky 1981). Since its formulation, syntactic conceptualizations of argument projection have developed significantly. A problematic development for the Maturation Hypothesis is that current syntactic theory assumes that subjects are Merged internal to the *v*P (e.g., Kitagawa 1986; Speas 1986; Rosen 1990; Woolford 1991). Furthermore, within the Minimalist framework, *v*P constitutes a phase boundary (Chomsky 1998). A phase is a sub-part of a syntactic derivation, such that when each phase is derived, and all syntactic processes are complete within that phase, it is spelled out and becomes unavailable to any subsequent phases in the derivation. This is referred to as the Phase Impenetrability Condition (14).

(14) PHASE IMPENETRABILITY CONDITION (PIC)

When working at a phase, only the edge (the head and spec(s)) of the next lower phase are available for analysis, and nothing lower than the edge. In particular the complement isn't available.

(Wexler 2004:164, ex. 12)

This is problematic for passive sentences because the subject of a passive bears the features of the underlying object of *v*P, but the subject position cannot access these features through the *v*P phase boundary. Thus, the *v*P in passive derivations (as well as unaccusatives and raising verbs) is defective, and does not constitute a phase boundary. Under this assumption, the source of the delay of passive and unaccusative acquisition

lies with the acquisition of defective *v*Ps, which is called the Universal Phase Hypothesis (UPH) (Wexler 2004).[15] The keystone of the UPH is the Universal Phase Requirement (UPR) (15):

(15) UNIVERSAL PHASE REQUIREMENT
(holds of pre-mature children, until around age 5)
v defines a phase, whether *v* is defective or not

(Wexler 2004:164, ex. 13)

Thus, in a passive structure as in (16), the defective *v* is taken by pre-mature children to be a phase boundary, and the Minimalist notions of Agree and Move cannot obtain between the subject position (Tense/T) and the object position (*John*) because the lower phase has already been spelled out.[16] Thus, the derivation "crashes", or is ungrammatical.

(16) PASSIVE DERIVATION (MINIMALIST THEORY)
$John_i$ T was *v* V pushed t_i

(Wexler 2004:163, ex. 10)

Regardless of the theory with which we approach the acquisition of passive and unaccusative verbs, the basic learnability issue remains the same: children must learn that

15 An intermediate hypothesis, the External Argument Requirement Hypothesis (Babyonyshev et al. 2001), fails to account for the acquisition of raising verbs and is replaced by the Universal Phase Hypothesis.

16 For our purposes, non-technical definitions of Agree and Move will suffice. Agree is the sharing of features between two elements in the derivation (in example (22) bearing the subscript letter i) and Move is the movement of some phrase to a higher position in the derivation. See Chomsky (1995) for technical definitions of Agree and Move.

the subject of a passive verb is a theme, not an agent.

4.3.1.2. Summary

The Maturation Hypothesis provides a very strongly nativist approach to passive acquisition, placing the burden of passive acquisition on innate principles that mature over time, allowing children to re-evaluate their language, growing ever closer to adult-like syntax. This approach stands in contrast to analysis-based approaches, which predict that children constantly make hypotheses about their language, which they refine over the course of their analysis. Analysis-based approaches to passive acquisition are considered in the following section.

4.3.2. Analysis-based perspectives: Language-specific characteristics and acquisition

A very different approach to passive acquisition is taken by Demuth (1989; 1990) with regard to passive acquisition in Sesotho. Her most striking finding is that Sesotho learners acquire passives at a very young age (2;08). This runs counter to the predictions made by the Maturation Hypothesis, which suggests that children only acquire the linguistic mechanisms to form passives around the age of 4;00. Demuth therefore rejects the Maturation Hypothesis and seeks another explanation for the Sesotho facts. She proposes that the early acquisition of passives in Sesotho can be explained by a *language-internal consideration of the role of passives in the language* (Demuth 1989; 1990). Similar conclusions have been reached by researchers studying Zulu, Quiche Mayan, and Inuktitut, each of which is summarized in the following sections.

4.3.2.1. Acquisition of Sesotho passives

Sesotho grammar permits the passivization of a high number of grammatical roles, including indirect objects. It is therefore a very productive syntactic construction. More importantly, however, Sesotho grammar is centred around information structure. Given/old information is preferred in topic position (e.g., subject position), while new information is grammaticalized as an oblique argument, in a *by*-phrase. This is true even when the new information is the Agent of the clause. Consider the following conversation, between a grandmother and her grandson (3;00) (17).

(17) SESOTHO INFORMATION STRUCTURE

a. Grandmother: O-o-nk-il-e kae?
SM-OBJ-get-PRF-M where?
'Where did you get it from?'

b. Hlobohang: Ke-o-f-uo-e **ke** ausi Linaese.
SM-OBJ-give-PRF **PASSIVE-M** by sister L.
'I was given it by sister Linaese.' [sic][17]
(Demuth 1990:73, ex. 9)

The above examples are indicative of a widespread pattern in Sesotho, namely that the given topic is preferred in subject position, and that this is maintained through the conversation. Thus, in (17b), Hlobohang ('I') continues in topic (subject) position and the

17 Based on other examples from Sesotho, I expect that the missing morpheme gloss for the verb in example (17b) is for the final morpheme *-e*, which ought to be glossed 'M' for 'mood'.

new information ('sister Linaese') is introduced in an oblique *by*-phrase. For this reason, Demuth (1990) argues that passive constructions are central to the grammar of Sesotho, and that this is an explanation for their early acquisition. She proposes that children learn very early on that Sesotho grammar is topic-oriented, and observes that children consistently choose to keep the discourse topic in subject position, which lends credence to her interpretation of the facts.

One important characteristic of Sesotho grammar is that there is no adjectival passive (Demuth 1989). This makes Sesotho a nice test case for the Maturation Hypothesis. In a language with no adjectival passives, all of the passive utterances will be verbal passives, requiring A-chain formation. Demuth's finding that children acquire passives by 2;08 therefore presents a strong counter-argument to the Maturation Hypothesis, which she argues must be reformulated with a greater consideration of language typology if it is to be maintained (Demuth 1989).

4.3.2.2. Acquisition of Zulu passives

Zulu is a topic-oriented language related to Sesotho (Demuth 1990). In a study of Zulu passive acquisition, Suzman finds that children begin to produce passives between 2;06-3;00 (Suzman 1985). This is partially accounted for by noting that Zulu passives are highly productive and used in a number of different contexts, such as questions, object relatives, and adjectival passives.[18] However, she notes that in the case of one child these

18 Note that while Zulu has adjectival passives and Sesotho does not, in both languages the acquisition of passives is relatively early.

utterances are restricted to adversitive recipient-of-action contexts, in which something bad happens to someone the speaker knows or to the speaker herself. Evidence for this comes from the child's account of the slaughter and preparation of a goat for a family feast. Standing in contrast to a narration of the same event by an adult, which included many passive verbs, the child's narration of the event was accomplished with short, active sentences. Situating her study within a (non-generative) analysis-based framework, Suzman suggests that passives originate in conversational routines and in prototypical situations (following Slobin 1981). In other words, passives are first associated with adversitive recipient-of-action contexts and generalized from there.

4.3.2.3. Acquisition of Quiche Mayan passives

Early passive acquisition is also attested in Quiche Mayan (Pye & Quixtan Poz 1988). Quiche Mayan is an interesting case because children must acquire both passive constructions, which require NP movement, and antipassive constructions, which do not.[19] The Maturation Hypothesis predicts constructions that do not require NP movement to be acquired before those that do. However, Pye & Quixtan Poz (1988) find that the two constructions are acquired simultaneously, and begin to appear at the age of 2;00. The child productions alternate between the passive and active voice, which Pye & Quixtan Poz take to be evidence of the acquisition of passive constructions. Furthermore, they find no evidence that children acquire passives of actional verbs like 'hit' before passives of

19 Antipassive constructions, as the name suggests, are functionally the opposite of passive constructions. While passive constructions demote the agent of a verb, antipassive constructions emphasize the agent or the action and demote the object, which is expressed as an oblique or not at all.

non-actional verbs like 'see', unlike what has been shown in English acquisition studies (Maratsos et al. 1985; Borer & Wexler 1987). Pye & Quixtan Poz propose that the relative frequency of passive constructions in Quiche Mayan is responsible for this early acquisition of passive forms. In a comparison between child passive productions in English (Pinker, Lebeaux, & Frost 1987) and Quiche Mayan (Pye 1980), they show that Quiche-speaking children produce passive sentences roughly eight times more often than the English-speaking children. Unlike English-speaking children, Quiche-speaking children are regularly exposed to passive sentences, although active sentences predominate in the input (Pye & Quixtan Poz 1988).

4.3.2.4. Acquisition of Inuktitut passives

Frequency also plays a role in the acquisition of Inuktitut passives, and the passive is common in both early child speech (emerging around 2;00) and adult speech (Allen & Crago 1996). To account for this, Allen & Crago point out an important paradigmatic fact: Two-argument verbs in Inuktitut require agreement morphology for both the subject and object. These agreement morphemes are portmanteaux encoding person and number information. Given that Inuktitut verbs inflect across seven grammatical moods for four persons and three numbers, this results in approximately 900 possible inflectional choices. On the other hand, one-argument verbs agree with their subject only, and their possible inflections number about 100. Thus, passivizing a transitive verb reduces the range of inflections by a factor of nine. Allen & Crago note that adult speakers tend to avoid two-argument inflection, when this is possible, by passivizing and antipassivizing

transitive verbs in both spontaneous and elicited speech. This observation is borne out in a comparison of CDS in Inuktitut to CDS in English (as reported in Maratsos 1985 and Gordon & Chafetz 1990). Allen & Crago find that Inuktitut caregivers produce 7.8 passive utterances per hour, to English caregivers' 1.1-2.7 passives per hour. Undoubtedly, Inuktitut children have plenty of exposure to passive utterances, which are arguably much easier to inflect than transitive utterances.

Allen & Crago propose that the structure of Inuktitut presents other factors that may play a role in the early acquisition of passives. As Inuktitut is a head-marking (Nichols 1986), polysynthetic language,[20] head movement is a very common syntactic process. Head movement is required for passive formation in both Inuktitut and English, but a number of other common constructions in Inuktitut involve head movement, including causatives, desideratives, antipassives, noun incorporation, verb incorporation, and verbal inflection (see Allen & Crago 1996:151 for references). In addition, case-marking in Inuktitut, an ergative language, is often associated with NP movement in the literature (e.g., Johns 1992; Murasugi 1992). Thus, children are regularly exposed to Inuktitut utterances that require head and NP movement, and are correctly producing some of these other constructions contemporaneously with passives (e.g., noun incorporation, see Allen & Crago 1989; Parkinson 1999). Allen & Crago (1996) suggest that an understanding of head and NP movement is essential to the production of even basic concepts in Inuktitut, and point out that there are no simpler alternatives available for many of these

20 Note that Baker (1996) does not include Eskimoan languages in his list of "true" polysynthetic languages because noun and verb roots cannot be used independently, one of his criteria for robust noun incorporation and therefore polysynthesis (Baker 1996:19).

constructions. Thus, there is impetus for the early acquisition of head and NP movement. This seems a necessary conclusion, considering the Inuktitut acquisition data, but note that the Maturation Hypothesis (Borer & Wexler 1987) cannot easily account for these facts. Allen & Crago, rather than appealing to the maturation of a given principle (A-chain formation), propose that language-internal factors determine the timing of acquisition (Slobin 1982).

4.3.3. Summary

As outlined in Chapter 3, I take an analysis-based approach to language acquisition. The evidence outlined in §4.3.2 of this chapter suggests that the structure of a language and characteristics of its usage influence the acquisition of the passive. I assume this to be true of NEC. In the following section, I give an outline of the passive construction in NEC.

4.4. Passives in eastern Cree-Montagnais-Naskapi dialects

A thorough investigation of passive constructions has yet to be undertaken in NEC. However, recent work by Drapeau (2012) investigates the same constructions in the closely related dialect of Innu. In this section, I will first give a description of passives in Innu in §4.4.1, followed by a description of NEC passives in §4.4.2. In §4.4.3 I will briefly mention a theoretical debate in the literature as to the best analysis of these forms, and discuss my decision to adopt the analysis that these constructions are passives.

4.4.1. Passives in Innu

Innu is spoken in communities in Quebec and Labrador (Sheshatshiu).[21] Both Innu and NEC are members of the Cree-Montagnais-Naskapi dialect continuum (Michelson 1939; MacKenzie 1980); Innu and NEC belong to the "palatalized" subgroup of these dialects, which term refers to the dialects of Cree-Montagnais-Naskapi in which velars are palatalized ([k] > [tʃ]) (MacKenzie 1980). In this section I present a summary of recent work by Drapeau (2012) that presents a unified analysis of a range of passive constructions in the Innu language.

Innu permits passivization of intransitive, transitive and ditransitive verbs, where the demoted argument is an animate agent. Expression of the agent argument is not permitted, even as an oblique. The morphological form of the passive morpheme is sensitive to the morphological class of the stem from which it is derived. Recall that Algonquian verb stems are divided into four classes based on both transitivity and animacy (18).

(18) ALGONQUIAN VERB CLASSES

VII	Inanimate Intransitive	subject inanimate
VAI	Animate Intransitive	subject animate
VTI	Transitive Inanimate	object inanimate
VTA	Transitive Animate	object animate

Importantly, the morphological classification of an Algonquian verb stem is not a hard-

21 Innu was formerly referred to as Montagnais, and is elsewhere referred to as Innu-aimun. I follow Drapeau (2012) and use the term "Innu" to refer to this variety of Cree-Montagnais-Naskapi.

and-fast indicator of its syntactic transitivity: some AI verbs are compatible with an object (see Bloomfield 1946:95; Wolfart 1973:39).[22] I divide this set of verbs into two sub-sets: (i) AI verbs that are compatible only with inanimate objects, which I refer to as "transitive AI" verbs, and (ii) AI verbs that are compatible with an object of either gender (animate or inanimate), which I refer to as "AI+Adjunct" verbs.[23]

At this point it will be useful to clarify a terminological difference between the present work and that of Drapeau (2012). I follow Bloomfield (1946) and Wolfart (1973) in my treatment of transitive AI verbs: that is, I include them in the morphological class of AI verbs. By contrast, Drapeau classifies these verbs as "TI2", a sub-set of transitive inanimate verbs. Her chosen classification captures the fact that these verbs are syntactically transitive and take grammatically inanimate objects. However, this classification does not recognize that "TI2" verbs are morphologically AI verbs, and are morphologically distinct from "true" TI verbs. For this reason I call these verbs transitive AI verbs, and will henceforth use my terminology.

In addition to transitive AI verbs and AI+Adjunct verbs, which are morphologically intransitive but take an object, there is a subset of TI verbs that are morphologically

22 These verbs have been referred to by many names in the Algonquian literature, first called "pseudo-transitive" or "pseudo-transitive inanimate" verbs by Bloomfield (1946). As I draw a slightly finer distinction in this work, dividing pseudo-transitives into two sub-sets, I define new terms.

23 Thanks to Marguerite MacKenzie for pointing out the distinction between these two types of intransitive verbs and their object selection properties. This insight arose during work on the Innu dictionary by members of the "Knowledge and Human Resources for Innu Language Development" Community University Research Alliance (CURA) project (http://innu-aimun.ca). I take the object of AI+Adjunct verbs to be an adjunct based on the assumption that transitive Algonquian verbs select for objects of a particular gender (e.g., Ritter & Rosen 2010), thus the adjunct, which can be of either gender, is not a true object of the verb. To the best of my knowledge, there is no semantic distinction between these two types of verbs, though future fieldwork may reveal such a distinction.

transitive (e.g., TI verbs) but syntactically intransitive, taking no object. I refer to these verbs as "objectless TI" verbs.[24]

To explain the distribution of different passive morphemes, Drapeau's proposal is that, regardless of syntactic transitivity, the form of the passive morpheme is triggered by the *morphological class* of the verb stem and yields an (n-1)-place predicate (Drapeau 2012). Underlying this proposal is the assumption that transitive AI verbs belong to the morphological class of TI verbs, which assumption is problematic considering the morphological make-up of transitive AI verbs. These verbs, in fact, are not morphologically TI verbs, and I argue that morphological class is not what triggers passive allomorphy. See the schematization below in (19), where each shaded area represents a group of verbs that is passivized with the same morpheme. In this table, SAP stands for Speech Act Participant, which I use to refer to first or second person.[25]

24 In the Algonquianist tradition these are sometimes referred to as "pseudo-intransitive" verbs (Bloomfield 1957).

25 Note that it is not possible to form a passive of an inanimate intransitive verb. This is because of the correspondence of real-world animacy and grammatical animacy in Algonquian (Hanson 2003; Bliss 2005). Agents are real-world animates, and therefore grammatically animate. Thus, the agent of an intransitive verb is denoted by a grammatically animate noun, meaning that intransitive verbs with agents are AI verbs. As passivization is a process that demotes an agent argument, of intransitive verbs only AI verbs may be passivized.

(19) INNU PASSIVE MORPHOLOGY (CF. DRAPEAU 2012)

MORPHOLOGICAL CLASS	SYNTACTIC TRANSITIVITY	PASSIVE MORPHOLOGY	DERIVED STEM
AI	Intransitive	-nânwi	Impersonal VII
AI+Adjunct	Intransitive	-nânwi	Intransitive (patient subject)
Transitive AI	Transitive	-kani	Intransitive (patient subject)
TI	Transitive	-kani	Intransitive (patient subject)
Objectless TI	Intransitive	-kani	Impersonal VII
TA	Transitive	-âkani	Intransitive (non-SAP patient subject)
		-ikaw	Intransitive (SAP patient subject)
TA	Ditransitive	-âkan	Intransitive (patient/applied object subject)

Observing the patterns in Innu (which hold also for NE Cree, as we will see below), I propose that the most useful generalization of the data is that the choice of passive allomorph is determined by syntactic transitivity. Those verbs that syntactically license an object (transitive AI, TI, TA) are passivized using the *-(â)kan(i)/-ikaw* morpheme, while those verbs that do not (AI, AI+Adjunct) are passivized using the *-nânwi* morpheme.[26]

A remaining problem with my proposal is the set of objectless TI verbs, which are morphologically TI verbs, but syntactically intransitive. If syntax determines the form of the passive allomorph, we would expect these verbs to be passivized using *-nânwi*, not the normal TI passive allomorph *-kani*. Providing an account of this set of verbs is beyond the scope of this thesis.[27] I go on to outline passivization in NEC.

26 Drapeau (2012) additionally presents an analysis of a type of passive that she calls the medio-passive, which I set aside here as beyond the scope of this chapter.

27 One possibility is that these verbs, once syntactically transitive, have been lexicalized as intransitive verbs. As this set of verbs is small, this seems a likely direction. I leave this puzzle to be solved by future researchers.

4.4.2. Passives in NEC

A consideration of NEC passives in light of the Innu data shows little difference in passivization in the two dialects. Note that, unlike Innu, NEC does not have a dedicated passive allomorph for the ditransitive. Innu and NEC passive morphology is schematized below in (20). Unless otherwise noted, all of the examples in this section come from my own fieldwork in Chisasibi, Quebec in spring 2011 and 2012.

(20) PASSIVE MORPHOLOGY: INNU AND NEC

DIALECT	MORPHOLOGICAL CLASS	SYNTACTIC TRANSITIVITY	PASSIVE MORPHOLOGY	DERIVED STEM
Innu	AI	Intransitive	-nânwi	Impersonal VII
	AI+Adjunct	Transitive	-nânwi	Intransitive
	Transitive AI	Transitive	-kani	Intransitive
	TI	Transitive	-kani	Intransitive
	Objectless TI	Intransitive	-kani	Impersonal VII
	TA	Transitive	-âkani	Intransitive (non-SAP subject)
			-ikaw	Intransitive (SAP subject)
	TA	Ditransitive	-âkan	Intransitive (patient/applied object subject)
NEC	AI	Intransitive	-(nâ)niu	Impersonal VII
	AI+Adjunct	Transitive	-(nâ)niu	Intransitive
	Transitive AI	Transitive	-ikiniwi	Intransitive
	TI	Transitive	-ikiniwi/ -âkiniwi	Intransitive
	Objectless TI	Intransitive	-ikiniwi	-- (Impersonal VII?)
	TA	(Di)transitive	-âkiniwi	Intransitive (non-SAP subject)
			-ikiwi	Intransitive (SAP subject)

Significant work on morphological paradigms in NEC has been undertaken for the recent edition of the dictionary (Bobbish-Salt et al. 2012), and in my fieldwork I sought to understand the syntactic behaviour of passivization across verb classes. Even so, our understanding of passivization in NEC is still preliminary. In particular, the set of objectless TI verbs is not clearly understood in NEC. As mentioned above (§4.4.1), the set of objectless TI verbs is an important exception to my proposal that passive allomorphy in NEC is triggered by the syntax of the passivized verb (e.g., transitive AI *versus* AI+Adjunct). I leave it to future researchers to confirm or disprove the tenability of this proposal.

4.4.2.1. Passives of Animate Intransitive verbs

NEC Animate Intransitive verbs are passivized using the morpheme *-nâniu* or its allomorph *-niu.* The resulting verb is an impersonal II verb, with an implicit subject that refers to "loosely collective human actors" (Drapeau 2012:186). An example of this type of verb is given below in (21).

(21) NEC PASSIVE OF AN AI VERB

a. Pâhp-i-u. Active
laugh-VAI.VBZ-3
ROOT-VAI.VBZ-IIN
'S/he laughs.'

(Bobbish-Salt et al. 2012:172)

b. Pâhp-i-**nâniu**. Passive

laugh-VAI.VBZ-**IMPERS**

ROOT-VAI.VBZ-**IIN**

'People are laughing. / Everyone is laughing.'

Note that the *-nâniu* morpheme in the above example is glossed as "impersonal". This is, in part, because *nâniu*-derived verbs are not fully understood. It seems clear that these morpheme can form passives (as seen in the next section), but the semantics of the forms are fairly unpredictable.[28]

4.4.2.2. Passives of AI+Adjunct verbs

Passives of AI+Adjunct verbs in NEC are formed in the same way as passives of AI verbs, that is, with the morpheme *-nâniu/-niu*. The resulting verbs appear to be compatible either with an impersonal II verb interpretation (e.g., the subject refers to people in general) or with a passive interpretation (e.g., as having a derived patient subject), as in the example below in (22).

(22) NEC PASSIVE OF AN AI+ADJUNCT VERB

a. Mâtiw-â-châ-u. Active

play-VAI.VBZ-DETRANS-3

ROOT-VAI.VBZ-VAI.VBZ-IIN

'S/he, it (anim) plays with it.'

(Bobbish-Salt et al. 2012:291)

28 See also the discussion of the semantic unpredictability of *nanu*-derived forms in Naskapi and Innu in Appendix I of Brittain & MacKenzie (2011:262).

b. Mâtiw-â-châ-niû. Passive

play-VAI.VBZ-DETRANS-IMPERS

ROOT-VAI.VBZ-VAI.VBZ-IIN

'People play with it. / It is played with.'

In Algonquian languages, the subject of a subordinate clause can trigger object agreement on a matrix verb. This is called Cross-Clausal Agreement (CCA) (Branigan & MacKenzie 2002), though it was first described as raising-to-object (Frantz 1978, for Blackfoot). Algonquian languages have two agreement options with respect to clausal complements. Either the higher verb is a TI verb, agreeing with a lower CP as an object, or the higher verb is a TA verb and agrees with the *syntactic subject* of the lower clause as its object (Dahlstrom 1991). In other words, there is optional non-local agreement across a clausal boundary, or Cross-Clausal Agreement. The derived subject of a passive verb can trigger CCA on the higher clause (cf. Dahlstrom, 1991), which is an indication that the patient argument in fact moves to subject position (see §4.4.3, below, for a more in-depth discussion of CCA and passive verbs). The verb given above in (22) is compatible with a passive analysis in that the grammatical animacy of the derived subject (e.g., the thing played with) determines the verb class of the matrix verb (23).

(23) DERIVED SUBJECT OF NEC AI+ADJUNCT PASSIVE VERB TRIGGERS CCA

a. ANIMATE

Ni-chisch-âyi-**m**-â-u	âh	chîh	mâtiw-â-châ-niwich.
1-know-by.mind-**by.head**[29]-THM-3	PVB,CJ	PAST	play-VAI.VBZ-DETRANS-IMPERS
1-ROOT-MEDIAL-**VTA.VBZ**-THM-IIN	PVB,CJ	PVB	ROOT-VAI.VBZ-VAI.VBZ-CIN

'I know that it (anim) was played with.'

b. INANIMATE

Ni-chisch-âyi-**ht**-â-n	âh	chîh	mâtiw-â-châ-niwich.
1-know-by.mind-**by.head**-THM-1/2	PVB,CJ	PAST	play-VAI.VBZ-DETRANS-IMPERS
1-ROOT-MEDIAL-**VTI.VBZ**-THM-IIN	PVB,CJ	PVB	PLAY-VAI.VBZ-VAI.VBZ-CIN

'I know that it (inan) was played with.'

As was mentioned above (§4.4.1), these verbs are compatible with objects of either gender (animate or inanimate). One counter-example has been found, and that is the verb *mîchiu* 'to eat'. While this verb is passivized by *-nâniu*, it is only compatible with inanimate objects. What sets this verb apart from transitive AI verbs is that there is no morphologically related TA verb, which may be an important clue for the explanation of this restriction, shown below in (24).

29 Although this morpheme is glossed with the meaning "by.head," as is the corresponding morpheme in (23b), it is functionally a verbalizer morpheme like any other in the grammar. These "by head" verbalizers fall into a class referred to as "concrete finals" (Wolfart 1973), which are those verbalizers that contribute an identifiable meaning component to the word, in this case associating the action of the verb with the head.

(24) AI+ADJUNCT VERB 'TO EAT' REQUIRES INANIMATE OBJECT

a. AI+ADJUNCT

i. Mîch-i-u **sîutis**-iyiu/***âihkunâu**-h. Active

eat-VAI.VBZ-3 **candy**-OBV/***cake**-OBV

ROOT-VAI.VBZ-IIN **NI**-OBV/*NA-OBV

'S/he eats the candy (inan)/*cake (anim).'

ii. **Sîutis**/*âihkunâu chîh mîch-i-nâniu. Passive

candy/*cake PAST eat-VAI.VBZ-IMPERS

NI/*NA PVB ROOT-VAI.VBZ-IIN

'The candy (inan)/*The cake (anim) was eaten.'

b. VTA

i. Muw-â-u **âihkunâu**-h. Active

eat-DIR-3 **cake**-OBV

ROOT-THM-IIN NA-OBV

'S/he eats the cake (anim).'

ii. Chîh muw-âkiniu-u **âihkunâu**. Passive

PAST eat-PASSIVE.3-3 **cake**

PVB ROOT-PASSIVE-IIN NA

'The cake (anim) was eaten.'

An in-depth discussion of the syntax of *nâniu*-derived verbs and their acquisition is beyond the scope of this thesis, and will not be pursued any further.

4.4.2.3. Passives of transitive AI verbs

The set of transitive AI verbs includes verbs derived by the verbalizers *-htâ*, *-tâ*, *-shtâ*, and some verbs derived by *-â*, among others. These verbs, like TI verbs, are passivized using the morpheme *-ikiniw*. An example of this set is given below in (25).

(25) NEC PASSIVE OF TRANSITIVE AI VERB

a. Âpichi-htâ-u. Active
use-CAUS-3
ROOT-VAI+O.VBZ-IIN
'S/he uses it.'
(Bobbish-Salt et al. 2012:68)

b. Âpichi-htâ-kiniu-u. Passive
use-CAUS-PASSIVE.3-3
ROOT-VAI+O.VBZ-PASSIVE-IIN
'It is used.'

Typically, transitive AI verbs are related to a TA verb, which is used as required by the presence of a grammatically animate object. A set of related verbs is given below in (26).

(26) RELATED TRANSITIVE AI AND TA PASSIVE VERBS

a. TRANSITIVE AI

i. Chisi-yâpâu-**tâ**-u. Active
clean-water-**VAI+O.VBZ**-3
ROOT-MEDIAL-**VAI+O.VBZ**-IIN
'S/he rinses it (inan) out.'

ii. Chisi-yâpâu-**tâ**-kiniu-u. Passive
clean-water-VAI+O.VBZ-PASSIVE.3-3
ROOT-MEDIAL-VAI+O.VBZ-PASSIVE-IIN
'It (inan) is rinsed out, e.g., a cloth.'

b. TA

i. Chisi-yâpâu-**y**-â-u. Active
clean-water-VTA.VBZ-DIR-3
ROOT-MEDIAL-VTA.VBZ-DIR-IIN
'S/he rinses it (anim) out.'

(Bobbish-Salt et al. 2012:231)

ii. Chisi-yâpâu-**y**-âkiniu-u. Passive
clean-water-VTA.VBZ-PASSIVE.3-3
ROOT-MEDIAL-VTA.VBZ-PASSIVE-IIN
'It (anim) is rinsed out, e.g., a towel.'

One apparent counter-example to the claim that transitive AI verbs restrict the animacy of their object to inanimate objects only is the verb 'to reduce by sawing.' This case is particular, since the permitted animate object of the verb is homophonous with a permitted inanimate object. The NEC noun *mishtikw* has two meanings: one meaning is 'tree' (animate), another meaning is 'stick' (inanimate). Either noun is permitted as the object of the transitive AI verb 'to reduce by sawing,' which I suggest is due to the polysemy of *mishtikw* (27).

(27) NEC PASSIVE OF TRANSITIVE AI VERB 'TO REDUCE BY SAWING'

a. Achiwi-putâ-u. Active
decrease-saw-3
ROOT-VAI+O.VBZ-IIN
'S/he reduces it by sawing.'

(Bobbish-Salt et al. 2012:58)

b. **Mishtikw** achiwi-**putâ**-kiniu-u. Passive
tree/stick decrease-**saw**-PASSIVE.3-3
NA/NI ROOT-VAI+O.VBZ-PASSIVE-IIN
'The tree (anim)/stick (inan) is reduced by sawing.'

4.4.2.4. Passives of Transitive Inanimate verbs

Passives of NEC Transitive Inanimate verbs are typically derived by the morpheme *-ikiniw*, though there appears to be free variation between *-ikiniw* and *-âkiniw* in passivized TI verbs. Consider the following typical example (28).

(28) NEC PASSIVE OF A TI VERB

a. Wâp-iht-im. Active
light-by.head-DIR
ROOT-VTI.VBZ-THM
'S/he sees it.'

(Bobbish-Salt et al. 2012:112)

b. Wâp-iht-**ikiniu**-u. Passive
light-by.head-PASSIVE.**3**-3
ROOT-VTI.VBZ-**PASSIVE**-IIN
'It is seen.'

Variation in the passive allomorph can be seen in the following examples (29). Consultants do not identify any meaning difference between the two forms, so I treat them as if they are in free variation, though perhaps the choice is conditioned at another level of language use.

(29) VARIATION IN PASSIVE ALLOMORPHY IN TI VERBS

a. Ihtut-im. Active
do-DIR
ROOT.VTI-THM
'S/he does it.'

(Bobbish-Salt et al. 2012:10)

b. Tânitâh âh ihtut-**ikiniwi**-ch û. Passive
how PVB,CJ do-**PASSIVE**.**3**-3.S this
P,WH PVB,CJ ROOT.VTI-**PASSIVE**-CIN P,DEM.PXL
'How do you do this?'

c. Tânitih âh ihtut-**âkiniwi**-ch. Passive
where PVB,CJ do-**PASSIVE**.**3**-3.S
P,WH PVB,CJ ROOT.VTI-**PASSIVE**-CIN
'Where do you do it?'

4.4.2.5. Passives of Transitive Animate and ditransitive TA verbs

Passives of Transitive Animate and ditransitive TA verbs are formed using one of two passive allomorphs. Passives of (ditransitive) TA verbs with derived third person subjects are formed with the *-âkiniw* morpheme, as in the following examples. The derived subject of a passivized ditransitive verb is the indirect object of the verb. The direct object shows no agreement or cross-referencing on the verbal complex and is not treated as an argument of the verb in the syntax, showing the characteristics of an adjunct (see for example Brittain, 1993 for a discussion of applicative constructions and adjunct arguments in Innu-aimun). The ditransitive example given in (30b) is one of very few lexical ditransitives in NEC; the majority of ditransitives are derived from transitive verbs through the addition of applicative morphology.

(30) NEC PASSIVE OF A TA VERB (3RD PERSON)

a. TRANSITIVE

i. Âpichi-h-â-u. Active
use-caus-dir-3
root-vta.vbz-thm-iin
'S/he uses, employs her/him, it (anim).'
(Bobbish-Salt et al. 2012:68)

ii. Âpichi-h-âkiniu-u. Passive
use-CAUS-PASSIVE.3-3
ROOT-VTA.VBZ-PASSIVE-IIN
'S/he is employed.'

b. DITRANSITIVE

i. Miy-â-u. Active
give-dir-3
vta-thm-iin
'S/he gives it to her/him, it (anim).'
(Bobbish-Salt et al. 2012:276)

ii. Miy-âkiniu-u. Passive
give-PASSIVE.3-3
VTA-PASSIVE-IIN
'She is given it.'

Where the derived subject of a TA verb is a first or second person argument, the passive is formed using *-ikiwi*, the SAP form of the passive morpheme (31).

(31) NEC PASSIVE OF A TA (SAP)

a. TRANSITIVE

i. Nit-âpichi-h-îkw. Active
1-use-CAUS-INV
1-ROOT-VTA.VBZ-THM
'S/he employs me.'

ii. Nit-âpichi-h-ikiwi-n. Passive
1-use-CAUS-PASSIVE.1/2-1/2
1-ROOT-VTA.VBZ-PASSIVE-IIN
'I am employed.'

b. DITRANSITIVE

i. Chi-miy-ikw. Active
2-GIVE-INV
2-VTA-THM
'S/he gives (it) to you.'

ii. Chi-miy-ikiwi-n. Passive
2-give-PASSIVE.1/2-1/2
2-VTA-PASSIVE-IIN
'You are given (it).'

Here it will be important to clarify some pertinent historical morphophonology. Where an SAP passive is formed from a TA verb with the *-iw* verbalizer, the verbalizer and the initial vowel of the passive morpheme coalesce to form the vowel *â*. In other words, *-iw* + *-ikiwi* → *âkiwi*. This morphophonological process is undone in the body of the text, such that the verbalizer and the passive morpheme are represented separately, as demonstrated below in (32). However, in the appendix of passive utterances this morphophonology is not undone to remain faithful to the orthography, which reflects the surface rather than the underlying form.

(32) NEC PASSIVE OF A TA VERB (SAP): COALESCENCE OF VERBALIZER AND PASSIVE MORPHEME

Châkwân	kâ	ihtut**âkiwi**yâkw.	Passive
châkwân	kâ	ihtut-**iw-ikiwi**-yâkw	
what	PVB,CJ	do-**VTA.VBZ-PASSIVE.1/2**-2.PL	
PRO,WH	PVB,CJ	ROOT-**VTA.VBZ-PASSIVE**-CIN	

'What did they make you do?'

4.4.2.6. "Do" passives

One very intriguing aspect of NEC passives is the interpretation and use of the passive in certain questions, as below in (33). To the best of my knowledge, this use of the passive has not been recorded until now (Johansson fieldwork, June 2012).

(33) NEC "DO" PASSIVE

Tânitâh	â-ihtut-ikiniwi-ch.	Passive
how	PVB,CJ-do-PASSIVE.3-3.PL	
P,WH	PVB,CJ-ROOT.VTI-PASSIVE-CIN	

'How is it done?'

Forms such as that in (33) often received an interpretation similar to "habitual" passives, following terminology used by Allen & Crago (1996) with reference to Inuktitut. In Inuktitut, passive constructions may refer to normal methods for undertaking some action in the community. Consider the following Inuktitut example (34).

(34) INUKTITUT HABITUAL PASSIVE

Saimurtausuunguvuq.

saimuq-**jau-suuq**-u-vuq

shake.hands-PASSIVE-HAB-be-IND.3SS

'S/he is normally shaken hands with (by people).'

(Allen & Crago 1996:113, ex. 6)

Note that, in this case, there is a habitual morpheme *-suuq-* present on the verb stem. Such an overt marker of habitual action is not present in the NEC question, above. It may prove

to be the case that certain passives in Cree, such as in (33), are best analyzed as impersonal passives in the sense of Drapeau (2012). This type of passive need not be formulated as a question, such that a possible answer to (33) is the passive declarative, "It is done like this." This subset of passives does appear in the corpus of Billy's speech, most commonly in question form. For the purposes of this thesis, I do not draw any formal distinctions between standard passives and 'do'-passives, as more fieldwork is needed in this area. However, it is interesting to speculate about the impact that this type of distinction, were it to prove valid, would have on the acquisition of passives in NEC. I discuss the use of 'do'-passives in Billy's speech in §5.4.1.2.

4.4.3. The debate: Passives, or not?

The syntax of passive constructions in Algonquian languages is by no means uncontroversial. As it is not the central purpose of this thesis to weigh in on the debate, I follow Drapeau (2012) and highlight the function of passive morphology: it serves to background the subject/agent and foreground the object/patient, reducing valency by one, as is expected of passive constructions.

At a theoretical level, I assume Dahlstrom's analysis that these forms are syntactic passives, that is, derived intransitive verbs with a patient subject (Dahlstrom 1991; see also Goddard 1979 on Delaware). The key piece of evidence for her analysis comes from Cross-Clausal Agreement (CCA), discussed above in §4.4.2.2. Dahlstrom (1991) observes that in Plains Cree the syntactic subject of a lower clause may trigger CCA on the higher clause, such that the higher clause agrees with the subject of the lower clause as though it

were its object. In (35a) below, the verb in the higher clause is a TI verb with a CP object. In (35b), the verb in the higher clause is a TA verb whose object is the animate subject of the lower clause.

(35) PLAINS CREE CCA[30]

a. NO CCA

Mary kiske·yiht-**am** George-**a** e·-a·hkosi-**yit**.
Mary know.VTI-**3.INAN** George-**OBV** be.sick-**OBV,CJ**
'Mary knows George is sick.'

b. CCA

Mary kiske·yim-**e·-w** George-**a** e·-a·hkosi-**yit**.
Mary know.VTA-**THM.DIR-3.OBV** George-**OBV** be.sick-**OBV,CJ**
'Mary knows George is sick.'

(Dahlstrom 1991:71, ex. 27-28)

Dahlstrom (1991) reports a slight semantic difference between the two forms, with the consequence that (35b) above has a reading in which Mary is inferring that George is sick.

Evidence from CCA shows that, in Plains Cree, the patient argument of a passive verb triggers agreement on the higher clause, indicating that it is, in fact, a derived syntactic subject. This is evidence that Cree has a true passive.

30 Dahlstrom (1991) marks the boundary between a preverb and a verb with '=', and verb-internal morpheme boundaries with '-'. In this thesis, I draw no such distinction, and change her glossing to match that in use here.

(36) PLAINS CREE PASSIVE SUBJECT TRIGGERS CCA

Ni-kiske·yim-**a·wak** e·- ki·-se·kih-**ihcik.**

1-know.VTA-**1>3.PL** PRF-scare-**PASSIVE.3.PL.CJ**

'I know they were scared.'

Dahlstrom's analysis has not gone unchallenged. Given that there is evidence that the higher verb can agree with syntactic objects in Innu (Branigan & MacKenzie 2002), Ritter & Rosen cast doubt on Dahlstrom's claim (Ritter & Rosen 2005). The pertinent facts for NEC have not been explored, but constitute an interesting avenue for future research, considering that NEC-speaking communities are geographically between Plains Cree and Innu-aimûn communities, and all are CMN dialects (MacKenzie 1980).

Other approaches have been taken to the passive construction in Algonquian. One proposal suggests that so-called passive forms are actually active forms with an obligatorily non-specific agent (Dryer 1997, Plains Cree), though Valentine (2001) points out morphological differences between passive and generalized actor forms in Nishnaabemwin. Another analysis is that inverse theme morphology is actually passive morphology and that inverse clauses are passives (LeSourd 1976; Jolley 1981; Jolley 1982) (see §6.7.4.2.3 for a discussion of inverse clauses). A third approach takes passives to be transitive passive verbs in which the agent and patient arguments are both present, but reversed in the syntax, that is, the agent becomes the object (Rhodes 1976). Any one of these approaches may prove to be the best approach to passives in NEC, but I leave this question to future work; I maintain my assumption that NEC passives are best treated as syntactically (n-1)-place predicates in which the patient is the derived subject.

Chapter 5 – The acquisition of passives in NE Cree

5.1. Introduction

In this chapter I outline three stages in Billy's acquisition of the passive construction in Cree. I show that he acquires passive morphology before acquiring the syntax of the passive construction, and that his development is U-shaped. I start with an overview of the methodology in §5.2, and a consideration of the passive utterances recorded in CDS in §5.3. In §5.4 I describe Billy's acquisition of the passive, and provide a discussion of his acquisition path and a comparison to passive acquisition in other languages in §5.5.

5.2. Methodology

This section describes the methodology that I adopted for my analysis of passive utterances in Billy's speech, and assumes familiarity with the corpus-wide methodology described in Chapter 3. I begin where all preliminary analysis is complete.

5.2.1. Identifying passive utterances

I classified as passive utterances all forms whose target utterance bears passive morphology, as defined in §4.4.2 above.[31] Specifically, I classified any verbal form bearing the morpheme *-ikiniw*, *-âkiniw* (non-SAP forms), and *-ikiwi* (SAP forms) as passive. These were glossed in PHON using the Auto-Parser and assigned the Morpheme Meaning 'passive.3' for non-SAP forms, or 'passive.1/2' for SAP forms. All forms were

31 Recall that I set aside passives formed with *-nâniu*, as noted in §4.4.2.2.

assigned the Morpheme Type 'passive.' Passive morphology in the recorded CDS was identified and glossed in a similar fashion. Once all forms were analyzed, a search for the 'passive' Morpheme Type was used to extract the passive utterances for each session participant (Billy, and Adult).

5.2.2. Secondary analysis

In order to identify discrepancies between Billy's utterances and adult-like utterances, a document consisting of Billy's passive utterances was prepared and submitted to Luci Bobbish-Salt for consideration. This document consisted of Billy's age at the time of recording, and his utterances in both Cree syllabics and Roman orthography. If appropriate, the surrounding context of each utterance was included. The context was included in cases in which the passive utterance constituted part of an exchange between Billy and his interlocutor. The context was not included in cases in which the passive utterance was isolated in the discourse. An example from this document is given below. Note that this is an example from the document that was sent, *before* it was edited (37).

(37) EXAMPLE FROM PASSIVE FIELDWORK MATERIALS

Session 1 – Age 4;06.08 (Conversations: 2)

Conversation 1 [sic]

Adult:	ᒥᐧᐁᐣᒪᐤ	ᐊᐧ	ᐧᐃ	ᐊᐧᐃ?
	miywâyimâu	â	wî	âi
	'Does ... like those...?'			

Billy:	ᒪᐅᑦ	ᐊᑲᐱᐦᐊᐦᑭᐧᐢᐃᐢᓵ
	mâutâh	âspiyihâkiniwit
	'This is how you make it go / You move it this way.'	

(B3-2005-11-22#210)

After taking some time to read the document and make corrections and comments, Luci Bobbish-Salt sent back an edited version of the document with commentary. Specifically, she considered the following questions: (i) "Does Billy's Cree look like adult Cree, or are there some differences? If there are differences, what are they?"; and (ii) "Is Billy using verbs that end in *-âkiniw* and *-ikiniw* correctly, and in the right places? When you look at his sentences in the context of the conversation, does it make sense for him to choose those verbs?" Her input has been incorporated into the PHON corpus as well as the appendix of Billy's passive utterances, Appendix I of this thesis. Some further analysis was conducted in person with Luci Bobbish-Salt and Elsie Duff in Chisasibi, Quebec in June, 2012. This consisted of re-recording two IPA target forms and filling in gaps in the analysis of certain utterances.

5.2.3. Excluded utterances

There are 36 utterances containing passive verbs recorded in the corpus of Billy's speech.

Only one of these verbs was excluded from this analysis. The verb is the only passive utterance recorded in session 8 (B3-2006-12-11, age 5;06.27). Noise in the recording made only parts of the utterance possible to transcribe, and there is no available recording of the target utterance against which to compare Billy's speech. I analyzed the remaining 35 passive verbs.

5.2.4. Productivity criteria and evidence of acquisition

Following Allen & Crago (1996) I have adapted my general productivity criteria (§3.4) for the analysis of passive acquisition in Northern East Cree. The data were considered with the following criteria.

(38) PRODUCTIVITY CRITERIA: MORPHOLOGICAL ACQUISITION

1. The passive morpheme is wrongly attached to its stem.
2. The passive morpheme appears in the transcript on at least two different stems, especially where different allomorphs of the morpheme are required.
3. Alternatively, the stem appears with a different morpheme attached in the same place, elsewhere in the transcript.

(cf. Allen & Crago 1989; Fortescue & Lennert Olsen 1992)

(39) PRODUCTIVITY CRITERIA: PASSIVE ACQUISITION

1. The passive is used with clearly innovative forms (e.g., overgeneralizations).
2. Errors in passive utterances are self-corrected.
3. The same event is referred to with both passive and active utterances.

(cf. Allen & Crago 1996)

With these two sets of productivity criteria I introduce an important terminological distinction between MORPHOLOGICAL ACQUISITION and the ACQUISITION OF THE PASSIVE CONSTRUCTION. What this means is that I do not take the morphological productivity of passive verbs (38) to be evidence that Billy understands the function of the passive construction (39). This distinction will be important in my discussion of Billy's acquisition (§5.4).

Furthermore, following Allen & Crago (1996), I have made note of various forms of passive utterances throughout the corpus, both in Billy's utterances and in CDS (40).

(40) PASSIVE FORMS

1. Basic passive
2. Passives of non-actional verb (see, understand, be called)
3. Passives of verbal stems with applicative morphology (derived ditransitives)
4. Passives with noun incorporation (medials)
5. Passives of morphological causatives
6. 'Do'-passives

(cf. Allen & Crago 1996)

Item 5 in the above list warrants further explanation, as I draw a distinction between causative verbalizers in "basic" verb stems and morphological causatives (one type of "derived" stem). Recall from Chapter 2 that a basic verb stem is composed of a verb root and a verbalizer. A morphological causative is derived from a basic verb stem, such that it is composed of a verb stem and an additional causative verbalizer (41).

(41) BASIC VERB STEMS AND MORPHOLOGICAL CAUSATIVES

a. BASIC VERB STEM

root + verbalizer

b. MORPHOLOGICAL CAUSATIVE

[$_{\text{BASIC VERB STEM}}$ root + verbalizer] + verbalizer (causative)

Some verbalizers can be used both to form basic verb stems and to derive morphological causatives. The causative verbalizer *-h* can be used in both ways. The following is an example of a basic verb stem derived by *-h* (42). As this is a basic verb stem, a passive derived from this verb is a basic passive.

(42) NEC TRANSITIVE VERB

Wîchi-h-â-u.

help-CAUS-DIR-3

ROOT-VTA.VBZ-THM-IIN

'S/he helps her/him/it.'

(Bobbish-Salt et al. 2012)

On the other hand, the same causative morpheme *-h* can be used to derive a morphological causative, as in the following example (43).

(43) NEC DERIVED TRANSITIVE CAUSATIVE VERB

Tiskimi-**piyi-h**-â-u.

take.across-**DYN-CAUS**-DIR-3

ROOT-**VI.VBZ-VTA.VBZ**-THM-IIN

'S/he takes him/her straight across by vehicle.'

(Johansson & Brittain 2012)

A passive verb formed from a morphological causative verb, as above, is a "passive of a morphological causative." Note, therefore, that while the causative verbalizer *-h* is used in both examples, passives formed from the two verbs are treated differently.

A number of Northern East Cree-specific characteristics are also of interest in the acquisition of passive morphology, and are listed below.

(44) NEC-SPECIFIC PASSIVE CONSTRUCTION CHARACTERISTICS

1. Additional morphology on the verbal complex (obviative, plural, diminutive)
2. SAP vs. non-SAP forms
3. Morphological class of the passivized verb (VTI, VTA , transitive AI, ditransitive)
4. Inflectional order of the passivized verb (Independent, Conjunct)[32]
5. Aspect/Mood (habitual, subjunctive)
6. Evidence of English influence

All of the above-listed criteria have been taken into account in the analysis of Cree CDS (§5.3) and Billy's passive productions (§5.4).

32 For a brief introduction to inflectional orders, see page 10.

5.3. CDS

As we have seen in §4.3.2, cross-linguistic studies of passive acquisition often make reference to the frequency of passive utterances in CDS. In order to compare the frequency of passives in NEC CDS against that of other languages, I have analyzed the adult side of the recorded conversations for each of the sessions in the corpus of Billy's speech. Passives were identified and glossed in these records in PHON. Each adult passive utterance was then extracted to yield both the frequency of passives in CDS (§5.3.1) as well as an idea of the range of passive forms in CDS (§5.3.2).

5.3.1. Frequency of passives in NEC CDS

Passive utterances occur in CDS in each of the 10 sessions under analysis in this thesis. The distribution of interlocutor passives is given below in (45).

(45) PASSIVES IN ADULT SPEECH: BILLY

SESSION	SESSION LENGTH	# PASSIVES (ADULT)	BILLY'S AGE
B3-2005-11-22	00:42:26	12	4;06.08
B3-2006-01-10	00:43:53	23	4;07.26
B3-2006-02-28	00:35:22	11	4;09.14
B3-2006-05-27	00:33:05	5	5;00.13
B3-2006-07-26	00:24:24	9	5;02.12
B3-2006-10-14	00:41:09	10	5;05.00
B3-2006-11-06	00:45:27	11	5;05.22
B3-2006-12-11	00:36:14	10	5;06.27
B3-2007-03-19	00:44:42	6	5;10.06
B3-2007-04-02	00:25:43	3	5;10.19
TOTAL:	06:12:25	100	

In a little over 6 hours of analyzed CDS, passives occur at a rate of approximately 16 passives/hour, or one passive utterance every 3 minutes and 41 seconds. Though the sample of adult speech is small, it is clear that children learning NEC are consistently exposed to passive structures.

Analysis of a larger corpus of NEC CDS is desirable to confirm that such a high frequency of passive utterances in CDS is broadly typical of the language. At present, it is possible to consider the speech of the *same* caregiver, interacting with a younger child from the CCLAS study, code-named Ani, from age 2;01 to 3;08 (46).

(46) PASSIVES IN ADULT SPEECH: ANI

SESSION	SESSION LENGTH	# PASSIVES (ADULT)	ANI'S AGE
A1-2005-03-08	00:38:47	7	2;01.14
A1-2005-05-18	00:37:24	8	2;03.24
A1-2005-07-29	00:49:06	12	2;06.05
A1-2005-09-14	00:39:36	2	2;07.19
A1-2005-11-21	00:48:41	11	2;09.27
A1-2006-01-09	00:36:30	7	2;11.15
A1-2006-03-14	00:30:28	6	3;01.20
A1-2006-06-02	00:40:08	0	3;04.08
A1-2006-08-16	00:31:53	4	3;06.22
A1-2006-10-18	00:30:16	3	3;08.24
TOTAL:	06:22:52	60	

Here again, the rate of passives per hour is quite high. In roughly 6.5 hours, Ani was exposed to 60 passive utterances, or 9.4 passives/hour. In this set, there is one passive caregiver utterance every 6 minutes and 23 seconds. It is interesting, however, that the rates of passive productions are so different for Billy and Ani. Billy is exposed to a significantly higher rate of passive utterances: more than 1.7 times as many passives per hour as Ani hears. I interpret this as evidence that Cree caregivers adapt their speech to the abilities of the child.[33] This is supported by the passive productions of the two children: Ani does not produce a single passive utterance during the duration of her recording, but Billy produces 36 passives beginning immediately with the first session.

Consider how NEC caregiver use of passives per hour compares with CDS in

33 Some language teachers in the Northern Cheyenne Nation (Montana) similarly report adapting their speech for the benefit of child learners of Cheyenne (Algonquian), favouring the use of gender-marked demonstratives with nouns to facilitate acquisition of the nominal gender system (p.c., Sarah Murray).

English and Inuktitut (Maratsos 1985; Gordon & Chafetz 1990; Allen & Crago 1996). Note that the term "full passives" refers to passives with a *by*-phrase (47).

(47) PASSIVES/HOUR IN CDS CROSS-LINGUISTICALLY (CF. ALLEN & CRAGO 1996:150)

LANGUAGE	HOURS OF DATA	NUMBER OF PASSIVES	NUMBER OF FULL PASSIVES	NUMBER OF PASSIVES/HOUR
English[34] (Gordon & Chafetz 1990)	293	313	4	1.1
English (Maratsos 1985)	37.5	101	1	2.7
Inuktitut (Allen & Crago 1996)	26.7	208	35	7.8
NEC – Billy & Ani	12.6	160	-- [35]	12.7

As we see, CDS in NEC has the highest rate of passives per hour of any of the languages listed above, though the sample of adult speech is relatively small.

Figures of English and Sesotho passive input frequency are presented by Kline & Demuth (2010) as a percentage of the total number of verbal utterances. In the following table, I extend their work to include NEC. As was seen in the frequency count, NEC CDS consists of the highest percentage of passive verbs per total verbal utterances of any of the languages for which such a count is available. Once again, the sample size is quite small, but the results are striking (48).

34 Based on caregiver interactions with Adam, Eve and Sarah (Brown 1973)

35 Recall that NEC does not permit *by*-phrases in passive constructions

(48) PERCENTAGE PASSIVE VERBS IN CDS CROSS-LINGUISTICALLY

LANGUAGE	TOTAL NUMBER OF VERBAL UTTERANCES	NUMBER OF PASSIVE UTTERANCES	PERCENTAGE PASSIVE UTTERANCES
English (Brown 1973)	33,125	91	0.27%
Sesotho (Demuth 1992)	10,021	269	2.7%
NEC – Billy & Ani	5,609	160	2.9%
NEC – Billy	3,036	100	3.3%

5.3.2. Morphological form of passives in NEC CDS

In order to provide a baseline for comparison, passives in CDS have been analyzed in the same way as Billy's passive utterances.[36] An overview of my analysis of CDS can be found in Appendix II.

The majority of the passive verbs Billy was exposed to were "basic" passives. In other words, the passivized stem consisted of a verb root and a verbalizer (55/86, 64%). Nearly a quarter of the passive verbs in the CDS contained a medial, that is, an incorporated noun or a classifier (20/86, 23%). One tenth of the passives Billy heard were built on stems that had undergone secondary derivation, to introduce an argument either through causative (4/86, 5%) or applicative morphology (5/86, 6%). Only two 'do'-passives were uttered (2/86, 2%), once when Billy was 4;07, and once when he was 5;05. Billy relies on this type of passive quite heavily in the beginning stages of his passive acquisition (§5.4.1.2), so it is significant that they are so infrequent in CDS (49).

36 Note that certain of these utterances were morphologically opaque in some way: the verb was unknown or some morpheme in the verbal complex was unclear. Of the 100 passive utterances in CDS, only 86 have been morphologically analyzed. The remaining 14 were left out of the analysis because they were not well-enough understood.

(49) MORPHOLOGICAL FORM OF PASSIVES IN CDS

BASIC	PASSIVE OF CAUSATIVE	'DO'-PASSIVE	PASSIVIZED VERB STEM WITH MEDIAL	PASSIVIZED VERB STEM WITH APPLICATIVE
55/86 (64%)	4/86 (5%)	2/86 (2%)	20/86 (23%)	5/86 (6%)

A good number of plural-marked passives are present in the adult speech (16/86, 19%), as are passives with overt patient NPs, which I contrast with passives where the patient undergoes pro-drop and is marked on the verbal complex only as a pronominal clitic or agreement marking (9/86, 11%). Other morphological variants of passive verbs are infrequent, with no other morphology occurring on more than 4% of passives (50).

(50) ADDITIONAL MORPHOLOGY ON PASSIVES IN CDS

OBVIATIVE MARKING	PLURAL MARKING	LOCATIVE PHRASE	OVERT PATIENT NP	HABITUAL MARKING	DIMINUTIVE MORPHEME	SUBJUNCTIVE	ADVERBIAL PREVERB
3/86 (4%)	16/86 (19%)	1/86 (1%)	9/86 (11%)	1/86 (1%)	2/86 (2%)	3/86 (4%)	3/86 (4%)

Billy is exposed to twice as many non-SAP passive forms as he is exposed to passive forms. However, his exposure to SAP begins with the first session (51).

(51) PERSON OF DERIVED PATIENT SUBJECT IN CDS

SAP (1ST OR 2ND PERSON)	NON-SAP (3RD PERSON)
28/86 (33%)	58/86 (67%)

Researchers have shown that children have difficulty acquiring passives of non-actional verbs (e.g., Maratsos et al. 1985). A consideration of the CDS to which Billy was exposed shows that one third of the passives in CDS were passives of non-actional verbs (26/86, 30%), suggesting that any delay in the acquisition of these forms would not be due to frequency effects. My classification of verbs into actional and non-actional was based on the translation of the verbs, and defined actional verbs as verbs in which the action is something that is both observable and pictureable (Kline & Demuth 2010:225). I have provided my classifications of the passive verbs used in adult and child speech in Appendix II-III, together with a token count for each passive verb.

(52) ACTIONAL VS. NON-ACTIONAL VERBS IN CDS

ACTIONAL VERB	NON-ACTIONAL VERB
60/86 (70%)	26/86 (30%)

As mentioned above, roughly two-thirds of passive verbs in CDS were built on TA stems (53/86, 62%).[37] The remaining passives are mostly TI passives (27/86, 31%), with few transitive AI passives (6/86, 7%) (53).

37 I consider both transitive and ditransitive TA verbs to be TA stems.

(53) MORPHOLOGICAL CLASS OF PASSIVE VERBS IN CDS

TRANSITIVE INANIMATE VERB (VTI)	TRANSITIVE ANIMATE VERB (VTA)	TRANSITIVE AI VERB (VAI)	DITRANSITIVE VTA
27/86 (31%)	39/86 (45%)	6/86 (7%)	14/86 (16%)

Passives inflected in the Conjunct order are slightly more frequent in CDS (46/86, 54%) than passives in the Independent order (40/86, 47%). Across both the Conjunct and Independent orders, nearly all passives are Indicative Neutral forms (82/86, 95%), with a handful of Dubitative Preterit forms (4/86, 5%).

(54) INFLECTIONAL ORDER OF PASSIVE VERBS IN CDS

INDEPENDENT INDICATIVE NEUTRAL (IIN)	CONJUNCT INDICATIVE NEUTRAL (CIN)	INDEPENDENT DUBITATIVE PRETERIT (IDP)
36/86 (42%)	46/86 (54%)	4/86 (5%)

5.4. Billy's passive productions

Billy produces 35 utterances containing passive verbs that are considered in this thesis. In this section, I discuss patterns in his productions. I have divided Billy's passive utterances into three stages, each of which I consider individually. The stages are as follows (55). Note that there are no passive productions under consideration in session 8.

(55) STAGES OF PASSIVE ACQUISITION

STAGE	# OF PASSIVES	SESSION	BILLY'S AGE
I	11	1	4;06.08
		2	4;07.26
		3	4;09.14
		4	5;00.13
II	13	5	5;02.12
		6	5;05.00
		7	5;05.22
		8	*5;06.27*
III	11	9	5;10.06
		10	5;10.19

As I discuss in the following sections, there is reason to think that passive morphology has been acquired already in Stage I (§5.4.1). However, evidence of productivity following the criteria outlined in §5.2.4 only begins to appear in Stage II (§5.4.2). Stage III shows an increase in the complexity and sophistication of Billy's passive utterances (§5.4.3). An overview of my analysis of Billy's passive utterances can be found in Appendix III.

5.4.1. Stage I – Age 4;06 – 5;00

The first stage of Billy's passive utterances consists of Sessions 1-4, from age 4;06 to 5;00. During this time, Billy produces 11 passive verbs. These are presented in Appendix I, Conversations 1-8. While there is evidence that the passive morpheme is used productively in this stage, there is no evidence that the passive construction has been

acquired. In other words, Billy appears to use the morpheme productively, but there is no evidence in the recordings that he understands the connection between the passive and active voices, or that he overgeneralizes the passive construction to demote agents.

5.4.1.1. Evidence of morphological acquisition

There is evidence that the passive morpheme has been acquired by the first session (age 4;06). There are two passive productions in this session, on two different stems, and two different allomorphs of the passive are required.

(56) PASSIVES IN SESSION 1 (4;06.08)

a. Mâu-tâh â**s-piyi-h-âkiniwi**-t.
this-LOC thusly-DYN-CAUS-**PASSIVE.3**-3.S
P,DEM+G.PXL-LOC ROOT.IC-VI.VBZ-VTA.VBZ-**PASSIVE**-CIN
'This is how you make it go. / You move it this way.'

Target: [maw-tah s-pi-h-akɪnəwɪ-t^{h}]
Actual: [mʌ-na sɪ-pi-h-agənʌ-_]

(B3-2005-11-22#210)

b. Ni-chîh misin-ihu-**kuwi**-n.
1-PAST write-by.instrument-PASSIVE.**1/2**-1/2
1-PVB ROOT-VTR.VBZ-**PASSIVE**-IIN
'They wrote my name down.'
Lit. 'I was written down.'

Target: [nɪ-ʧɪ-msɪn-ɪhʊ-kʊɪ-n]
Actual: [ʌnɑ n-ʤɪ-msən-o-gwɑ-n]

(B3-2005-11-22#241)

Comparing the Target and Actual IPA, we see that there is only one morpheme that Billy does not produce: person inflection is missing from the first utterance (56a). However, these two utterances constitute evidence that the passive morpheme has been acquired.

Further evidence that he has acquired the passive morpheme comes from the following example, where Billy selects the TA passive allomorph *-âkiniw* for the TI verb 'to close', instead of the passive allomorph *-ikiniw*, as visible in the Actual IPA (57).

(57) INCORRECT PASSIVE ALLOMORPH

Tânitâh	âh	ihtut-ikiniwi-ch	âh	chip-ih-**îkiniwi**-ch.
how	PVB,CJ	do-PASSIVE.3-0.S	PVB,CJ	close-VTI.VBZ-**PASSIVE.3**-0.S
P,WH	PVB,CJ	ROOT.VTI-PASSIVE-CIN	PVB,CJ	ROOT-VTI.VBZ-**PASSIVE**-CIN

'How is this closed?'

Target:	[dɑn'd	a	tʰot-ɪkə'no-ʤ	ɛ	tsp-ʰ-**iga'no**-ʧ]
Actual:	[dæn'd	a	dɔd-ano-ʤ	a	ʤap-ʰ-**a'no**-ʧ]

(B3-2006-01-10#650)

Note that there is no evidence that Billy has acquired the syntax of the passive at this point. For example, in the first session Billy uses the same verb stem in both active and passive voice, but he uses these verbs to discuss different events.[38] This is evidence that the *morphology* has been acquired by this session, but the active-passive alternation is only taken to be evidence that the passive construction has been acquired when both forms are referring to the same event.

Billy's passive utterances in this first session appear to be precocious. Passives of causative verbs and SAP passives do not reappear without error until Stage III. One interpretation of this pattern is that Billy's passives in the first session are morphologically productive, but his understanding of the passive construction is limited or incomplete. As he acquires the passive construction, his use of passive morphology is reduced until he understands the construction well. Unfortunately, there is no way of knowing when Billy first began to produce passive verbs and what they looked like. Hopefully, with continued analysis of child speech in the CCLAS corpus, some confirmation of or counter-evidence to this interpretation can be found.

5.4.1.2. Reliance on 'do'-passives

While there is evidence that passive morphology has been acquired, Billy leans on conventionalized expressions in this stage. Of the 11 passive utterances in this stage, 6 are

38 The verb in question is *âspiyi* 'thusly', derived by the verbalizer *-piyi*, which set of verbs is the subject of Chapter 6. The two utterances I refer to here can be found in Appendix V, which lists every *piyi*-derived verbal utterance in the corpus. In Session 1 (B3-2005-11-22) Billy uses the verb *âspiyi* in the passive voice in Conversation 4, §1.4 of Appendix V (page 248). The same verb in the active voice can be found in Conversation 6, §1.6 of Appendix V (page 251).

built on the TI root *ihtut* 'do' (6/11; 55%; see §4.4.2.6 for some discussion of these forms). The root 'do' may be passivized with the two allomorphs of the non-SAP passive morpheme (*-âkiniw/-ikiniw*). I refer to these constructions as 'do'-passives. Throughout the corpus, Billy consistently uses the allomorph *-ikiniw* when his intention is to discuss the manner of the action ('how' questions and statements), and *-âkiniw* when his intention is to discuss the place of the action ('where' questions), though this may be coincidence. In session 2 of Stage I he uses a 'do'-passive inappropriately. The verb is correctly formed, but is ill-placed in the sentence structure. These facts indicate that, in Stage I the 'do'-passive construction may be used as "unanalyzed chunks" (cf. Pinker 1984; see Courtney & Saville-Troike 2002 for evidence of unanalyzed chunks in the acquisition in Quechua). In other words, these appear to be single-unit verbal forms for which the child has not yet mapped out a verb-internal morphological analysis. This analysis accounts for the fact that the verb itself is well-formed, but is wrongly used within a sentence.

(58) STAGE I – INAPPROPRIATE USE OF 'DO'-PASSIVE

a. Billy:

U-tâh	âhtut-ikiniwi-ch	kiyipwâ.
this-LOC	do-PASSIVE.3-0.S	of.course
P,DEM.PXL-LOC	ROOT.VTI-PASSIVE-CIN	P,AFF

'How you do this.'

Target:	[o-ˈdæ	tot-ɛkənowi-tʃ	kibɑ]
Actual:	[o-da:	dod-anʊwɪ-tʃ	kɑ:]

Translator comment: Correct verb composition but strange sentence structure.

(B3-2006-01-10#139)

b. Adult: Tâpâ nichischâyimâu.
'I don't know.'

Evidence that 'do'-passives are morphologically productive appears by the third session of Stage I (4;09), where a 'do'-passive appears in a declarative sentence, embedded in a relative clause. All previous 'do'-passives occur in *wh*-questions and have an identical morphological form (the form seen in example 58, above). Embedding the 'do'-passive requires the complementizer *kâh*, which appears in preverb position (Brittain 2001; Johansson 2011). I take this to be evidence that the 'do'-passive is no longer treated as an unanalyzed chunk by 4;09, though it is possible that analysis of this form occurs earlier.

(59) 'DO'-PASSIVE IN A RELATIVE CLAUSE

Ây-iyiu	utâh	**kâh**	ihtut-ikiniwi-ch.
PRO,HES-OBV	here	**PVB,CJ**	do-PASSIVE.3-0.S
PRO,HES-OBV	P,DEM.LOCATION	**PVB,CJ**	ROOT.VTI-PASSIVE-CIN

Umm, the thing that is done this way.

Target:	['a-jo	' uda	**ka**	dod-ɪkanowi-tʃ]
Actual:	[a-jo	wʌdə	**ga**	dəd-ajgʌne-jt]

(B3-2006-02-28#79)

5.4.1.3. Passive forms attested in Stage I

In this section I outline the various forms of passive utterances that are produced in Stage I, including their morphological form, the appearance of "additional" morphology, the person of the patient, whether the passivized verb is actional or non-actional, the morphological class and the inflectional order of the verb.

In noting the morphological form of passive utterances, recall that basic passives are taken to be "typical" passives; that is, all passives that are not conventionalized 'do'-passives or passives of morphological causatives. Passivized verb stems that include a medial or applicative morphology are also noted (60).

(60) MORPHOLOGICAL FORM OF PASSIVES – STAGE I

STAGE	BASIC	PASSIVE OF CAUSATIVE	'DO'-PASSIVE	PASSIVIZED STEM WITH MEDIAL	PASSIVIZED STEM WITH APPLICATIVE
Stage I (4;06 – 5;00)	4/11 (36%)	1/11 (9%)	6/11 (55%)	0/11 (0%)	0/11 (0%)

Recall that 'do'-passives are very rare in CDS (2/86, 2%). Billy's speech in Stage I differs significantly from adult speech in this regard.

What I refer to as "additional morphology" includes obviative marking, plural marking (agreeing with an inanimate plural derived subject), locative phrases, and overt patient NPs, meaning that the patient argument is present as an independent lexical item, rather than a person clitic or agreement on the verbal complex.

(61) ADDITIONAL MORPHOLOGY ON PASSIVES – STAGE I

STAGE	OBVIATIVE MARKING	PLURAL MARKING	LOCATIVE PHRASE	OVERT PATIENT NP
Stage I (4;06 – 5;00)	1/11 (9%)	2/11 (18%)	1/11 (9%)	1/11 (9%)

Both the locative phrase and the overt patient NP are found in the same example, but both are in English. Billy corrects himself after this utterance, repeating the locative phrase in Cree.[39] Note that this example is also marked for plural. While none of our English-speaking transcribers heard this in either the target or actual utterances, its presence has been confirmed by a Cree consultant.

39 For a discussion of code-switching in the CCLAS corpus, refer to Pile (in prep).

(62) OVERT PATIENT NP AND LOCATIVE PHRASE – STAGE I

a. **Drops** wâsh chîh pichischit-in-ikiniu-u-**h** **my** **eye.**
Eng EMPH PAST release-by.hand-PASSIVE.3-3-**0.PL** **Eng** **Eng**
N P,DISC PVB ROOT-VTR.VBZ-PASSIVE-IIN-**IIN** **POSS.PRON.1** N
'Drops were put in my eye.'

Target: ['dɹɑps waʃ gʌ-bɪts-n-ɪgəno-o-_ m aj]
Actual: [ʤɹɑps ɑʃ tigə-bɪts-d-igənano-o-_ dm ʌj]
(B3-2006-02-28#599)

b. Nishchîshikuhch.
'In my eye.'

Most of the passive utterances in Stage I are non-SAP forms, with the exception of one utterance in the first session. This is another way in which Billy's speech in Stage I differs from CDS, where SAP passives constitute one third of passive productions. (63).

(63) PERSON OF DERIVED PATIENT SUBJECT – STAGE I

STAGE	SAP (1ST OR 2ND PERSON)	NON-SAP (3RD PERSON)
Stage I (4;06 – 5;00)	1/11 (9%)	10/11 (91%)

Every passive verb in Stage I is a passive derived from an actional verb, which suggests that children learning Cree may exhibit a similar difficulty in the acquisition of non-actional passives as do children learning English (e.g., Maratsos et al. 1985) (64).

(64) ACTIONAL VS. NON-ACTIONAL VERBS – STAGE I

STAGE	ACTIONAL VERB	NON-ACTIONAL VERB
Stage I (4;06 – 5;00)	11/11 (100%)	0/11 (0%)

Passive verbs in Billy's speech are derived from transitive verbs throughout this stage, and are inflected in either the Independent Indicative Neutral (IIN) or Conjunct Indicative Neutral (CIN) orders (65).[40]

(65) MORPHOLOGICAL CLASS AND INFLECTIONAL ORDER OF PASSIVE VERBS – STAGE I

STAGE	TRANSITIVE INANIMATE VERB (VTI)	TRANSITIVE ANIMATE VERB (VTA)	DITRANSITIVE (VTA)	INDEPENDENT ORDER (IIN)	CONJUNCT ORDER (CIN)
Stage I (4;06 – 5;00)	9/11 (82%)	2/11 (18%)	0/11 (0%)	2/11 (18%)	9/11 (82%)

The high number of TI verbs and Conjunct order inflection can be explained by the fact that Billy relies on 'do'-passives in this stage, which are derived from TI verb stems. As these utterances are all *wh*-questions or embedded relative clauses, they are inflected in the Conjunct order (Brittain 2001). This is an important observation, as previous work on NEC acquisition has demonstrated that the Conjunct order is acquired later than the morphologically simpler Independent order (Terry 2010; Rose & Brittain 2011). In later stages Billy relies less on such forms and the TI and Conjunct numbers decrease, to more closely approximate CDS.

40 Some of the inflectional morphology is not produced in this stage. Of the 9 verbs that are inflected in the Conjunct order, the inflectional morphology is produced on 7 (7/9; 78%).

5.4.2. Stage II – Age 5;02 – 5;05

The second stage of Billy's passive utterances includes sessions 5-7, where Billy is aged 5;02 to 5;05. This Stage consists of 13 passive utterances, which can be found in Appendix I, Conversations 9-16. In this stage, we find evidence that Billy is acquiring the passive construction.

5.4.2.1. Evidence of the acquisition of the passive construction

The three sessions that make up Stage II of Billy's acquisition are filled with errors and self-corrections, as well as passive-active alternations.

One two occasions, Billy rephrases his passive utterances. In the first session of Stage II (session 5), Billy adjusts his morphological choice following the example of the adult interlocutor, changing his utterance from a passive utterance to an impersonal utterance. Billy's choice of the passive at the start of this interchange sparks a miscommunication that is clarified over the following utterances. Both the passive form and the impersonal form are grammatical, but there is a subtle change in the interpretation. In the passive utterance in (66a), the derived patient of the passive verb has a specific referent. In the impersonal utterance in (66c), the unspecified subject of the verb has a general referent. Note that the tense of Billy's utterance is also corrected from the past tense to the future tense, which is confirmed with the subjunctive utterance in (66d).

(66) RECASTING OF PASSIVE VERB AS IMPERSONAL VERB – STAGE II

a. Billy: Chîh tipi-h-**îkiniu**-u wâsh.
PAST measure-by.instrument-**PASSIVE.3**-3 P,EMPH
PVB ROOT-VTI.VBZ-**PASSIVE**-IIN P,EMPH
'It was paid.'

Target: [dʒi dəp-i-gɛˈnoː-_ waʃ]
Actual: [dʒi təp-ʰi-təno-_ wəʃ]
(B3-2006-07-26#265)

b. Adult: Chîh tipi-h-**ich-âniu**-u â.
PAST measure-by.instrument-**DETRANS-IMPERS**-3 P,QST
PVB ROOT-VTI.VBZ-**VAI.VBZ-IMPERS**-IIN P,QST
'Was it already paid?'

c. Billy: Îhî chiki tipi-h-**ich-âniu**-u wâsh.
Yes FUT.3 measure-by.instrument-**DETRANS-IMPERS**-3 P,EMPH
P,AFF PVB ROOT-VTI.VBZ-**VAI.VBZ-IMPERS**-IIN P,EMPH
'Yes, it will be paid.'

Target: [eˈheʔ ɛtʃəkə təp-i-dˈz-anoː waʃ]
Actual: [ʔə̃hə̃ dʒɪ dəp-ʰi-ʣ-ano aʃ]
(B3-2006-07-26#267)

d. Billy: Graduate-uyânâ.
'When I graduate.'

e. Adult: Uh.
'Oh!'

In the second instance of self-correction in Stage II, Billy produces the grammatical utterance 'It has already been seen' with reference to some toys that he is being asked about. The caregiver asks for clarification, and he changes his utterance to 'It has already been thrown out.' The difference between the two utterances is in the verbalizer morpheme: they are otherwise phonologically identical verb stems with homophonous roots.[41] Billy's first utterance is the only grammatical passive of a non-actional verb in the corpus of Billy's speech (67a), but I interpret it as a speech error within the context of this exchange. Assuming this interpretation is correct, Billy produces no non-actional verbs, despite the fact that one third of passive verbs in CDS are passives of non-actional verbs.

(67) ERROR IN VERBALIZER SELECTION – STAGE II

a. Billy: Shâsh chîh **wâp-iht**-ikiniu-u.
already PAST **light-by.head**-PASSIVE.3-3
P,TIME PVB ROOT-VTI.VBZ-PASSIVE-IIN
'It's already been seen.'

Target: ['ʃaʃ ʤi wap-^{h}t^{h}-ɪk^{h}ən-o]
Actual: [ha ʤi jɑpˀ-t-əgɪn-ʌpˀ]

(B3-2006-10-14#445)

b. Adult: Chichîh iyân â mân.
'Did you have one before?'

41 The entirety of this interchange can be found in Conversation 12, §6.2 of Appendix I

c. Billy: Shâsh chîh **wâp-in**-ikiniu-u.
already PAST **throw.out-by.hand**-PASSIVE.3-3
P,TIME PVB **ROOT-VTR.VBZ**-PASSIVE-IIN
'It was already thrown out.'

Target: ['ʃaʃ ʤi wab-ən-ɪgən-o]
Actual: [haʃ ʤi wɑb-n-ɪgən-oʔ]

(B3-2006-10-14#447)

There is one instance of confusion that goes uncorrected in Stage II, as shown below in (68).

(68) CONFUSION BETWEEN INVERSE AND PASSIVE

a. BILLY'S UTTERANCE

Susie âh iht-â-t ni-chîh it-**ikiwi**-n n-ikâwî.
Susie PVB,CJ be-VAI.VBZ-3.S 1-PAST tell-**PASSIVE.1/2**-1/2 1-mother
N PVB,CJ ROOT-VAI.VBZ-CIN 1-PVB ROOT-**PASSIVE**-IIN 1-NAD
'Susie's place, s/he told me, my mother.'

Target: [(name) a-jtʰ-ah-t _-ʧ _-it-ʊkʊ-n n-ɪkawi]
Actual: [(name) o-jt-a-t ɳi-ʦta n-ʧ-it-əkʊ-n n-ɪkawi]

(B3-2006-11-06#628)

b. CORRECTED UTTERANCE (INVERSE)

Susie	âh	iht-â-t,	ni-chîh	it-**îkw**	n-ikâwî.
Susie	PVB,CJ	be-VAI.VBZ-3.S	1-PAST	tell-**INV**	1-mother
N	PVB,CJ	ROOT-VAI.VBZ-CIN	1-PVB	ROOT-**THM**	1-NAD

'My mother told me to go to Susie's place.'

In (68a), Billy produces something between a transitive inverse verb and a passive verb, resulting in a passive verb that appears to have a *by*-phrase. (Simply put, in this example the inverse morpheme indicates that the third person "my mother" is the subject and the first person is the object. See §6.7.4.2.3 for more discussion of inverse morphology in Billy's speech.) In primary analysis (translation), Luci Bobbish-Salt noted that it should have been an inverse, as constructed in (68b). During secondary analysis, she commented that the noun 'mother' in his actual utterance appears to be an afterthought, as shown in the translations of (68a). Note that the SAP passive (*-ikiwi*) and inverse morphemes (*-îkw*) are very similar.

Perhaps the best evidence that Billy understands the passive construction is his ability to form a passive verb from an active verb produced by the interlocutor. This demonstrates his understanding of the relationship between active and passive verbs (69).

(69) ACTIVE-PASSIVE ALTERNATION

a. Adult: Châ **nikwâ-t-**â-yin kiyipwâ pîsim.
FUT **snare-VTA.VBZ-**DIR-2.S of.course sun
PVB,CJ **ROOT-VTA.VBZ-**THM-CIN P,AFF NA
'You will catch the sun with your snare.'[42]

b. Adult: Akwâtitân û, châ nikwâtâyin kiyipwâ pîsim.
'I said, "You will catch the sun with your snare".'

c. Billy: Châkwân an "âh **nikwâ-t-âkiniwi-**t."
what that PVB,CJ **snare-VTA.VBZ-PASSIVE.3-**3.S
PRO,WH P,DEM.DST PVB,CJ **ROOT-VTA.VBZ-PASSIVE-**CIN
'What is the meaning of "âh nikwâtâkiniwit (it was snared)"?'

Target: [ˈʤagwan ən a nəgɔ-t-əgano-tʰ]
Actual: [tʰəgʌn _ ə gɑ-b-egəmʌ-ʃ]

(2006-10-14#517)

5.4.2.2. Passive forms attested in Stage II

In this section, I present the various morphological forms of Billy's passive utterances in Stage II, in comparison with the forms attested in Stage I, beginning with the morphological forms of the passive utterances, followed by "additional" morphology, the person of the patient, actional and non-actional verbs, and the morphological class and order of the passivized verb.

Unlike Stage I, no passives of causative verbs are attested in Stage II (70).

42 This utterance is a reference to a traditional Cree story in which the hero Chakapash snares the sun.

(70) Morphological form of passives – Stage II

Stage	Basic	Passive of causative	'Do'-passive	Passivized verb stem with medial	Passivized verb stem with applicative
Stage I (4;06 – 5;00)	4/11 (36%)	1/11 (9%)	6/11 (55%)	0/11 (0%)	0/11 (0%)
Stage II (5;02 – 5;05)	9/13 (69%)	0/13 (0%)	4/13 (31%)	0/13 (0%)	0/13 (0%)

On the other hand, as Billy's dependence on 'do'-passives decreases, we see an increase in the number of basic passives in Stage II.

Additional morphology is rare in both Stage I and Stage II.

(71) Additional morphology on passives – Stage II

Stage	Obviative marking	Plural marking	Locative phrase	Overt patient NP
Stage I (4;06 – 5;00)	1/11 (9%)	2/11 (18%)	1/11 (9%)	1/11 (9%)
Stage II (5;02 – 5;05)	1/13 (8%)	0/13 (0%)	0/13 (0%)	0/13 (0%)

The only first person passive utterance in Stage II is the problematic inverse-passive example discussed above in (68). This is very similar to Stage I, in which the vast majority of passive utterances are in the third person (72).

(72) PERSON OF DERIVED PATIENT SUBJECT – STAGE II

STAGE	SAP (1ST OR 2ND PERSON)	NON-SAP (3RD PERSON)
Stage I (4;06 – 5;00)	1/11 (9%)	10/11 (91%)
Stage II (5;02 – 5;05)	1/13 (8%)	12/13 (92%)

There is a single non-actional passive in Stage II, but as discussed above (67a and the surrounding discussion) it appears to have been spoken in error (73).

(73) ACTIONAL VS. NON-ACTIONAL VERBS – STAGE II

STAGE	ACTIONAL VERB	NON-ACTIONAL VERB
Stage I (4;06 – 5;00)	11/11 (100%)	0/11 (0%)
Stage II (5;02 – 5;05)	12/13 (92%)	1/13 (8%)

In both Stage I and Stage II, Transitive Inanimate verbs are passivized by Billy most frequently. This also accounts for the high numbers of non-SAP passives, as VTI passives are third person by necessity. In Stage II, however, there is an increase in the number of passives in the Independent Order. This coincides with an increase in basic passives, which are more likely to be in the Independent order than, for example, 'do'-passives, which are typically Conjunct order.

(74) MORPHOLOGICAL CLASS AND INFLECTIONAL ORDER OF PASSIVE VERBS – STAGE II

STAGE	TRANSITIVE INANIMATE VERB (VTI)	TRANSITIVE ANIMATE VERB (VTA)	DITRANSITIVE (VTA)	INDEPENDENT ORDER (IIN)	CONJUNCT ORDER (CIN)
Stage I (4;06 – 5;00)	9/11 (82%)	2/11 (18%)	0/11 (0%)	2/11 (18%)	9/11 (82%)
Stage II (5;02 – 5;05)	8/13 (62%)	5/13 (38%)	0/13 (0%)	6/13 (46%)	7/13 (54%)

Inflectional morphology is always produced in Stage II, which marks an improvement over Stage I.

5.4.3. Stage III – Age 5;10

Stage III is made up of the final two sessions of Billy's speech, sessions 9 and 10, and includes 11 passive verbs. The passive utterances in this stage can be found in Appendix I, Conversations 17-25. Stage III marks a notable improvement in Billy's passive utterances. In this session we find passives of a wider range of verbs, including those with applicative morphology and morphological causatives. We also find a number of SAP passives, and passives with medials. More patient NPs are in evidence in this session as well.

5.4.3.1. Passive forms attested in Stage III

In this section, I present examples of Billy's passives in Stage III, together with comparisons against Stages I and II. I show that his understanding of passive constructions develops significantly in Stage III.

To begin with, there are two passives of morphological causatives, using two different causative morphemes. Note an additional complexity in (75a), where the relative root (*is-*) of the verb refers to the English phrase *up and down.*

(75) PASSIVES OF CAUSATIVE VERBS – STAGE III

a. Âukw â an up and down âh is-piyi-**ht**-âkiniwi-ch.
THAT.ONE P,QST THAT Eng Eng Eng PVB,CJ thusly-DYN-**CAUS**-PASSIVE.3-0.S
PRO,FOC P,QST P,DEM.DST ENG ENG ENG PVB,CJ ROOT-VI.VBZ-**VTI.VBZ**-PASSIVE-CIN
'Is this what is used to make it go up and down?'

Target: [aw a n ʌp an tawn a jɪs-pi-ht-akanow-ʧ]
Actual: [awga n ab ə dɪnd awis-pi-td-agəno-ʧ]
(B3-2007-03-19#617)

b. Mîn kâh pim-ipiyi-**h**-âkiniwi-t Susie.
again PVB,CJ MOVE-DYN-**CAUS**-PASSIVE.3-3.S Susie
P,QUANT PVB,CJ ROOT-VI.VBZ-**VTA.VBZ**-PASSIVE-CIN N
'Then it was Susie's turn, Susie had a ride.'
Lit. 'Then Susie was driven.'

Target: ['mɪn ga bəm-bi-h-agənɔ-t (name)]
Actual: [mɪn ga vɪm-bi-^{h}h-agəno-d (name)]
(B3-2007-04-02#62)

In addition, there are three passives that include classificatory medials, all of which involve the 'metal mineral' medial in the verb 'to videotape' (Vaughan 2010). One example

is given below in (76), followed by a summary of morphological forms in Stages I-III (78).

(76) PASSIVE WITH A MEDIAL – STAGE III

Âukw	an	châ	misin-**âpisk**-ihw-âkiniwi-t
that.one	that	FUT	write-**metal,mineral**-VTA.VBZ-PASSIVE.3-3.S
PRO,FOC	P,DEM.DST	PVB,CJ	ROOT-**MEDIAL**-VTA.VBZ-PASSIVE-CIN

'It will be the one that is filmed.'

Target:	[awk^{w}	ən	ʤʌ	msn-ʌmsˈk-w-agənɔw-t^{h}]
Actual:	[awg	ən	ʤə	nbɪsn-ask-w-ɔdnʊ-t^{h}]

(B3-2007-04-02#303)

Also in this stage, Billy begins to use passives of verb stems with applicative morphology (derived ditransitives), as in the following examples. Recall that morphophonology obscures the applicative morpheme, but I have undone this process and have presented each morpheme, as discussed in §4.4.2.5. I include an example below in (77).

(77) PASSIVIZED VERB STEM WITH APPLICATIVE MORPHOLOGY – STAGE III

Ni-chîh	wîht-im-**iw**-ikiwi-n	apishîsh...
1-PAST	tell-by.head-**APPLIC**-PASSIVE.1-1/2	little
1-PVB	ROOT-VTA.VBZ-**APPLIC**-PASSIVE-IIN	P,QUANT

'I was told a little about [angels]...'

Lit: 'To me it was told a little about [angels]...'

Target:	[n̩-ʧi	wiht-ɪm-a-kɔw-n	ɪpʃiʃ]
Actual:	[mə-ʤi	tʰ-əm-ɑ-gʌ-n	ɪpʃiʃ əwedɑ]

(B3-2007-03-19#370)

In Stage III, Billy uses every morphological form of the passive available to adult speakers, in roughly equal distribution. This marks a notable development from Stage I, where Billy was heavily reliant on 'do'-passives (78). A graph of Billy's use of morphological forms is given in Figure 4.

(78) MORPHOLOGICAL FORM OF PASSIVES – STAGE I-III

STAGE	BASIC	PASSIVE OF CAUSATIVE	'DO'-PASSIVE	PASSIVIZED VERB STEM WITH MEDIAL	PASSIVIZED VERB STEM WITH APPLICATIVE
Stage I (4;06 – 5;00)	4/11 (36%)	1/11 (9%)	6/11 (55%)	0/11 (0%)	0/11 (0%)
Stage II (5;02 – 5;05)	9/13 (69%)	0/13 (0%)	4/13 (31%)	0/13 (0%)	0/13 (0%)
Stage III (5;10)	3/11 (27%)	2/11 (18%)	1/11 (9%)	3/11 (27%)	2/11 (18%)

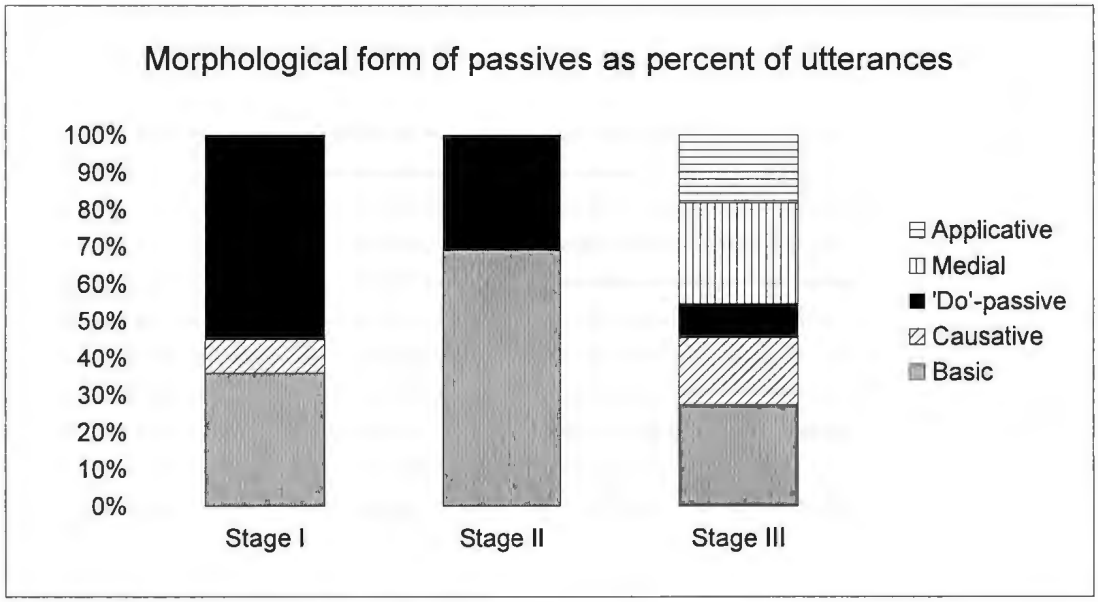

Figure 4: Morphological form of passives

In Stage III we find an increase in the number of overt patient NPs. One was given above in (75b), and another example with an inanimate patient NP is given below in (79). A summary across the three sections is given in (80).

(79) OVERT PATIENT NP – STAGE III

Misin-âpisk-ihw-âkiniu-u	â	**iskîtû**	utâh.
write-metal,mineral-VTA.VBZ-PASSIVE.3-3	P,QST	**skidoo**	here
ROOT-MEDIAL-VTA.VBZ-PASSIVE-IIN	P,QST	NA	P,DEM.LOCATION

'Is the skidoo going to be filmed like this?'

Target:	[psn-ʌbˈsk-w-agən-o	a	skidu	ˈʊta]
Actual:	[ɪpsn-ɑpsk-^{h}-ɑgən-ol	ɑ	sgido	ɪdæ]

(B3-2007-04-02#304)

(80) ADDITIONAL MORPHOLOGY ON PASSIVES – STAGE I-III

STAGE	OBVIATIVE MARKING	PLURAL MARKING	LOCATIVE PHRASE	OVERT PATIENT NP
Stage I (4;06 – 5;00)	1/11 (9%)	2/11 (18%)	1/11 (9%)	1/11 (9%)
Stage II (5;02 – 5;05)	1/13 (8%)	0/13 (0%)	0/13 (0%)	0/13 (0%)
Stage III (5;10)	0/11 (0%)	1/11 (9%)	0/11 (0%)	5/11 (45%)

Thus we see that use of patient NPs rises, albeit not significantly, in Stage III. This is likely due to the fact that patient NPs are uncommon in Cree passive constructions, given the availability of pronominal clitics and cross-referencing.

Billy forms SAP passives more frequently in Stage III than in Stages I and II.

(81) SAP PASSIVES – STAGE III

a. **Ni**-chîh wîht-im-iw-**ikiwi-n** apishîsh late
1-PAST tell-by.head-APPLIC-**PASSIVE.1/2-1/2** little Eng
1-PVB ROOT-VTA.VBZ-APPLIC-**PASSIVE-IIN** P,QUANT ADV
âh kiwishim-u-ch.
PVB,CJ go.to.bed-VAI.VBZ-3.PL
PVB,CJ ROOT-VAI.VBZ-CIN
'I was told they go to bed a little too late.'

Target: [n̥-ʧi wiht-ɪm-a-kow-n ɪpiʃ lejtʰ a kɔwʃim-ʊ-ʧ]
Actual: [ən-ʤiʤi wet-əm-ɑ-gʊ-n ɪpʃiʃ ledaj ɑ gɑʃum-ɪ-ʧ]
(B3-2007-03-19#372)

b. **Ni**-chîh misinâpiski-hu-**kiwi-n** wâsh shâsh.
1-PAST videorecord-by.instrument-PASSIVE.**1/2-1/2** EMPH already
1-PVB ROOT-VAI.VBZ-PASSIVE-**IIN** P,DISC P,TIME
'I was already videotaped. / I already had my picture taken.'

Target: [n̥-ʧi msnapsk-u-ku-n əwɑʃ ɛʃ]
Actual: [_-ʤɪ msnæpsk-o-ko-n ɑʃ ɑʃ əmiaj]

(B3-2007-03-19#582)

Example (81a) is the second utterance in a series, the completion of the previous utterance 'I was told a little about...', which is given in (77). A comparison of SAP forms in Stages I-III is given in (82).

(82) PERSON OF DERIVED PATIENT SUBJECT – STAGE I-III

STAGE	SAP (1ST OR 2ND PERSON)	NON-SAP (3RD PERSON)
Stage I (4;06 – 5;00)	1/11 (9%)	10/11 (91%)
Stage II (5;02 – 5;05)	1/13 (8%)	12/13 (92%)
Stage III (5;10)	3/11 (27%)	8/11 (73%)

Despite the developments in his speech by Stage III, Billy is still not producing passives formed from non-actional verbs. The data for all three Stages is given in (83).

(83) ACTIONAL VS. NON-ACTIONAL VERBS – STAGE I-III

STAGE	ACTIONAL VERB	NON-ACTIONAL VERB
Stage I (4;06 – 5;00)	11/11 (100%)	0/11 (0%)
Stage II (5;02 – 5;05)	12/13 (92%)	1/13 (8%)
Stage III (5;10)	11/11 (100%)	0/11 (0%)

Stage III is the first time that the majority of passive verbs are Transitive Animate verbs, and inflected in the Independent order. This stage also marks the first use of ditransitive stems in passive constructions. I take this to be evidence that Billy's linguistic abilities are increasing. For instance, Billy relies less and less on conventionalized 'do'-passives, producing only one in this session. Recall that 'do'-passives are formed from TI stems and inflected in the Conjunct order in every recorded use. As Billy produces only one 'do'-passive expression in Stage III, his speech begins to resemble CDS, where the majority of passive verbs are formed from VTA stems and roughly half of verbs are inflected in the Conjunct order (84). A graph of Billy's use of morphological verb classes in passive utterances is given in Figure 5, and a graph of his use of inflectional orders is given in Figure 6.

(84) MORPHOLOGICAL CLASS AND INFLECTIONAL ORDER OF PASSIVE VERBS – STAGE I-III

STAGE	TRANSITIVE INANIMATE VERB (VTI)	TRANSITIVE ANIMATE VERB (VTA)	DITRANSITIVE (VTA)	INDEPENDENT ORDER (IIN)	CONJUNCT ORDER (CIN)
Stage I (4;06 – 5;00)	9/11 (82%)	2/11 (18%)	0/11 (0%)	2/11 (18%)	9/11 (82%)
Stage II (5;02 – 5;05)	8/13 (62%)	5/13 (38%)	0/13 (0%)	6/13 (46%)	7/13 (54%)
Stage III (5;10)	4/11 (36%)	5/11 (45%)	2/11 (18%)	6/11 (55%)	5/11 (45%)

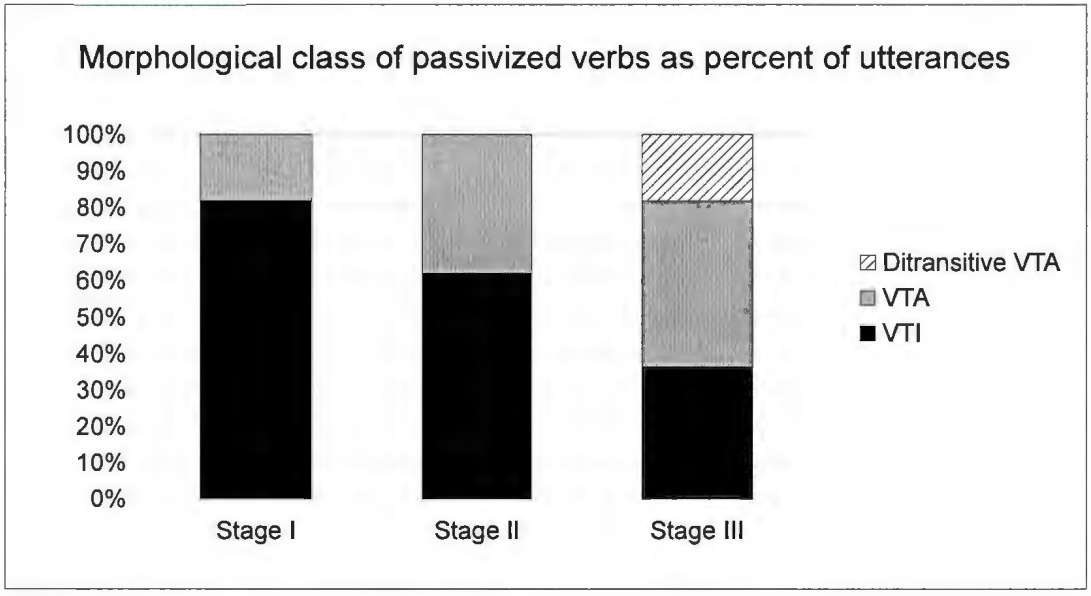

Figure 5: Morphological class of passives

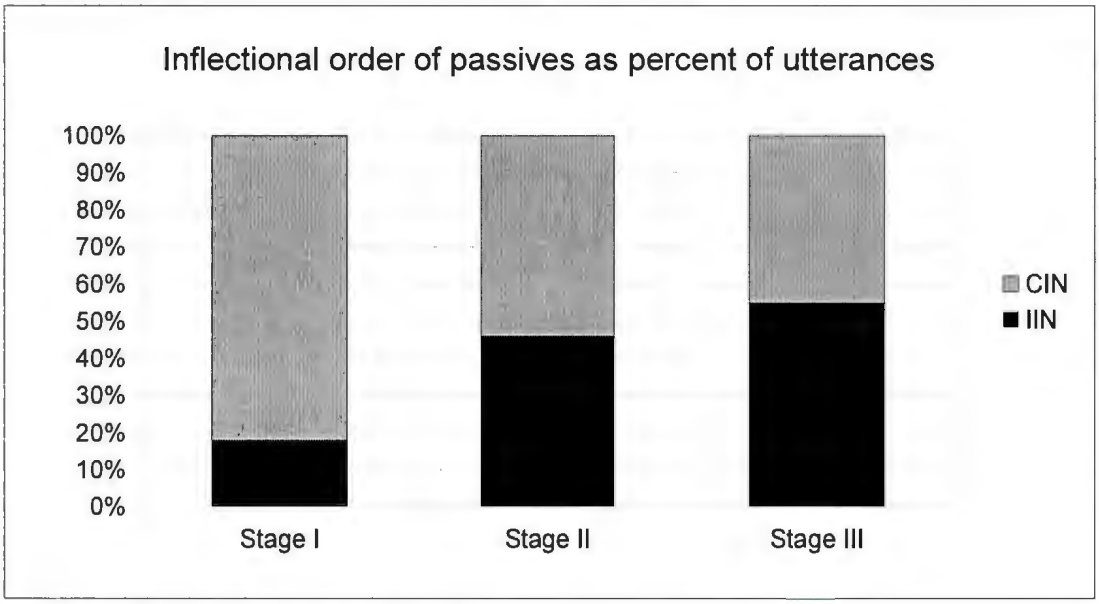

Figure 6: Inflectional order of passives

5.4.4. Comparison to CDS

In the above section I have shown the development of Billy's passive productions up to Stage III, which is the most adult-like of the three stages. In this section, I compare Billy's productions in Stages I - III (4;06 - 5;10) to his caregiver's productions. This section requires adopting the assumption that CDS approximates conversational Cree, which is not necessarily true. What we will see is that Billy's speech has developed significantly, and that his acquisition of the passive construction is comprehensive but by no means complete.

Consider morphological forms of the passive in Billy's speech as compared to CDS.

(85) MORPHOLOGICAL FORM OF PASSIVES – BILLY'S AND CDS

SPEAKER	BASIC	PASSIVE OF CAUSATIVE	'DO'-PASSIVE	PASSIVIZED VERB STEM W/ MEDIAL	PASSIVIZED VERB STEM W/ APPLICATIVE
Billy Stage I (4;06 – 5;00)	4/11 (36%)	1/11 (9%)	6/11 (55%)	0/11 (0%)	0/11 (0%)
Billy Stage II (5;02 – 5;05)	9/13 (69%)	0/13 (0%)	4/13 (31%)	0/12 (0%)	0/12 (0%)
Billy Stage III (5;10)	3/11 (27%)	2/11 (18%)	1/11 (9%)	3/11 (27%)	2/11 (18%)
CDS	55/86 (64%)	4/86 (5%)	2/86 (2%)	20/86 (23%)	5/86 (6%)

By Stage III, Billy shows an adult-like ability to use all of the recorded forms of the passive that occur in CDS. In this regard, Billy's acquisition is very advanced, though the percentages of his usage of various forms in Stage III are influenced by the small sample size and do not approximate usage of various forms in CDS.

With respect to the possible morphological complexity of passive utterances, Billy does not produce the same variety of morphology as his caregiver. As this morphology is optional, I present Billy's speech as a percentage of his total utterances, as I have done for CDS. While he shows knowledge of obviative marking, plural marking, locative phrases and patient NPs, we have no evidence that he is aware of habitual or subjunctive mood marking on passives, diminutive morphology, or adverbial preverbs. Note, however, that this morphology may appear elsewhere in Billy's speech, only not yet on passives (86).

(86) ADDITIONAL MORPHOLOGY ON PASSIVES – BILLY'S AND CDS

SPEAKER	OBVIA-TIVE MARKING	PLURAL MARKING	LOCATIVE PHRASE	OVERT PATIENT NP	HABIT-UAL MARKING	DIMINU-TIVE	SUBJUNC-TIVE	ADVERB-IAL PREVERB
Billy Stage I (4;06 – 5;00)	1/11 (9%)	2/11 (18%)	1/11 (9%)	1/11 (9%)	0/11 (0%)	0/11 (0%)	0/11 (0%)	0/11 (0%)
Billy Stage II (5;02-5;05)	1/13 (8%)	0/13 (0%)	0/13 (0%)	0/13 (0%)	0/13 (0%)	0/13 (0%)	0/13 (0%)	0/13 (0%)
Billy Stage III (5;10)	0/11 (0%)	1/11 (9%)	0/11 (0%)	5/11 (45%)	0/11 (0%)	0/11 (0%)	0/11 (0%)	0/11 (0%)
CDS	3/86 (4%)	16/86 (19%)	1/86 (1%)	9/86 (11%)	1/86 (1%)	2/86 (2%)	3/86 (4%)	3/86 (4%)

While SAP forms appear to be difficult to acquire, Billy's passive utterances approximate his caregiver's by Stage III. Note, however, that Billy repeats an SAP utterance twice in Stage III (see the discussion surrounding example (81a) and Appendix I, Conversation 20). Thus, his acquisition of SAP passives may not be as comprehensive as they appear to be, based on these numbers (87).

(87) PERSON OF DERIVED PATIENT SUBJECT – BILLY'S AND CDS

SPEAKER	SAP (1ST OR 2ND PERSON)	NON-SAP (3RD PERSON)
Billy Stage I (4;06 – 5;00)	1/11 (9%)	10/11 (91%)
Billy Stage II (5;02 – 5;05)	1/13 (8%)	12/13 (92%)
Billy Stage III (5;10)	3/11 (27%)	8/11 (73%)
CDS	28/86 (33%)	58/86 (67%)

Throughout the corpus, Billy produces no non-actional passives in an adult-like way (recall that the one non-actional passive in the corpus is self-corrected and appears to be a mistake, as in §5.4.2.1). It seems that he has yet to acquire an understanding of this type of passive verb, and in this regard his speech is not adult-like (88).

(88) ACTIONAL VS. NON-ACTIONAL VERBS – BILLY'S AND CDS

SPEAKER	ACTIONAL VERB	NON-ACTIONAL VERB
Billy Stage I (4;06 – 5;00)	11/11 (100%)	0/11 (0%)
Billy Stage II (5;02 – 5;05)	12/13 (92%)	1/13 (8%)
Billy (5;10)	11/11 (100%)	0/11 (0%)
CDS	60/86 (70%)	26/86 (30%)

Billy's reliance on 'do'-passives initially biased the distribution of morphological verb classes in his passive utterances to VTI stems. This is unlike adult speech, in which

VTA stems predominate. By Stage III, Billy's speech is adult-like in that the majority of his passive utterances are derived from VTA stems (transitive and ditransitive). However, note that Billy's speech is unlike adult speech in that he produces no passives of transitive AI verbs. This suggests that passives of morphologically intransitive verbs are more difficult to acquire than passives of transitive verbs. An interesting question for future research will be how Billy acquires the difference between passives of transitive AI verbs, which have a patient subject, and passives of AI+Adjunct verbs, which have a generic human agent subject (89).

(89) MORPHOLOGICAL CLASS OF PASSIVE VERBS – BILLY'S AND CDS

SPEAKER	TRANSITIVE INANIMATE VERB (VTI)	TRANSITIVE ANIMATE VERB (VTA)	TRANSITIVE AI VERB (VAI)	DITRANSITIVE VTA
Billy Stage I (4;06 – 5;02)	9/11 (82%)	2/11 (18%)	0/11 (0%)	0/11 (0%)
Billy Stage II (5;02 – 5;05)	8/13 (62%)	5/13 (38%)	0/13 (0%)	0/13 (0%)
Billy Stage III (5;10)	4/11 (36%)	5/11 (45%)	0/11 (0%)	2/11 (18%)
CDS	27/86 (31%)	39/86 (45%)	6/86 (7%)	14/86 (16%)

Billy was exposed to passive verbs bearing dubitative preterit inflection in 5% of the utterances he heard. Throughout the corpus of his speech, he only produces passive verbs bearing indicative neutral inflection. Despite an early predominance of Conjunct

order inflection, due to his reliance on 'do'-passives, his usage of the Independent and Conjunct orders develops to a point where it is roughly similar to usage in CDS (90).

(90) INFLECTIONAL ORDER OF PASSIVE VERBS – BILLY'S AND CDS

SPEAKER	INDEPENDENT INDICATIVE NEUTRAL (IIN)	CONJUNCT INDICATIVE NEUTRAL (CIN)	INDEPENDENT DUBITATIVE PRETERIT (IDP)
Billy Stage I (4;06 – 5;00)	2/11 (18%)	9/11 (82%)	0/11 (0%)
Billy Stage II (5;02 – 5;05)	6/13 (46%)	7/13 (54%)	0/13 (0%)
Billy Stage III (5;10)	6/11 (55%)	5/11 (45%)	0/11 (0%)
CDS	36/86 (42%)	46/86 (54%)	4/86 (5%)

5.4.5. Summary

What I have shown in this section is that Billy's acquisition of the passive develops over three Stages. In Stage I it is difficult to pinpoint how much he knows about passive constructions, though it seems clear that he has acquired the passive morpheme. In Stage II there is evidence that he is starting to understand the function of the passive morpheme, and make mistakes in his verbal composition and self-corrects. In Stage III Billy shows a much wider range of constructions, with more complex passive verbs, such as derived ditransitive verbs and morphological causatives. He shows a marked improvement from Stages I and II. However, Billy appears to have difficulty acquiring passives of non-actional verbs. Even so, his speech closely resembles CDS, though with a slight reduction in morphological complexity and inflectional variety.

5.5. Discussion

Billy's linguistic development is similar to development in some other non-Indo-European languages in that the speed with which he develops a sophisticated understanding of the passive construction is remarkable. He is exposed to a very high rate of passive utterances in CDS, which is a factor that helps to explain this fact.

One surprising aspect of Billy's acquisition of passives is that SAP passives appear later than non-SAP passives. This is unlike Zulu acquisition, where Suzman found that children produced first person adversitive passives first (Suzman 1985). I believe that a likely explanation for this pattern has to do with two factors: (i) the increased morphological complexity of TA passive verbs in Cree, and (ii) the conventionalized use of the 'do'-passive, which is a non-SAP form.

Recall that Transitive Animate passives require the selection of an allomorph based on the person of the derived subject (SAP vs. non-SAP), which adds a layer of complexity to the acquisition of these forms. Furthermore, TA verbal stems in the active voice are more complex than other verbal stems because the projection of two animate arguments requires the direct/inverse system, so it is possible that Billy acquires TA verbs, both active and passive, later than TI verbs (cf. Allen & Crago 1996 on Inuktitut inflections). This is an interesting question for future work. It is significant that these passives appear late, given that they constitute the majority of the passives in the CDS.

Note also that Billy relies on 'do'-passives in his first passive utterances ('How do you do this?'). This is a non-SAP passive of a Transitive Inanimate verb in Cree, inflected in the Conjunct order. This is a highly useful phrase for a child learner. I speculate that

Billy first acquired the 'do'-passive as an unanalyzed chunk, and find some supportive evidence for this hypothesis in the corpus. This is an important observation, since Conjunct order is argued to be more complicated for the Cree learner (Terry 2010, Rose & Brittain 2011). Billy's passives are inflected in the Conjunct order to a very high degree in the first stage, because of his reliance on 'do'-passives. Unfortunately, the corpus of Billy's speech does not start early enough (4;06), and the corpus of the younger speaker Ani's speech does not continue late enough (3;08) to test whether 'do'-passives are in fact used by children to begin analysis the passive system,[43] so I must leave this question to future researchers investigating the speech development of Cree children. The idea that Cree children first acquire basic linguistic systems and use them to begin to analyze more complex linguistic constructions is not new: this same pattern has been found in Ani's acquisition of the NEC metrical system (Swain 2008) and intransitive inflectional morphology (Terry 2010; for an overview of Ani's acquisition see Rose & Brittain 2011).

Billy does not produce passivized non-actional verbs. This resembles findings for Inuktitut (Allen & Crago 1996), but not for Quiche and Sesotho (Pye & Quixtan Poz 1988; Kline & Demuth 2010). Only one non-actional passive was produced (1/35; 3%), and it appears to be a mistake, as Billy self-corrects his utterance to an actional verb. More data is needed to really assess the acquisition of non-actional passives in Cree.

Overall, Billy's acquisition of the passive construction shows a U-shaped development pattern (e.g., Marcus et al. 1992), *contra* the Maturation Hypothesis (Borer

43 Note that recordings of Ani continue until 4;03, but no recordings have been translated or processed past 3;08.

& Wexler 1987). In Stage I (4;06 – 5;00), his use of passive morphology is productive, and his passive utterances are relatively error-free, though the majority of his passive utterances are 'do'-passives. Furthermore, we see no evidence that he has acquired the syntax of the passive. Thus, at this stage he has acquired passive morphology and passive words, but not passive grammar. In Stage II (5;02 – 5;05) there is evidence that he engages in an analysis of the syntax of the passive system, and during this stage he shows an understanding of the relationship between passive and active verb forms. This is the stage in which he produces the most errors. By Stage III there is a noticeable increase in the complexity of his passive utterances, which are in many respects adult-like, suggesting that by 5;10 he has acquired the syntax of the passive.

Chapter 6 – The acquisition of unaccusativity

6.1. Introduction

The purpose of this chapter is to investigate Billy's acquisition of unaccusativity in the subset of intransitive verbs. I begin by reviewing unaccusativity from a theoretical perspective in §6.2, then I give an overview of the literature on the acquisition of unaccusativity in §6.3. In §6.4 I introduce the subset of verbs of interest in Billy's speech, that is the set of *-piyi* verbs. I discuss the methodology with which I investigate this set of verbs in §6.5. In §6.6 I consider *-piyi* verbs in CDS, and in §6.7 I present an analysis of these verbs in Billy's speech. I conclude in §6.8 with a discussion.

6.2. Overview of unaccusativity

The theory of unaccusativity seeks to explain cross-linguistic differences in the syntactic behaviour of intransitive verbs by positing two classes of intransitive verbs that differ in their underlying syntactic representations. In the Minimalist terminology, the argument of an unergative verb is merged in subject position, while the argument of an unaccusative verb merged in object position. A simplified schematization is provided below in (91).

(91) STRUCTURE OF INTRANSITIVE VERBS

a. Unergative: NP $[_{VP}$ V]

b. Unaccusative: $[_{VP}$ V NP/CP]

(Levin & Rappaport Hovav 1995:3, ex.1)

These ideas were first formulated by Perlmutter as the Unaccusative Hypothesis (Perlmutter 1978; see also, for example, Chomsky 1981; Burzio 1986). Perlmutter observed that semantic sub-classes share syntactic behaviour, for example that change of state verbs are unaccusatives. This has been confirmed in a number of other languages.

In GB terms, the underlying object of an unaccusative verb raises to subject position to get Nominative case, forming an A-chain, while the subject of an unergative verb is base-generated in subject position.[44] These two types of verbs form causatives in different ways. Unaccusative verbs with related transitive verbs enter into the causative-inchoative alternation (Levin 1993:27), whereas unergative verbs do not alternate (92).

(92) CAUSATIVE-INCHOATIVE ALTERNATION

a. UNACCUSATIVE (ALTERNATES)

i.	The cup broke	INCHOATIVE
ii.	Janet broke the cup	CAUSATIVE

(Levin 1993:29, ex.12)

b. UNERGATIVE (DOES NOT ALTERNATE)

i.	The doll giggled	UNERGATIVE
ii.	*Peter giggled the doll	*TRANSITIVE CAUSATIVE
iii.	Peter made the doll giggle	PERIPHRASTIC CAUSATIVE

(Borer & Wexler 1987:159, ex. 44)

Within the Minimalist Program (Chomsky 1995), *v*-projections are understood to constitute phase boundaries, such that only the head and specifier(s) of the *v*P are

44 See §4.3.1 for more discussion of argument raising in GB.

available to syntactic functions higher in the derivation.[45] Unaccusative verbs are understood to project a defective *v*P, which does not project an external argument, does not assign Accusative case, and does not constitute a phase boundary (Wexler 2004:168, ex. 19). In other words, the complement of VP is still available to the subject position (Spec-TP) for purposes of feature-checking (Agree), and case assignment.

(93) DERIVATION OF AN UNACCUSATIVE VERB (MINIMALIST)
The vase$_i$ T *v* V broke t_i

Because both unergative and unaccusative verbs have the same superficial surface appearance, an intransitive verb with a single subject, unaccusative structures pose an acquisition problem, in terms of learnability. The challenge can be stated differently, depending on one's theoretical bent: (i) the acquisition of the mismatch between grammatical roles and thematic roles; (ii) the acquisition of structures requiring the formation of an A-chain; (iii) the acquisition of defective *v*-projections as opposed to full *v*-projections.

6.3. Unaccusativity acquisition literature

In this section, I provide a brief overview of the literature on the acquisition of unaccusativity. Much current work takes the Maturation Hypothesis (Borer & Wexler 1987) as a starting point. I restate the hypothesis here, as well as the Universal Phase Hypothesis (Wexler 2004), but refer the reader to §4.3.1 for an in-depth overview of the

45 See §4.3.1.1 for more on defective *v*-projections.

same.

6.3.1. The Maturation Hypothesis and unaccusativity

The Maturation Hypothesis (Borer & Wexler 1987), which holds that children cannot form A-chains until around age 4;00, has implications for the acquisition of unaccusativity. Since unaccusative verbs require A-chain formation, children who lack the ability to form an A-chain are predicted to have difficulty acquiring unaccusativity.

The Maturation Hypothesis has been updated to incorporate current syntactic theory in a hypothesis known as the Univeral Phase Hypothesis (UPH) (Wexler 2004), which holds that pre-mature children always understand *v* to be a phase boundary. Like passives, unaccusative verbs are understood to project a defective *v* which does not define a phase boundary. The inability to interpret a *v*-projection as defective (that is, as not constituting a phase boundary) would be an issue for children acquiring unaccusativity.

As children produce unaccusative verbs at a young age, Borer & Wexler (1992) propose the Unergative Misanalyis Hypothesis (UMH) to account for child speech.[46]

6.3.1.1. Unergative Misanalysis

A pre-mature child who is unable to form an A-chain or to interpret a *v*-projection as defective still undertakes an evaluation of language (Borer & Wexler 1987). The UMH holds that children presume all subjects to have been base-generated in subject position

46 Another potential misanalysis is the non-raising misanalysis, where children assume that the object of an unaccusative verb remains *in situ*. No evidence has been found to support this (Sano, Endo & Yamakoshi 2001).

(Borer & Wexler 1992). Thus, children will not structurally differentiate between verbs that enter into the causative-inchoative alternation (unaccusative) and verbs that do not (unergative). Since there will be no way for children to determine that only unaccusative verbs form lexical causatives, they may assume that any verb may do so. This accounts for the over-generalization of lexical causatives, as in **Peter giggled the doll*, which is not uncommon in child English.

Results of experimental studies have yielded mixed results. Evidence in support of the UMH comes from the acquisition of Russian genitive-of-negation constructions (Babyonyshev et al. 2001) and Russian locative inversion constructions (Kallestinova 2007). Both studies found, through production tasks, that children have difficulty differentiating between unergative and unaccusative verbs, particularly around age three. Evidence against the UMH comes from two studies of Japanese acquisition, a study of "full" unaccusatives (unaccusatives with a *by*-phrase) (Sano, Endo, & Yamakoshi 2001),[47] and a study of *te-iru* aspect constructions (Shimada & Sano 2007). Both of these studies found that children are able to comprehend structures requiring A-chains by age 3.[48] As this thesis is not experimental in nature and the results I report do not bear on the UMH, I do not go into any further detail here, but I refer the interested reader to Appendix IV for a more detailed overview of these experimental studies.

47 Sano, Endo & Yamakoshi (2001) was later reanalyzed in favour of the Unergative Misanalysis Hypothesis by Machida, Miyagawa, & Wexler (2004).

48 Comprehension has been argued to precede production; see, for example, Clark (1993:246).

6.3.2. Longitudinal studies of the acquisition of unaccusativity

To the best of my knowledge, only one other longitudinal study of the acquisition of unaccusativity has been undertaken, of Inuktitut (Allen & Crago 1993).[49] Though their classification of intransitive Inuktitut verbs into unergatives and unaccusatives is preliminary, they are able to demonstrate that children incorrectly form lexical causatives for both unergatives and those unaccusatives that do not enter into the causative-inchoative alternation, as in the following examples (94).

(94) CAUSATIVE OVERGENERALIZATIONS IN INUKTITUT[50]

a.	UNERGATIVE (3;05.15)	CORRECTED UTTERANCE
	?Niuvirialaurlagit?	Niuvirtilaurlagit?
	niuviq-giaq-lauq-lagit?	niuviq-tit-lauq-lagit
	buy-begin-POL-IMP.1sS	buy-CAUS-POL-IMP.1sS
	'Want me to go buy you?'	'Want me to let you buy something?'

Context: Suusi (speaker) is acting as a cashier in a pretend store

(Allen & Crago 1993:22, ex. 39b)

49 There is a study of the acquisition of change of state verbs in Quechua (Courtney 2002), which does not address unaccusativity directly. Rather, Courtney focuses on the acquisition of basically intransitive predicates (unaccusative, internally caused) as opposed to basically transitive predicates (externally caused). (See Levin & Rappaport Hovav 1995 for internal vs. external cause and cross-linguistic differences in the construal of event causation.) She finds that children initially analyze all change of state predicates as basically transitive, which she interprets as evidence that children first understand all change of state events to be externally caused. Thus, the difficulty for Quechua-speaking children is the acquisition of internal cause.

50 In this example I change Allen & Crago's (1993) glossing of *-tit-* from 'CSV' (causative mood) to 'caus' (causative derivational morphology), following the distinction drawn in Allen (1998).

b.	UNACCUSATIVE (3;01.15)	CORRECTED UTTERANCE
	* Ijukkalagu?	Ijukkatillagu?
	ijukka-lagu	ijukka-tit-lagu
	fall-IMP.1sS.3sO	fall-CAUS-IMP.1sS.3sO
	'Shall I fall it?'	'I will make it fall.'

Context: Suusi proposes pushing a stuffed animal down the stairs

(Allen & Crago 1993:23, ex.41b)

Allen & Crago (1993) go on to demonstrate that this difficulty with unergatives and unaccusatives can be extended to transitivity alternations in a more general sense. They observe confusion between transitive and intransitive verbs, and difficulty with antipassive morphology, case-marking and verbal inflections. They propose that this difficulty does not arise because children lack the ability to form A-chains, but from the structure of Inuktitut grammar. As an ergative language, Inuktitut is typically analyzed as requiring NP movement in an overwhelming number of constructions (see, e.g., Johns 1992; Murasugi 1992). Children are consistently exposed to and producing constructions requiring A-chain formation. Therefore, it is not surprising that children do not exhibit a specific difficulty with the acquisition of unaccusativity, as they appear to be able to form A-chains from a very young age.

I will continue on to introduce my own study in the next sections, beginning with an overview of unaccusativity in NEC.

6.4. Unaccusativity in NEC: *piyi*-derived verbs

Recall from Chapter 2 that Algonquian verbs are composed minimally of a root and a verbalizer. In this study I will focus on verbs derived by the verbalizer *-piyi*. This set of verbs is of particular interest because the same verbalizer derives both unaccusative and unergative verbs, and both AI and II verbs (Brittain in press).

6.4.1. Previous discussions of *-piyi*

Previous discussions of *-piyi* in the literature have centred on the equivalent Plains Cree morpheme *-payi*. Wolfart (1973:71) attributes the meaning 'move' to the *-payi* verbalizer. Hirose (2003) analyzes *payi*-derived verbs as "dynamic" unaccusatives (e.g., inchoatives), and notes a subclass which denotes fast movement. He attributes the feature [dynamic] to the *-payi* verbalizer. Brittain (in press) and Johansson & Brittain (2012) provide a more detailed analysis of this verbalizer, for Naskapi and NEC respectively.

6.4.2. Classification of *piyi*-derived verbs

Piyi-derived verbs fall into three subclasses according to the semantics of the root morpheme. Johansson & Brittain (2012) propose the following classification (95).

(95) *Piyi*-DERIVED VERB CLASSES

VERB TYPE	MORPHOLOGICAL COMPOSITION	SUB-CLASS	% OF LEXICON[51]
Unaccusative	ROOT + *piyi*	Spontaneous unaccusative	80%
Unergative	ROOT[spatial] + *piyi*	Vehicle verb	10%
		Verb of emission	10%

The set of unaccusative *-piyi* verbs includes verbs whose argument is a patient, for example change of state verbs (*pîkupiyiu* 'it breaks') and change of location verbs (*wiyiwîpiyiu* 'it falls out').

Roots of vehicle verbs denote points of departure, arrival, or movement between two points and are thus considered to be "spatial" roots (Brittain in press). The verbs themselves are typically agentive manner of motion verbs, where the agent of the verb is the operator of a vehicle (e.g., boat, car, skidoo); no part of the morphology of the verb refers to a vehicle, but the use of a vehicle is entailed by the verb (*âshuwipiyiu* 's/he, it (anim) goes across by vehicle'). Certain of these verbs can be non-agentive, where the subject typically refers to the vehicle or engine itself (*chihchipiyiu* 'it (engine) starts on its own'), though some refer to life events or time (*winipiyiu* 'events are going wrong').

Piyi-derived verbs of emission refer to events of substance, sound, or light emission (Substance: *pîshtâupiyiu* 'it (anim) foams up'; Sound: *shâshwâwâpiyiu* 'it jingles'; Light: *wâshtâpiyiu* 'it lights up, flashes').[52] These are cross-linguistically non-agentive

51 The count is based on the Naskapi Lexicon (http://www.collectionscanada.gc.ca/naskapi). Naskapi verb forms were tested with a native NEC speaker who accepted all presented forms as NEC words. No dialectal differences between Naskapi and NEC were discovered with respect to *piyi*-derived words.

52 Note that verbs of smell emission are derived by a different verbalizer (NEC: *-mâku*) in CMN. This set of verbs is not investigated further in this thesis. However, this morphological difference does present an interesting puzzle, as verbs of emission are typically treated as a fairly homogeneous lexical-semantic

unergatives (Levin & Rappaport Hovav 1995), and have been demonstrated to be so in Blackfoot (Algonquian) (Johansson & Ritter in press).

Unlike most NEC verbalizers, *-piyi* can derive both AI and II verbs. In other words, the subject of a *piyi*-derived verb can be animate or inanimate, and the morphological form of the verb does not change, as demonstrated below in (96).

(96) *PIYI*-DERIVED VERBS PERMIT ANIMATE AND INANIMATE SUBJECTS

a. ANIMATE SUBJECTS

Pîku-**piyi**-u	akiskw.	Wiyip-**isi**-u	akiskw.
break-DYN-3	arrow	black-VAI.VBZ-3	arrow
ROOT-**VI.VBZ**-IIN	NA	ROOT-**VAI.VBZ**-IIN	NA
'The arrow (animate) is broken.'		'The arrow (animate) is black.'	

b. INANIMATE SUBJECTS

Pîku-**piyi**-u	wiyâkin.	Wiyip-**â**-u	wiyâkin.
break-DYN-3	plate	black-VII.VBZ-3	plate
ROOT-**VI.VBZ**-IIN	NI	ROOT-**VII.VBZ**-IIN	NI
'The plate (inanimate) is broken.'		'The plate (animate) is black.'	

Thus, *piyi*-derived verbs may be AI or II verbs. While any *piyi*-derived verb can be AI/II, the permissible arguments differ across the three subclasses (97).

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class.

(97) SUMMARY OF *PIYI*-DERIVED VERB CLASSES (CF. JOHANSSON & BRITTAIN 2012)

PIYI-DERIVED SUB-CLASS	ARGUMENT	CREE	GLOSS
UNACCUSATIVE	Patient (AI/II)	*pîkupiyiu*	It breaks
UNERGATIVES (VEHICLE)	Agent (AI) Non-agentive (AI/II)	*chihchipiyiu*	S/he sets out by car or boat; the engine starts on its own
UNERGATIVES (EMISSION)	Non-agentive (AI/II)	*tâpwâpiyiu*	It makes a loud noise

Johansson & Brittain (2012) provide empirical evidence to support the above classification. Their diagnostics and my fieldwork findings are outlined below.

6.4.2.1. Agentive vs. non-agentive arguments

Unaccusative verbs, whose single argument is an affected entity (a patient), and verbs of emission, whose single argument is a non-agentive emitter, are not compatible with either agent-oriented adverbs or with purpose clauses. Agentive vehicle verbs are compatible with both. This is demonstrated below with examples from my fieldwork.

(98) AGENT-ORIENTED ADVERBS ONLY PERMISSIBLE WITH VEHICLE VERBS

a. UNACCUSATIVE

(*Wisht)	Chwân	chîh	kwâtipi-piyi-u.
(*deliberately)	John	PAST	roll.over-DYN-3
(*ADV)	NA	PVB	ROOT-VI.VBZ-IIN

'John rolled over (*deliberately).'

b. VEHICLE VERB

Wisht	chîh	wîh	pâ-piyi-u	Chwân.
deliberately	PAST	DESID	come-DYN-3	John
ADV	PVB	PVB	ROOT-VI.VBZ-IIN	NA

'John came over deliberately (e.g., in a motor boat).'

c. VERB OF EMISSION

*Wisht	wîh	shâshwâwâ-piyi-u	âh	nîm-i-t.	
deliberately	DESID	jingle-DYN-3	PVB,CJ	dance-VAI.VBZ-3.S	
ADV	PVB	ROOT-VI.VBZ-IIN	PVB,CJ	ROOT-VAI.VBZ-CIN	

'*She deliberately makes the jingling sound while she dances.'[53]

(99) PURPOSE CLAUSES ONLY PERMISSIBLE WITH VEHICLE VERBS

a. UNACCUSATIVE

Chwân	chîh	kwâtipi-piyi-u	*[âh	wîh	pâhp-i-h-â-t	
John	PAST	roll.over-DYN-3	PVB,CJ	DESID	laugh-VAI.VBZ-CAUS-DIR-3.S	
NA	PVB	ROOT-VI.VBZ-IIN	PVB,CJ	PVB	ROOT-VAI.VBZ-VTA.VBZ-THM-CIN	
		awâshish-h].				
		child-PL				
		NA-PL				

'John rolled over (unintentionally) *[to make the kids laugh].'

53 Jingle dancing is a cultural practice shared by many aboriginal communities in North America, including the Cree. It involves wearing a dress with rows of metal cones (tobacco lids) sewn on and dancing in such a way as to make the dress jingle. Jingle dancing is often part of dance competitions at powwow.

b. VEHICLE VERB

Chwân	chîh	pâ-piyi-u	âh	wîh	wâp-iht-îw-â-t	ut-ût.
John	PAST	come-DYN-3	PVB,CJ	DESID	light-by.head-APPLIC-DIR-3.S	3-canoe
NA	PVB	ROOT-VI.VBZ-IIN	PVB,CJ	PVB	ROOT-VTI.VBZ-APPLIC-THM-CIN	3-NI

'John came over (e.g., in a motor boat) to show her his canoe.'

c. VERB OF EMISSION

*Shâshwâwâ-piyi-u	âh	wîh	pihkuht-â-t	châkwâyiu.
jingle-DYN-3	PVB,CJ	DESID	win-VAI.VBZ-3.S	something
ROOT-VI.VBZ-IIN	PVB,CJ	PVB	ROOT-VAI.VBZ-CIN	PRO,INDEF

'*She jingles to win something (a prize).'

Lit. 'It is jingling to win something (a prize).'

This demonstrates that only vehicle verbs permit agentive external arguments, as summarized below in (100).

(100) SUMMARY: SYNTACTIC CHARACTERIZATION OF *PIYI*-DERIVED VERBS

CHARACTERISTIC	UNACCUSATIVE	UNERGATIVE (VEHICLE)	UNERGATIVE (EMISSION)
Agentive argument	×	✓	×

6.4.2.2. Internal causer arguments

A shared characteristic of non-agentive external arguments is that the entity denoted by the subject has the inherent capacity to generate the event denoted by the verb. This has

been called "internal cause" by Levin & Rappaport Hovav (1995) and "teleological capacity" by Folli & Harley (2008). Consider the following English examples. In (101a), *the bell* denotes an entity that is capable of generating a chiming event. However, (101b) is strange because *John* does not denote an entity with the internal capacity to chime.

(101) INTERNAL CAUSE

a. The bell chimed.

b. * John chimed.

Internal cause is understood to be a category of causers that includes agents (Levin & Rappaport Hovav 1995). It is therefore associated with external arguments.

In the set of *piyi*-derived verbs, verbs of emission require that their argument be a non-sentient internal causer. In the case of the verb 'whistle', a kettle is an appropriate argument (102a), but lips are not, as lips are not in and of themselves capable of generating a whistling event (102b).

(102) ARGUMENTS OF VERBS OF EMISSION ARE INTERNAL CAUSERS

a.

Kuishkushî-piyi-u	tîuschihkw.
whistle-DYN-3	kettle
ROOT-VI.VBZ-IIN	NI

'The kettle is making a whistling sound.'

b. *Kuishkushî-piyi-u nitowin.
whistle-DYN-3 my.lips
ROOT-VI.VBZ-IIN NA
Intended: 'My lips are making a whistling sound.'

(Johansson & Brittain 2012)

Note that sentient whistlers are predicated of a different verb (103a). Where a sentient argument takes on the capacity to generate some event, for example through wearing certain clothing, additional morphology is required on the verb to permit the sentient subject (103b). Thus, emitters in NEC are non-sentient internal causers.

(103) SENTIENT EMITTERS

a. Kuishkush-i-u Mirî.
whistle-VAI.VBZ-3 Mary
ROOT-VAI.VBZ-IIN NA
'Mary whistles.'

b. Mirî shâshwâwâ-piyi-hu-u.
Mary jingle-DYN-MED.RFLX-3
NA ROOT-VI.VBZ-VAI.VBZ-IIN
'Mary jingled (wearing a jingle dress or clothing with bells).'
Lit. 'Mary made herself jingle.'

(Johansson & Brittain 2012)

Vehicle verbs, while typically agentive manner of motion verbs, may also take internal causer subjects. My fieldwork suggests that internal causer interpretations are

available to most, if not all, vehicle verbs, as reported below (104).

(104) VEHICLE VERBS WITH INTERNAL CAUSERS

a. Shâsh chîh chihchi-piyi-u ni-misinihîkin.
already PAST leave-DYN-3 1-letter
P,TIME PVB ROOT-VI.VBZ-IIN 1-NI
'My letter has left (e.g., in the post; by vehicle, by air).'

b. Awâsh tiskim-ipiyi-u.
child straight.across-DYN-3
NA ROOT-VI.VBZ-IIN
'The baby crosses the water in a motor boat (e.g., the motor is what carries the non-agentive baby across).'

Verbs of emission and vehicle verbs thereby contrast with unaccusative verbs in that their non-sentient subjects are required to be internal causers (105).

(105) SUMMARY: SYNTACTIC CHARACTERIZATION OF *PIYI*-DERIVED VERBS

CHARACTERISTIC	UNACCUSATIVE	UNERGATIVE (VEHICLE)	UNERGATIVE (EMISSION)
Agentive argument	×	✓	×
Non-sentient subject = internal causer	×	✓	✓

6.4.2.3. Causative alternation

The causative-inchoative alternation is taken to be evidence that the subject of an unaccusative verb is an underlying object (Burzio 1986; Levin & Rappaport Hovav 1995, among others). Among *piyi*-derived verbs, only the unaccusative set enter into the causative-inchoative alternation. In the following examples, note that the verb root is derived by a transitive verbalizer to form the transitive verbs. This is akin to Hale & Keyser's (2002) "simple" or "automatic" transitivity alternation (106).

(106) CAUSATIVE-INCHOATIVE ALTERNATION: UNACCUSATIVE VERBS ONLY

	INTRANSITIVE		TRANSITIVE ALTERNANT	
a.	Pîku-**piyi**-u.	AI/II	Pîku-**n**-im.	TI
	'It breaks.'		'S/he breaks it.'	
b.	Shâyuw-**ipiyi**-u.	AI/II	Shâyuw-**ishk**-im.	TI
	'It opens up.'		'S/he opens it with her/his foot/body.' (cf. Johansson & Brittain 2012)	

In contrast to unaccusative verbs, neither vehicle verbs nor verbs of emission enter into the causative-inchoative alternation. Causative vehicle verbs or verbs of emission are derived *from* the intransitive *-piyi* verbs, by adding extra causative morphology. This is evidence that these verbs are unergative, and that their single argument is Merged in subject position; a causer is an additional external argument and requires additional layers of syntactic derivation to be Merged in the structure, signalled by the extra morphology.

(107) VEHICLE VERBS AND VERBS OF EMISSION DO NOT ALTERNATE

	INTRANSITIVE		TRANSITIVE ALTERNANT
a.	Chishi-**piyi**-u.	AI/II	--
	'S/he goes fast (in a vehicle or on foot); it (vehicle) goes fast.'		
b.	Kuishkushî-**piyi**-u.	II	--
	'It whistles.'		

(Johansson & Brittain 2012)

(108) DERIVED CAUSATIVE VEHICLE VERBS AND VERBS OF EMISSION (SECONDARY DERIVATION)

a. Chisi-**piyi-htâ**-u.
fast-DYN-CAUS-3
ROOT-VI.VBZ-VTI.VBZ-IIN
'S/he drives it fast.'

b. Kuishkushi-**piyi-htâ**-u an nâpâsh ani-ya utâpân-iyiu.
whistle-DYN-CAUS-3 P,DEM boy P,DEM-OBV train-OBV
ROOT-VI.VBZ-VTI.VBZ-IIN P,DEM NA P,DEM-OBV NI-OBV
'The boy makes the train whistle.'

(Johansson & Brittain 2012)

Johansson & Brittain (2012) conclude that subjects of unaccusative verbs are Merged in internal argument position, but subjects of vehicle verbs and verbs of emission are Merged in external argument position (109).[54]

54 The behaviour of the three classes is different, but the notion of "internal cause" allows for the unification of vehicle and emission verbs. Levin & Rappaport Hovav (1995:91) propose that internal cause subsumes agentivity. I assume this definition of internal cause, and conclude that arguments of unergative verbs are merged in subject position and have the properties of internal causers.

(109) SUMMARY: SYNTACTIC CHARACTERIZATION OF *PIYI*-DERIVED VERBS

CHARACTERISTIC	UNACCUSATIVE	UNERGATIVE (VEHICLE)	UNERGATIVE (EMISSION)
Agentive argument	×	✓	×
Non-sentient subject = internal causer	×	✓	✓
Subject = external argument	×	✓	✓

6.4.2.4. Medio-reflexives

Johansson & Brittain (2012) do not focus on medio-reflexive morphology in their study of *piyi*-derived verbs. Medio-reflexive morphology consists of a transitivizer *-h* and an AI verbalizer *-u*, which seems to detransitivize the verb. The resulting verb is an AI verb, but the morphology adds some sense of agentivity (110). For example, in (110a) the source of the motion is the engine of the vehicle. However, in (110b) the source of the motion is volitional muscle control. The same morphology is used to predicate sentient emitters of verbs of emission, as in (103b), above, which is reproduced below in (110d). Medio-reflexive morphology can also be used to predicate an agent of an unaccusative verb, which will be discussed in §6.7.4.2.3.

(110) MEDIO-REFLEXIVE MORPHOLOGY ADDS AGENT

a. Chîwâ-piyi-u. VEHICLE VERB
turn-DYN-3
ROOT-VI.VBZ-IIN
'S/he went back (by vehicle).'

b. Chîwâ-piyi-hu-u. VEHICLE VERB + MEDIO-REFLEXIVE
turn-DYN-TR-MED.RFLX-3
ROOT-VI.VBZ-VAI.VBZ-IIN
'S/he turns back (e.g., to look over her/his shoulder, or in a vehicle).'

c. Shâshwâwâ-piyi-u. EMISSION VERB
jingle-DYN-3
ROOT-VI.VBZ-IIN
'It jingles.'

d. Mirî shâshwâwâ-piyi-hu-u. EMISSION VERB + MEDIO-REFLEXIVE
Mary jingle-DYN-MED.RFLX-3
NA ROOT-VI.VBZ-VAI.VBZ-IIN
'Mary jingled (wearing a jingle dress or clothing with bells).'
Lit. 'Mary made herself jingle.'

My working hypothesis for these forms is that both vehicle verbs and emission verbs require internal causers, but that the subject of a vehicle verb is attributed the characteristics of an agent due to the conventional interpretation of the verb (cf. Brittain in press). I suggest that the medio-reflexive morphology attributes agentivity to the subject, such that the subject can be the volitional causer of some event, for example an

event of turning as in (110b).[55] This remains to be confirmed in fieldwork.

6.4.2.5. Mystery set I: Relative root *-piyi* verbs

The set of relative root *-piyi* verbs has not been analyzed in depth, and in this thesis I treat these verbs as a homogeneous and mysterious class. Relative roots are typically translated to mean 'thusly', which captures the idea that they refer to some other contextually salient idea or event (see Bloomfield 1957; Rhodes 2006). Relative root *-piyi* verbs receive a default vehicle verb interpretation. This is demonstrated below (111).

(111) RELATIVE ROOT VERBS AS VEHICLE VERBS

a. Mânâ-tâh kâ is-piyi-t.
there-LOC PVB,CJ thusly-DYN-3.S
P,DEM.REM-LOC PVB,CJ ROOT-VI.VBZ-CIN
'S/he went over there (by vehicle).'

b. Kâ is-piyi-h-îk.
PVB,CJ thusly-DYN-CAUS-INV
PVB,CJ ROOT-VI.VBZ-VTA.VBZ-THM
'I took him there (by vehicle).'

c. Mâu-tâh kâ is-piyi-htâ-t.
this-LOC PVB,CJ thusly-DYN-CAUS-3.S
DEM-LOC PVB,CJ ROOT-VI.VBZ-VTI.VBZ-CIN
'S/he took it somewhere by vehicle.'

55 The vehicle interpretation is still available in the presence of medio-reflexive morphology, but the subject is interpreted as being somehow "more agentive" than in the absence of the medio-reflexive.

However, it is possible for the relative root to refer to, for example, the gesturing of the speaker as in the following examples.

(112) RELATIVE ROOT VERBS REFERRING TO SPEAKER GESTURING

a. Mâu-tah kâ is-piyi-t.
this-LOC PVB,CJ thusly-DYN-3.S
DEM-LOC PVB,CJ ROOT-VI.VBZ-CIN
'S/he went like this (e.g., he fell – indicated by gestures of speaker).'

b. Kâ is-piyi-hu-t.
PVB,CJ thusly-DYN-MED.RFLX-3.S
PVB,CJ ROOT-VI.VBZ-VAI.VBZ-CIN
'S/he did like this (e.g., dancing or volitional motion – indicated by gesture).'

c. Mâu-tah kâ is-piyi-h-îk.
this-LOC PVB,CJ thusly-DYN-CAUS-INV
DEM-LOC PVB,CJ ROOT-VI.VBZ-VTA.VBZ-THM
'S/he made me go like this.'
Context: A child complains about a sibling spinning her around until dizzy.

d. Mâu-tah kâ is-piyi-htâ-t.
this-LOC PVB,CJ thusly-DYN-CAUS-3.S
DEM-LOC PVB,CJ ROOT-VI.VBZ-VTI.VBZ-CIN
'He made it go like this (e.g., an inanimate thing, show motion with gesture).'

Given that the meaning of these verbs is so variable, I consider them to be a fourth sub-class of *piyi*-derived verbs.

6.4.2.6. Mystery set II: Manner adverbial *-piyi* verbs

There is a small set of *piyi*-derived verbs that is, as of yet, under-studied. These are *piyi*-derived verbs that refer to quick motion, but do not denote vehicular travel. For example, consider the following example.

(113) *Piyi*-DERIVED MANNER VERBS

Kichâshtipi-piyi-u.

fast-DYN-3

ROOT-VI.VBZ-IIN

'S/he is fast, quick, agile.'

This verb cannot refer to vehicular travel, nor to the passage of time. Similar verbs include *kâchipiyihâu* 'S/he hides her/him/it quickly', and *kuchipiyihâu* 'S/he quickly swallows, gulps it down'. Verbs like this are also observed by Hirose (2003), but have not been classified as either unergative or unaccusative as of yet.[56]

6.4.2.7. Summary

In sum, I have identified five classes of *-piyi* verbs to consider in Billy's language productions. These are unaccusative verbs, vehicle verbs, verbs of emission, relative root verbs, and manner verbs. I turn now to my methodology for analyzing these verbs.

56 The various interpretations of *piyi*-derived verbs resembles the ambiguity of the verb of identity ('be an X') in Nishnaabemwin (Central Algonquian), which can refer to "an ongoing state or a transition into that state" (Valentine 2001:337-338).

6.5. Methodology

In this section I describe the methodology that I used in my analysis of Billy's acquisition of unaccusativity. This section continues from §3.3, which discusses preliminary methodology prior to analysis.

6.5.1. Identifying *piyi*-derived utterances

During preliminary analysis, all *-piyi* verbalizers in Billy's speech and the Adult's speech were glossed with the Morpheme Meaning 'inch', short for 'inchoative' and the Morpheme Type 'vintr.fin'.[57] A search of Morpheme Meaning for 'inch' yields all and only *-piyi* verbs.

6.5.2. Secondary analysis

As was done with passive utterances, transcripts of the conversation surrounding each *piyi*-derived verb in Billy's speech were submitted to Luci Bobbish-Salt for secondary analysis. The document listed Billy's age, and his utterances in both Cree syllabics and Roman orthography, together with a translation. The surrounding context was included to facilitate the process, unless the utterance was isolated in the discourse. An example from one of these documents is given below, as it was *before* it was edited.

57 Note that in this thesis the same morpheme is glossed are 'dyn', short for 'dynamic' (cf. Hirose 2003). This reflects the results of analysis: As most *piyi*-derived verbs are unaccusatives, these morphemes were originally glossed as such. However, the preponderance of *piyi*-derived verbs in the corpus are vehicle verbs . Thus, I adopt the conventions of Brittain (in press) and Johansson & Brittain (2012) in this text.

(114) EXAMPLE FROM *-PIYI* FIELDWORK MATERIALS

Session 1 – Age 4;06.08

Conversation 6 (*-piyi* tokens: 1) [sic]

Billy: ᐧᐊᐱᑎᒧᒪ ᐊᐦ ᐃᐢᐱᔨᐦᒋ
Wâpihtimâ âh ispiyich
'Look how it goes.'

(B3-2005-11-22#306)

Adult: ᐅᐦ ᓄᐧᐃᐢ ᒥᔦᐱᔨᔅᐢᐣ ᓂᒪᐟ
Oh nuwich miyupiyishiu nimâ
'Oh it runs well eh?'

Luci Bobbish-Salt read the transcripts and sent back an edited version with commentary. Specifically, she considered the following questions: (i) "Does Billy's Cree look like adult Cree, or are there some differences? If there are differences, what are they?"; and (ii) "Is Billy using verbs that end in *-piyi* correctly, and in the right places? When you look at his sentences in the context of the conversation, does it make sense for him to choose those verbs?" Her input and commentary was added to the PHON corpus, as well as to the appendix of *-piyi* utterances which is included in Appendix V of this thesis. Follow-up questions were sent to Luci Bobbish-Salt over email, and asked in interviews with Luci Bobbish-Salt and Elsie Duff in Chisasibi, Quebec in June, 2012. This consisted mostly of questions having to do with the classification of *-piyi* utterances in the corpus as unaccusative or unergative, and a preliminary investigation into relative root *-piyi* verbs.

6.5.3. Excluded utterances

The corpus of Billy's speech contains 68 utterances containing a *piyi*-derived verb. Of these, I will analyze 67. One utterance has been excluded from consideration because

poor audio quality obscured the verbal utterance. This is record B3-2006-07-26#371, from session 5 of Billy's speech, age 5;02.12.

6.5.4. Productivity criteria and evidence of acquisition

As I did for passive utterances, I have adapted my morphological and syntactic criteria from §3.4 for the analysis of the acquisition of unaccusativity in NEC (cf. Allen & Crago 1996). The data were considered as follows.

(115) PRODUCTIVITY CRITERIA: MORPHOLOGICAL ACQUISITION

1. The *-piyi* verbalizer morpheme is wrongly attached to its stem.
2. The same root appears with both *-piyi* and a different verbalizer morpheme, elsewhere in the transcript.
3. Alternatively, the *-piyi* verbalizer morpheme appears in the transcript on at least two different stems.

(cf. Allen & Crago 1989; Fortescue & Lennert Olsen 1992)

(116) PRODUCTIVITY CRITERIA: ACQUISITION OF UNACCUSATIVITY

1. The *-piyi* verbalizer morpheme is used with clearly innovative forms/arguments (e.g., overgeneralizations).
2. Errors in argument selection or causativization of *piyi*-derived verbs are self-corrected.
3. Causative and non-causative forms of the same *piyi*-derived verb are used correctly in the same session.

(cf. Allen & Crago 1996)

Here again I will distinguish between the MORPHOLOGICAL ACQUISITION of the *-piyi* verbalizer and the SYNTACTIC ACQUISITION OF UNACCUSATIVITY. The first will be distinguished by purely morphological criteria (115), while the second will require a clear demonstration that Billy understands the distinction between unaccusative and unergative verbs and the syntactic characteristics of each (116).

6.5.5. Classification of *piyi*-derived verbs

Each *piyi*-derived verb in both Billy's speech and CDS was classified into one of five groups (117). The decision-making process for this classificaiton is outlined below.

(117) CLASSIFICATON OF *PIYI*-DERIVED VERBS

1. Unaccusative
2. Vehicle verb
3. Verb of emission
4. Relative root verb
5. Manner verb

Unaccusative verbs are most strongly identified by the availability of a transitive alternant (see §6.4.2.3), as well as by their semantics (e.g., change of state, change of location) and the thematic role of their subject (e.g., patient; subject cannot be an agent).[58]

Vehicle verbs are listed in the lexicon with the designation "by vehicle" in their definition. Furthermore, they have no transitive alternants and can take agentive subjects.

58 A further diagnostic is the availability of the "accidental" reading (Brittain in press).

Verbs of emission are identified by their semantics (sound emission, light emission, substance emission). They are verbs that place restrictions on their arguments (internal causers), have no transitive alternants, and typically require medio-reflexive morphology to allow agentive subjects.[59]

Only one verb is included in the class of relative root verbs. It is *ispiyiu* (also *ishpiyiu*) 's/he moves/goes, it happens', which is derived from the root *is* 'thusly'.

The category "manner verb" contains all verbs that thus far elude classification as unergative or unaccusative. These include verbs whose root is an adverb (e.g., *chiyi-piyi-u*, where *chiyi* means 'fast'), verbs of manner of motion (e.g., *pipâm-ipiyi-u*, where *pipâm* means 'to go around/wander' and the verb itself means 'moving around'), and the verb of quantity of motion (*ishpish-ipiyi-u*, where *ishpish* is a particle meaning 'amount' and the verb itself is used with numerals to tell time or to tell the speed of a car).

6.6. CDS

In this section, I present an analysis of *piyi*-derived verbs in CDS, with respect to both frequency (§6.6.1) and *piyi*-derived subclasses (§6.6.2). *Piyi*-derived verbs from interactions with Billy were identified and glossed in PHON, then extracted for analysis. Unfortunately, it is beyond the scope of this chapter to include an analysis of *piyi*-derived verbs in CDS from the recordings of Ani's speech.

59 One counter-example to this claim is the verb *nitîtwâwâpiyin*, 'I sound thusly', in which a sentient agent is an acceptable subject.

6.6.1. Frequency of *piyi*-derived verbs in NEC CDS

Piyi-derived verbs are common in CDS, and are found in every session under analysis. The number of *piyi*-derived verbs per session in CDS is given below.

(118) *PIYI*-DERIVED VERBS IN ADULT SPEECH: BILLY

SESSION	SESSION LENGTH	# -PIYI VERBS (ADULT)	BILLY'S AGE
B3-2005-11-22	00:42:26	35	4;06.08
B3-2006-01-10	00:43:53	24	4;07.26
B3-2006-02-28	00:35:22	19	4;09.14
B3-2006-05-27	00:33:05	12	5;00.13
B3-2006-07-26	00:24:24	3	5;02.12
B3-2006-10-14	00:41:09	12	5;05.00
B3-2006-11-06	00:45:27	18	5;05.22
B3-2006-12-11	00:36:14	18	5;06.27
B3-2007-03-19	00:44:42	17	5;10.06
B3-2007-04-02	00:25:43	9	5;10.19
TOTAL:	06:12:25	167	

Piyi-derived verbs are abundant in CDS. Billy hears 26.9 *piyi*-derived verbs/hour, or one *piyi*-derived verb every 2 minutes and 13 seconds. Billy has plenty of evidence with which to analyze the different syntactic behaviour of the sub-classes of *piyi*-derived verbs.

6.6.2. Classification of *piyi*-derived verbs in NEC CDS

All of the *piyi*-derived verbs in CDS have been classified into the five sub-classes identified in §6.5.5, above. The classification is as follows (119).

(119) CLASSIFICATION OF *PIYI*-DERIVED VERBS IN CDS

UNACCUSATIVE	VEHICLE VERB	VERB OF EMISSION	RELATIVE ROOT	MANNER VERB
24/167 14.4%	55/167 32.9%	39/167 23.4%	37/167 22.2%	12/167 7.2%

The majority of the verbs in the input are unergative (94/167, 56.3%), while only 14.4% are known to be unaccusative. Recall that unergative verbs constitute only 20% of the *piyi*-derived verbs listed in the Naskapi Lexicon (§6.4.2). Regardless, Billy is exposed to both unaccusative and unergative verbs in CDS.

6.7. Billy's *-piyi* productions

In this section I present a description of Billy's productions of *piyi*-derived verbs in the CCLAS corpus. I begin by classifying all of his utterances into the classes outlined above, and compare them to the utterances in CDS (§6.7.1). I then present the range of *piyi*-derived verbs in Billy's speech (§6.7.2), followed by evidence for the acquisition of unaccusativity (§6.7.3), and an overview of the morphological development of *piyi*-derived verbs in Billy's speech (§6.7.4).

6.7.1. Classification of *piyi*-derived verbs in Billy's speech

An analysis of Billy's speech reveals that the majority of his *piyi*-derived utterances are vehicle verbs (26/67, 38.8%), as is also true of CDS. In fact, Billy's productions mirror those of his adult interlocutor fairly consistently, excepting verbs of emission, which he uses considerably less often (7/64, 10.4%). This could be simply due to the lower number

of tokens in Billy's speech than in CDS, or it could be an indication that, of the set of *piyi*-derived verbs, verbs of emission are relatively difficult to acquire. Unfortunately, the recordings do not start early enough to know which type of *piyi*-derived verb is produced first.

(120) CLASSIFICATION OF *PIYI*-DERIVED VERBS IN BILLY'S SPEECH AND CDS

	UNACCUSATIVE	VEHICLE VERB	VERB OF EMISSION	RELATIVE ROOT	MANNER VERB
BILLY	11/67 16.4%	26/67 38.8%	7/67 10.4%	17/67 25.4%	6/67 9.0%
ADULT	24/167 14.4%	55/167 32.9%	39/167 23.4%	37/167 22.2%	12/167 7.2%

While Billy produces all sub-types of *piyi*-derived verbs, he does not produce them all at once. The first session consists of unaccusatives, vehicle verbs, and relative root verbs (4;06). Verbs of emission are first produced in the third session (4;09), and the manner verbs (all of which are tokens of *ishpishipiyiu* 'be a certain quantity', which in each occurrence is used for telling time) appear in the fourth session (5;00). Note, however, that he produces both unaccusative and unergative verbs from the first session.

6.7.2. Range of *piyi*-derived verbs in Billy's speech

While Billy produces a good number of *piyi*-derived verbal utterances, the range of verbs that he uses is restricted, with a total of 14 verb types across the 67 verb tokens. The distribution of his productions is as follows (121).

(121) *PIYI*-DERIVED VERBS IN BILLY'S SPEECH

PIYI-DERIVED ROOT[60]	GLOSS	SUB-CLASS	COUNT (TOKENS)
âpihî	'open'	Unaccusative	1
chihchi	'leave'	Vehicle verb	6
chishchi	'leave/start'	Vehicle verb	1
chishi	'fast'	Vehicle verb	3
chishwâwâ	'make noise'	Verb of emission	4
is/îs/îsh/âs	'thusly'	Relative root	17
ishpish/âshpish	'quantity'	Manner verb	6
îtwâ/îtwâwâ/âtwâwâ	'be heard/sound thusly'	Verb of emission	3
mini	'pull off'	Unaccusative	1
pâ/piyâ	'along'	Vehicle verb	7
pâhkâ	'bleed/burst'	Unaccusative	1
pîhtâ	'go inside'	Unaccusative	1
pîku	'break'	Unaccusative	7
pimi	'move'	Vehicle verb	9
		TOTAL:	67

When considered in this way, we see that Billy's use of unaccusative and vehicle verbs is equal in number of types, but very disparate in number of tokens. Half of the types Billy uses are unergative verbs (vehicle or emission), and one third are unaccusative. The rest are relative root and the unclassified manner verbs (122).

60 Where two roots are listed and the second begins with *â*, this is the same root after having undergone "initial change", a morphophonological process typical of verb roots that begin with *i* when inflected in the conjunct order. Similarly, *piyâ* is the form of *pâ* after initial change (Wolfart 1973:82-83). The verb roots *îtwâ* and *îtwâwâ* are related by a process of reduplication, which adds "continuity, repetition, intensity" (Wolfart 1973:66).

(122) CLASSES OF *PIYI*-DERIVED VERBS AND THEIR TYPES

PIYI-DERIVED CLASS	TYPES (OF TOTAL)	LIST OF TYPES (ENGLISH)	TOKENS (OF TOTAL)
UNACCUSATIVE	5/14 35.7%	open, pull off, bleed/burst, go inside, break	11/67 16.4%
VEHICLE VERB	5/14 35.7%	leave, leave/start, fast, along, move	26/67 38.8%
VERB OF EMISSION	2/14 14.3%	make noise, be heard/sound thusly	7/67 10.4%
RELATIVE ROOT	1/14 7.1%	thusly	17/67 25.4%
MANNER VERB	1/14	quantity	6/67 9.0%

Thus we see that Billy is capable of producing verbs from each subclass, but these distributions are not sufficient evidence to claim that Billy has acquired unaccusativity. We turn to this question in the next section.

6.7.3. Evidence of the acquisition of unaccusativity

In this section I consider the morphological acquisition of the *-piyi* verbalizer (§6.7.3.1) and the syntactic acquisition of unaccusativity (§6.7.3.2).

6.7.3.1. Morphological acquisition: *-piyi*

Applying the following diagnostics yields evidence that Billy has already acquired the *-piyi* morpheme from the first session (123).

(123) PRODUCTIVITY CRITERIA: MORPHOLOGICAL ACQUISITION

1. The *-piyi* verbalizer morpheme is wrongly attached to its stem.
2. The same root appears with both *-piyi* and a different verbalizer morpheme, elsewhere in the transcript.
3. Alternatively, the *-piyi* verbalizer morpheme appears in the transcript on at least two different stems.

(cf. Allen & Crago 1989; Fortescue & Lennert Olsen 1992)

There are no cases where Billy uses *-piyi* incorrectly with a verb root: all of the *piyi*-derived verbs that he produces exist in adult speech, and all are morphologically well-formed. However, there are instances in which Billy uses the same root with both *-piyi* and some other verbalizer. These occur from the first session, and are evidence that the *-piyi* morpheme has been acquired by 4;06. An example is given below in (124).[61]

(124) SAME ROOT DERIVED BY *-PIYI* AND *-HW* (4;06)

a.	Nimui	ni-chîh	**chishi-piyi**-n.
	not	1-PAST	**fast**-DYN-1/2
	P,NEG	1-PVB	**ROOT**-VI.VBZ-IIN
	'I can't go fast.'		
	Target:	[nɪmujɪ	n-ʧi ʧʃɪ-pi-n]
	Actual:	[mojo	_-ʤi ʧʃɪ-pi-_]

(B3-2005-11-22#272)

61 Note that this does not constitute a causative alternation, as the example given in (124a) entails vehicular motion, while the example in (124b) does not. These two verbs are different verbs derived from the verb root *chisi*, not a pair of related intransitive and transitive verbs denoting vehicular motion.

b. Âi yâkwâh-**chishi-hw**-â-u.
PRO,HES careful-**fast**-VTA.VBZ-DIR-3
PRO,HES P,INTJ-**ROOT**-VTA.VBZ-THM-IIN
'He sends them (someone) away.'

Target: [h jəkɒ-ʧəʃ-w-a-w]
Actual: [ha jɑgɑ-ʧha-w-ij-ə]

(B3-2005-11-22#692)

With respect to the third criterion for morphological productivity, Billy derives eight roots with the *-piyi* verbalizer morpheme in the first session (unaccusative, vehicle verbs and relative root verbs), which is significant.

6.7.3.2. Syntactic acquisition: unaccusativity

There are no instances of pragmatically or contextually innovative *piyi*-derived verb forms in Billy's speech. Furthermore, he makes no errors in argument selection or causativization and there are no instances of self-correction. What evidence there is for syntactic productivity comes from causativization of *piyi*-derived forms, the third criterion for syntactic acquisition (116), which was discussed in §6.5.4 above.

(125) PRODUCTIVITY CRITERIA: ACQUISITION OF UNACCUSATIVITY

1. The *-piyi* verbalizer morpheme is used with clearly innovative forms/arguments (e.g., overgeneralizations).
2. Errors in argument selection or causativization of *piyi*-derived verbs are self-corrected.
3. Causative and non-causative forms of the same *piyi*-derived verb are used correctly in the same session.

(cf. Allen & Crago 1996)

6.7.3.2.1. Unaccusatives

The earliest evidence that Billy has acquired the syntax of unaccusative verbs is found in session 4 at age 5;00. In this session, Billy productively uses the causative-inchoative alternation. The verb root *pîku-* 'break' is produced with three different verbalizers: *-piyi* 'dynamic', *-h* 'causative',[62] and *-pit* 'by force'. Examples of these three are given below.

(126) CAUSATIVE-INCHOATIVE ALTERNATION

a. *PIYI*-DERIVED FORM

Chiki	ihtut-im	û-tâh	châ	pîku-piyi-ch	ani-tâh	floor.
FUT.3	do-DIR	this-LOC	FUT	break-DYN-0.S	that-LOC	ENG
PVB	ROOT.VTI-THM	P,DEM.PXL-LOC	PVB,CJ	ROOT-VI.VBZ-CINP,DEM.DST-LOC		N

'If I do it like this the floor will break'

Target:	[	ʤɪg ətot-əm	o-'da:	ʤa	pʰekə-bajɛ-ʧ	əs flɔɹ]
Actual:	[ɪmʤɪ ɪn	ʤɪk ədod-ob	ʌ-tə	ʤæ	bɪgo-biɪ-ʤ	is flɔɹ]

(B3-2006-05-27#163)

62 Note that here, the causative verbalizer *-h* is used to derive a "basic" verb. See the discussion in §5.2.4 for uses of the causative morpheme.

b. *PIT*-DERIVED FORM

Âi	pîku-pit-im	âi-yiu.
PRO,HES	break-by.force-VTI.THM	PRO,HES-OBV
PRO,HES	ROOT-VTR.VBZ-VTI.THM	PRO,HES-OBV

'He breaks it.'

Target:	[aj	biˈgʊ-pət-əm	aj-ɔ]
Actual:	[hʔaj	bigʊ-ptd-om	aj-o]

(B3-2006-05-27#438)

c. *H*-DERIVED FORM

Chiki pîku-h-am.

FUT.3 break-CAUS-VTI.THM

PVB ROOT-VTA.VBZ-VTI.THM

'He'll break it with something.'

Target:	[ʧɪkə ˈbik-_-əm]
Actual:	[ʧɪ̥kə bik-ʰ-ɔm]

(B3-2006-05-27#680)

An additional example from a later session is very compelling: Billy uses the root *mini-* 'pull off' twice in the same utterance, using both the *piyi*-derived intransitive variant and its causative alternant (127).

(127) CAUSATIVE-INCHOATIVE ALTERNATION

Châkât	kâ	mini-piyi-ch	ni-chîh	min-in-â-n.
almost	PVB,CJ	pull.off-DYN-0.S	1-PAST	pull.off-by.hand-THM-1/2
P,MANNER	PVB,CJ	ROOT-VI.VBZ-CIN	1-PVB	ROOT-VTR.VBZ-THM-IIN

'When it almost came off, I took it off.'

Target:	[ʧakatʰ	ka	mənɪ-pij-ʧ	_-əʧi	mɪn-ɪn-a-n]
Actual:	[ʧəkat	ka	pɪtə-pi-ʧ	ni-_	m-ɪn-a-_]

(B3-2006-11-06#115)

The above examples illustrate that Billy is aware of the causative-inchoative alternation with unaccusative *piyi*-derived verbs by the age of 5;00.[63]

6.7.3.2.2. Vehicle verbs

Billy correctly derives causative vehicle verbs from the first session, as seen below in (128). However, this example on its own is not sufficient to consider this construction acquired. The productivity criteria require that Billy produces a causative and a non-causative form of the same verb in the same session.

63 Note that the absence of this type of alternation with unergative verbs is also significant. There are instances of a verb root from the set of vehicle verbs being derived by another verbalizer, for example in *chisi-hwâu* 'he rushes him away', as compared to *chisi-piyiu* 'he moves fast by vehicle'. However, in the transitive case, the verb does not entail that the subject be the operator of or passenger in a vehicle, and thus I do not take it to be a transitive alternant of the verb, e.g., the verb does not mean 'he moves him away fast (by vehicle).'

(128) CAUSATIVIZED VEHICLE VERB (4;06)

Nimui	pimi-piyi-h-â-u	wîyi.
not	move-DYN-CAUS-DIR-3	3
P,NEG	ROOT-VI.VBZ-VTA.VBZ-THM-IIN	PRO

'He doesn't drive it himself (dirt bike).'

Target:	[nmʊwi	pɪm-pi-h-a-w	wɪj]
Actual:	[mwi	bɪm-bi-h-a-w	w̃ĩ]

(B3-2005-11-22#780)

The earliest evidence that Billy controls the causativization of unergative verbs is found in session 8, at age 5;06. Consider the following example (129).[64]

(129) CAUSATIVIZATION OF A VEHICLE VERB (5;06)

a.

Piyâ-**piyi**-yâhch	mâk.
along-**DYN**-1.PL	and
IC.ROOT-**VI.VBZ**-CIN	P,CONJN

'As we **arrive** (by vehicle).'

Target:	[pija-pi-jaʧ	ɪmakʰ]
Actual:	[bija-bij-a	maga:]

(B3-2006-12-11#398)

64 Note that although *pâ* and *piyâ* are the same root, only *piyâ* has undergone initial change (Wolfart 1973:82-83).

b. Awâ-yiu-h kâ pâ-**piyi-h**-îku-ch.
who-OBV-OBV PVB,CJ along-**DYN-CAUS**-INV-3.PL
PRO,WH-OBV-OBV PVB,CJ ROOT-**VI.VBZ-VTA.VBZ**-THM-CIN
'Who **brought** them (by vehicle)?'

Target: [we-'ju-_ kæ bæ-bi-h-igʊ-ʧ]
Actual: [wa-ɛ-_ kə ba-bɪ-d-ikɔ-ʤ]

(B3-2006-12-11#196)

As the above utterances are from the same session, I take them to be evidence that Billy has acquired the syntax of unergative vehicle verbs by 5;06 (with the acknowledgment that he may well have acquired this earlier).

6.7.3.2.3. Verbs of emission

There are no instances in the corpus in which Billy alternates between a non-causative and a causative verb of emission in the same session, which is required for his utterances to be considered evidence of productivity. However, across sessions we see that he causativizes verbs of emission correctly, using the correct causative morpheme for a sentient agent acting on an inanimate thing (emitter) (130).

(130) CAUSATIVIZATION OF A VERB OF EMISSION (5;00, 4;09)

a. Sûhk chîh chishwâwâ-**piyi**-u.
hard PAST noise-**DYN**-3
P,INTJ PVB ROOT-**VI.VBZ**-IIN
'It made a loud noise.'

Translator comment: *Sûhk* is common in child speech
(Periphrastic strategy for adverbial information)

Target: [ʤi ʧɔw-ˈa-bi-ə]
Actual: [sʊkʰ ʤe dɑm-_-bij-o]

(B3-2006-05-27#380)

b. Ni-ki chishwâwâ-**piyi-htâ**-n mâ â.
1-FUT.1/2 noise-**DYN-CAUS**-1/2 EMPH P,QST
1-PVB ROOT-**VI.VBZ-VAI+O.VBZ**-IIN P,DISC P,QST
'I am going to turn up the sound, okay?'

Target: [nɪ-gɪ ʧɪwɔˈ-bi-tʰa-n ma ʔa]
Actual: [uʃʌ-bi-t tən mæh æ]

(B3-2006-02-28#345)

6.7.3.2.4. Relative root verbs

Billy uses causativization correctly from the first record with relative root verbs, as in the following examples (131).[65]

65 Unfortunately, relative root verbs have not been definitively classed as unergative or unaccusative up to this point, though the form of the causative is an indication that they may be unergative, at least in vehicle verb uses.

(131) CAUSATIVIZATION OF A RELATIVE ROOT VERB (4;06)

a. Wâp-iht-ih mâ âs-**piyi**-ch.
light-by.head-VTI.THM.IMP EMPH thusly-**DYN**-0.S
ROOT-VTI.VBZ-VTI.THM.IMP P,DISC ROOT.IC-**VI.VBZ**-CIN
'Look how it goes.'

Target: [wap-ht-h ma ajs-**pi**-ʧ]
Actual: [u:o-_-_ ma ajs-**pi**-ʧ]

(B3-2005-11-22#306)

b. Mâu-tâh âs-**piyi**-**h**-âkiniwi-t.
this-LOC thusly-**DYN**-**CAUS**-PASSIVE.3-3.S
P,DEM+G.PXL-LOC ROOT.IC-**VI.VBZ**-**VTA.VBZ**-PASSIVE-CIN
'This is how you make it go. / You move it this way'

Target: [maw-tah s-**pi**-**h**-akɪnəwɪ-t^{h}]
Actual: [mʌ-na sɪ-**pi**-**h**-agənʌ-_]

(B3-2005-11-22#210)

6.7.3.2.5. Manner verbs

Billy produces no causative manner verbs in the corpus.

6.7.3.3. Summary

From the first session, there is evidence that Billy has acquired the *-piyi* morpheme and uses it productively. However, the evidence for syntactic acquisition is less clear.

Taking causative alternations in the corpus to be evidence for the syntactic

acquisition of unaccusativity, I find that Billy does not produce any errors in his causativization. He correctly forms transitive variants of unaccusative verbs, and causativizes vehicle verbs, verbs of emission, and relative root verbs using proper morphology. The ages at which there is evidence of his acquisition of unaccusativity (causative alternations in a single session) are given below in (132).

(132) AGE OF ACQUISITION OF UNACCUSATIVITY

VERB TYPE	PRODUCTIVE CAUSATIVIZATION
Unaccusatives	5;00
Vehicle verbs	5;06
Verbs of emission	--
Relative root verbs	4;06
Manner verbs	--

Because of the low number of tokens it is not the case that the above table should be taken as definitive evidence of the order of Billy's acquisition.[66] Earlier recordings of Billy and experimental evidence would be necessary to confirm the order in which he acquires *piyi*-derived verb types.

As there isn't enough evidence to assess Billy's acquisition of the syntax of these forms, I turn to a global assessment of his acquisition of *-piyi* verbs and the morphological complexity of his utterances.

66 Note, however, that causativized unaccusative verbs are still "basic" verbs (transitive alternants), not morphological causatives. Therefore, these verbs are less morphologically complex and are predicted to be acquired before morphological causatives. In support of this prediction, Allen (1998) finds that Inuktitut-speaking children acquire the causative-inchoative alternation earlier than morphological causatives.

6.7.4. Increasing morphological complexity in *piyi*-derived utterances

An examination of Billy's *piyi*-derived verbal utterances reveals a clear development in morphological complexity. In this section I will present this development in terms of a morphological measure of his Mean Length of Utterance (§6.7.4.1) and will present an inventory of the morphology of his forms split into three stages (§6.7.4.2).

6.7.4.1. Mean Length of Utterance by morpheme

Measures of Mean Length of Utterance by morpheme (MLUm) are useful to track increasing morphological complexity in speech. However, the measure is problematic, as it is not really possible to know what constitutes a separate morpheme to the child (see Fortescue 1985; Allen & Crago 1996).

For the purposes of this study, I assume a linguist's analysis of the number of morphemes in the verbal complex. The count of morphemes per utterance is based on the Actual IPA transcription of each utterance, such that it is based on morphemes *produced* by Billy, not the target number of morphemes.[67] Only morphemes within the *piyi*-derived verbal complex were counted. This includes pronominal clitics and preverbs as well as derivational morphology and agreement suffixes.

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67 First person pronominal clitics are assumed to be produced where they are the only missing morpheme at the start of the verb complex. (If both the first person pronominal clitic and an immediately following morpheme are not transcribed, both morphemes are considered absent from his production.) These morphemes are often highly reduced in speech, such that they are not always transcribed by native English speakers. Additionally, the word-final obviative marker *-h* and word-final imperative morpheme *-h* are always assumed to be produced, as they are similarly difficult for English-speaking transcribers to hear. I make the conservative assumption that these morphemes are always produced, as a study of the acquisition of these morphemes would require acoustic analyses beyond the scope of this thesis. A pilot acoustic study of word-final *-h* is currently underway (O'Neill in prep).

The number of utterances, minimum value, maximum value, and mean value for each session is given below in (133), schematized in the chart in Figure 7.

(133) MLUM MEASUREMENTS

SESSION	AGE	# UTTERANCES	MINIMUM	MAXIMUM	MEAN
B3-2005-11-22	4;06	13	3	5	3.85
B3-2006-01-10	4;07	1	4	4	4.00
B3-2006-02-28	4;09	4	3	6	4.25
B3-2006-05-27	5;00	8	3	5	3.75
B3-2006-07-26	5;02	6	3	6	4.50
B3-2006-10-14	5;05	5	3	6	4.20
B3-2006-11-06	5;05	2	4	4	4.00
B3-2006-12-11	5;06	8	3	7	5.00
B3-2007-03-19	5;10	5	3	6	4.40
B3-2007-04-02	5;10	14	3	7	4.29

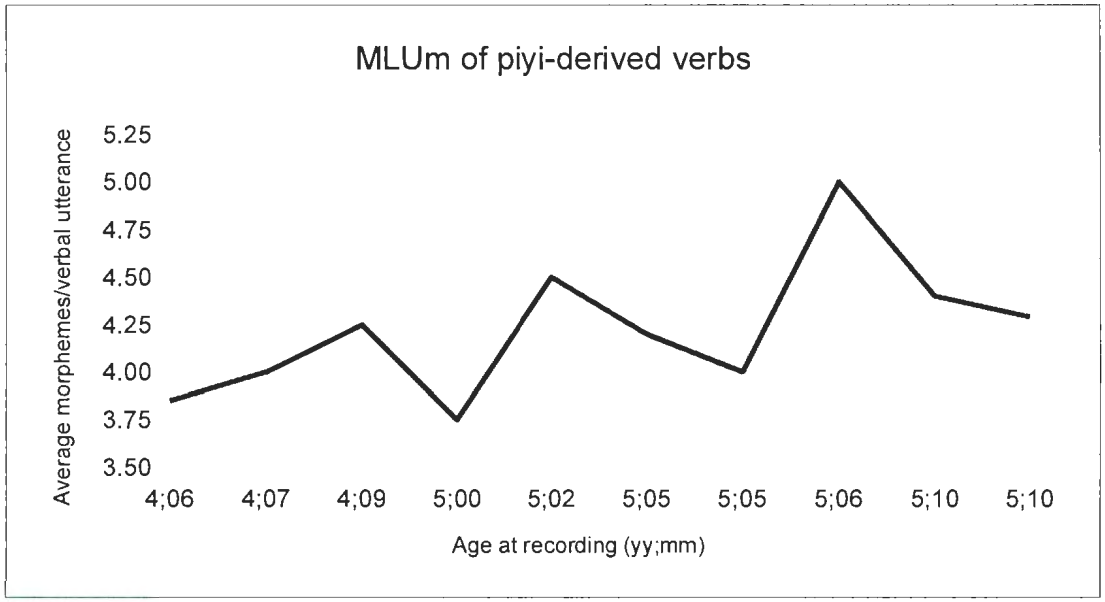

Figure 7: MLUm of *piyi*-derived verbal utterances

The results of this analysis show an upward trend from the 3-4 MLUm range to the 4-5 MLUm range. From age 4;06 – 5;00 (sessions 1-4), Billy's MLUm ranges from 3.85-4.25. From age 5;02 – 5;05 (session 5-7), Billy's MLUm ranges from 4.00-4.50. From age 5;06 – 5;10 (sessions 8-10), Billy's MLUm ranges from 4.29-5.00. These groups of sessions will form the three stages of *-piyi* acquisition analyzed in the next section.

The highest MLUm is measured at age 5;06. Billy produces several complex utterances in this session: of the eight *piyi*-derived verbs, four are 6- or 7-morpheme utterances. Thus, as of 5;06 Billy's use of longer utterances is more sustained. For this reason, I take 5;06 to be the age that marks the beginning of Stage III in the acquisition of unaccusativity. I consider the morphological make-up of Billy's utterances below.

6.7.4.2. Morphological inventory of *piyi*-derived utterances

In this section, I present an inventory of the morphology used in the derivation of *-piyi* verbs. I separate Billy's utterances into three stages, as discussed above. Stage I includes the first four sessions, ending with the last session with an MLUm in the range of 3. Stage III begins with session 8, the session with the highest recorded MLUm in the whole corpus. These stages are the same as those used in the chapter on the acquisition of the passive (Chapter 5), and are as follows (134).

(134) STAGES OF *-PIYI* ACQUISITION

STAGE	# OF *-PIYI* VERBS	SESSION	BILLY'S AGE	MLUM
I	26	1	4;06.08	3.69
		2	4;07.26	4.00
		3	4;09.14	4.25
		4	5;00.13	3.75
II	14	5	5;02.12	4.50
		6	5;05.00	4.20
		7	5;05.22	4.00
III	28	8	5;06.27	5.00
		9	5;10.06	4.40
		10	5;10.19	4.29

In the rest of this session, I will discuss Billy's use of morphology in each position in the morphological template of the verb, beginning with the first position in the verbal complex, pronominal clitics. A full breakdown of his morphological inventory can be found in Appendix VI.

6.7.4.2.1. Pronominal clitics

Billy produces first person pronominal clitics on *piyi*-derived verbs throughout the corpus, but the second person pronominal clitic only appears in Stage III.

(135) PRONOMINAL CLITIC PRODUCTIONS WITH *PIYI*-DERIVED VERBS

PRONOMINAL CLITIC	STAGE I (4;06 – 5;00)	STAGE II (5;02 – 5;05)	STAGE III (5;06 – 5;10)
1st person *n- / ni- / nit-*	✓	✓	✓
2nd person *chi-*	×	×	✓

The reason for this pattern is unclear, as second person pronominal clitics are clearly produced by Billy on other verbs by 4;09. This may well be an accident of the corpus data, as it does not appear to be indicative of some wider pattern.

6.7.4.2.2. Preverbs

Conjunct preverbs, which might be thought of as subordinating preverbs, are used by Billy throughout the three stages, as is the past morpheme in the independent order. However, tense, modal, and desiderative preverbs show some interesting developmental patterns.

(136) PREVERB PRODUCTIONS WITH *PIYI*-DERIVED VERBS

PREVERBS	STAGE I (4;06 – 5;00)	STAGE II (5;02 – 5;05)	STAGE III (5;06 – 5;10)
Conjunct preverb *âh*	✓	✓	✓
Conjunct preverb *kâ*	✓	✓	✓
Past independent *chîh*	✓	✓	✓
Past negative independent *uhchi*	✓	×	×
Future conjunct *châ*	✓	×	✓
Future 2nd/ 3rd person independent *chiki*	×	✓	✓
Desiderative 'want' *wîh*	×	✓	✓
Future 1st/ 2nd person independent *ki*	×	×	✓
Future 3rd person independent *kiti*	×	×	✓
Modal 'should' *chipi*	×	×	✓

The reason for the past negative preverb *uhchi* to be absent in the second and third stages and for the future conjunct preverb *châ* to be absent in the second stage appears to be an accident of the data set. Billy produces these preverbs on a variety of verbs in every stage.

The future second/third person independent preverb *chiki* and the desiderative preverb *wîh* both appear to be used correctly throughout the corpus from the first session, but less frequently than later in the corpus. The same cannot be said of the future SAP independent preverb *ki*, which is regularly part of the target utterance from the first

session but is inconsistently produced throughout the corpus, even through the third stage. In many utterances, Billy simply omits *ki*.

The future third person independent preverb *kiti* and the modal *chipi* are both extremely rare in the corpus, appearing late in Billy's speech. The preverb *kiti* conveys third person future information on an independent verb. This same information is similarly conveyed by the more straightforward future independent preverb *châ*, which requires no person distinctions. One way to capture this order of acquisition is to say that children will acquire one morpheme to perform one function (e.g., Pinker's 1984 Unique Entry Principle; Clark's 1987 Principle of Contrast; Markman's 1991 Mutual Exclusivity Assumption).[68] The late appearance of the modal is likely due to the semantic complexity of the concept of modality (see, e.g., Papafragou 1998 and citations therein).

6.7.4.2.3. Derivational morphology

Billy's productions of derivational morphology are sporadic, excepting the diminutive morpheme. Consider the following distribution.

68 This similarly predicts that Billy will have difficulty acquiring the past negative independent preverb *uhchi*, as it encodes more complex semantics than the past independent preverb *chîh*. Indeed, this seems to be the case, as Billy incorrectly uses *chîh* in negative sentences. Luci Bobbish-Salt notes that this error is common in the linguistic development of Cree-speaking children. I leave the analysis of the acquisition of this morpheme to future researchers, as it is beyond the scope of this thesis.

(137) DERIVATIONAL MORPHOLOGY PRODUCTIONS ON *PIYI*-DERIVED VERBS

MORPHEME	STAGE I (4;06 – 5;00)	STAGE II (5;02 – 5;05)	STAGE III (5;06 – 5;10)
Diminutive *-shi*	✓	✓	✓
Intensifier *-si*	×	✓	×
Medio-reflexive *-hu*	×	✓	×
Passive 3rd person *-âkiniwi / -kiniwi*	✓	×	✓
Causative animate *-h*	✓	×	✓
Causative inanimate *-htâ*	✓	×	✓
Direct theme *-â*	✓	×	✓
Inverse theme *-îku*	×	×	✓

What I call the "intensifier" *-si* morpheme is not fully understood. It takes the form of a VAI verbalizing morpheme, but can stack with other verbalizing morphemes. It seems to add a pejorative meaning, or to function as an intensifier, as in the following (138). More study is needed to understand the semantics and function of this form.

(138) INTENSIFIER *-si*

Âtwâwâ-piyi-**si**-yi-ch	mâ	châkwâ-yiu.
sound.thusly-DYN-**INTENS**-OBV-0.S	EMPH	what-OBV
IC.ROOT-VI.VBZ-**INTENS**-OBV-CIN	P,DISC	PRO,WH-OBV

'Something is making (a certain) noise!'

Translator comment: Would normally be *âtwâwâpiyiyich.*

Target:	[ædo-bi-'s-i-z	mæ	dʒɛgo-jo]
Actual:	[nɪdo-vi-s-ɪ-ʤ	ɛn	ʧəgɔ-jə]

(B3-2006-07-26#191)

Similarly, the medio-reflexive *-hu* needs a closer look. This morpheme appears to first be used in fixed phrases like "I know how to do this" and "I dress up as x (e.g., Halloween costume)." The use noted here in Stage II requires a deeper understanding of the syntax of medio-reflexives, as it is used to ascribe an agentive subject to an unaccusative verb, instead of focusing agentivity on an already sentient subject as in the fixed examples. In the following example, the agentive subject is "impersonal", referring to people in general (139). This is also the only instance of impersonal inflection on *piyi-* derived verbs, which is noted in the section on inflectional morphology, below.

(139) MEDIO-REFLEXIVE MORPHOLOGY

Mâu-tâh	âh	wîh	pîhtâ-piyi-**hu**-nâniwich.
this-LOC	PVB,CJ	DESID	go.inside-DYN-**MEDIO.RFLX**-IMPERS
P,DEM+G.PXL-LOC	PVB,CJ	PVB	ROOT-VI.VBZ-**VAI.VBZ**-IMPERS

'This is where you go in order to get in.'

Target: ['maw-daw ʒia-wəæ-'bidæ-bi-hʊ-nænoʧ][69]

Actual: [mɑ-taʔ o-wi-bida-bi-hʊ-nanoʧ]

(B3-2006-07-26#165)

I assume that both of these morphemes are acquired at least by Stage II, and do not appear on Stage III *piyi*-derived verbs as an accident of the corpus.

With respect to the passive morpheme, I have argued that Stage II is the stage during which Billy is acquiring passive syntax (§5.4.2). During this time, his productions are less complex and he makes more errors. Thus, it is not surprising that he does not form passives of morphological casuatives of *-piyi* verbs during Stage II. It is tempting to hypothesize that the same holds true for causative morphology and the related theme morphology. This is an interesting question for future work: Is Stage II a time during which Billy is starting to understand how to derive more complex verbs from basic verb stems (secondary derivation)? This would mean that passive, causative, benefactive and other applicative morphology would all be acquired around the same time, predicting a fairly uniform reduction in the use of this morphology from 5;02-5;05, together with an increase in the rate of errors. Were this correct, it would strengthen my argument from

69 It is unclear why there is a syllable [ʒi] in the Target Morphology field in this example.

Chapter 5 that Billy's acquisition path is U-shaped (Marcus et al. 1992; see also Rose & Brittain 2011 for a discussion of Cree). This question must be left for future work.

Before moving on, the acquisition of the inverse theme sign deserves some discussion. Transitive verbs with two animate arguments bear "theme sign" morphology. This system interacts with the Algonquian person and gender hierarchy, which orders second person above first person, which in turn is above third person (2>1>3) (e.g., Bloomfield 1946; Wolfart 1973; Dahlstrom 1991). The theme sign morphology indicates which of the two animate arguments is the actor, and which is the patient. If the actor argument is higher on the person hierarchy than the patient, the verbal complex is marked with direct theme sign morphology. If the actor is lower on the hierarchy than the patient, the verbal complex is marked with inverse theme sign morphology.

There is a sense in the literature that verbs bearing direct theme sign morphology are somehow "more basic" (see, e.g., Dahlstrom 1991). The acquisition facts from the set of *piyi*-derived verbs appear to confirm this. While Billy produces basic transitives (e.g., transitive verb stems) with both direct and inverse morphology from the second session (4;07), the pattern is very different with derived transitive verbs (e.g., morphological causatives). Billy produces morphological causatives with direct theme sign morphology from the first session (4;06). He first produces morphological causative with inverse theme sign morphology a full year later (5;06). Consider the following example (140).

(140) INVERSE THEME SIGN MORPHOLOGY ON A MORPHOLOGICAL CAUSATIVE (5;06)

Awâ-yiu-h kâ pâ-piyi-**h-îku**-ch.

who-OBV-OBV PVB,CJ along-DYN-**CAUS-INV**-3.PL

PRO,WH-OBV-OBV PVB,CJ ROOT-VI.VBZ-**VTA.VBZ-THM**-CIN

'Who brought them by vehicle?'

Target: [we-ˈju-_ kæ bæ-bi-h-igʊ-ʧ]

Actual: [wa-ɛ-_ kə ba-bɪ-d-ikɔ-ʤ]

(B3-2006-12-11#196)

This preliminary evidence suggests that direct theme sign morphology is in fact acquired before inverse theme sign morphology, which is predicted if direct theme sign morphology is more basic. Unfortunately, the corpus of Billy's speech does not begin early enough to observe which theme sign he first uses with basic transitive verbs. I leave this question to future work.

6.7.4.2.4. Inflectional suffixes

Billy produces a range of inflectional suffixes on *piyi*-derived verbs. He produces subjunctive and obviative verbs from the first session, as well as verb inflected in both Independent Indicative Neutral (IIN) and Conjunct Indicative Neutral (IIN) orders. He does not produce verbs inflected in the imperative order until Stage III. Consider the following distribution (141).

(141) INFLECTIONAL SUFFIXES PRODUCED ON *PIYI*-DERIVED VERBS

MORPHEME	STAGE I (4;06 – 5;00)	STAGE II (5;02 – 5;05)	STAGE III (5;06 – 5;10)
Subjunctive *-â*	✓	✓	✓
Obivative *-yi / -yiu*	✓	✓	✓
Obviative inan *-h*	×	✓	✓
Impersonal *-nâniwich*	×	✓	×
IIN 1st / 2nd person *-n*	✓	×	×
IIN 1st person plural *-nân*	✓	✓	✓
IIN 3rd person anim/inan *-u*	✓	✓	✓
IIN 3rd person anim plural *-ich*	✓	×	×
CIN 1st person singular *-yân*	×	✓	×
CIN 1st person plural *-yâhch*	✓	✓	✓
CIN 1pl > 3 *-ichihch*	?	×	×
CIN inan singular *-ch*	✓	✓	✓
CIN anim singular *-t / -ch*	✓	×	✓

While I will, for the most part, set aside discussion of inflectional morphology, a few of the above morphemes need some further attention.[70]

70 It is difficult to comment on the word-final obviative morpheme *-h*, as these morphemes are difficult for English-speaking transcribers to hear. See footnote 67 on page 148.

Impersonal morphology is an interesting part of the passive system, as discussed in §4.4.2.2. This morphology is still not well-understood and requires closer investigation. As it is, Billy produces very few of these forms, but appears to have more difficulty acquiring this morphology than passive morphology.[71]

Of the inflectional morphology, the transitive first person plural morpheme *-ichihch* is interesting. This morpheme is used in cases where the actor is first person plural and the patient is a third person singular animate, as in the following example (142).

(142) TRANSITIVE CIN 1PL>3 MORPHOLOGY

Âh	pimi-piyi-h-**ichihch**	û.
PVB,CJ	move-DYN-CAUS-**1.PL**	this
PVB,CJ	ROOT-VI.VBZ-VTA.VBZ-**CIN**	P,DEM.PXL

'When we drive this one.'

Target:	[æ	pʰəm-bi-ˈh-**idʒɪʧʰ**	o]
Actual:	[ajæ	bɪn-bi-ha-**jæʧ**	o]

(B3-2006-05-27#505)

Take note of Billy's utterance in the Actual IPA field. The phonological form of the morpheme is not adult-like. Instead, he appears to be producing the CIN morpheme for a first person plural subject of an *intransitive* verb, *-yâhch.* This is true of both utterances in the corpus in which Billy ought to produce *-ichihch* – both have the phonological form of *-yâhch* in his productions. This is an example of Billy generalizing intransitive

71 See example (66) on page 80, where Billy incorrectly produces a passive instead of an impersonal verb.

inflectional morphology to transitive verbs. Whether this is a pattern found throughout his speech is a question that I leave to future research.

6.8. Summary

In this chapter I have shown that Billy has acquired the syntax of unaccusative and unergative verbs by 5;06 at the latest, though possibly earlier. I have further demonstrated that his *piyi*-derived verbal utterances increase in morphological length and complexity across three stages. I have shown that modals appear late in Billy's *piyi*-derived verbs, as do morphemes whose basic semantics can be expressed in another, simpler way. I have hypothesized that U-shaped development is a more general pattern in Billy's acquisition of derivational morphology, and have given preliminary evidence from the order of acquisition that direct theme sign markers are in fact "more basic" than inverse theme sign markers. I have demonstrated one case in which Billy generalizes intransitive inflectional morphology to transitive verbs.

I have raised a number of questions in this chapter, summarized below.

(143) QUESTIONS FOR FUTURE RESEARCH

1. What is the role of sentience in the acquisition of unaccusativity?
2. Does Billy's acquisition of derivational morphology follow a U-shaped developmental path?
3. Is direct theme sign morphology acquired before inverse theme sign morphology in "basic" verbal stems (primary derivation)?
4. Does Billy regularly produce intransitive inflectional suffixes on transitive verbs, as he does with the morpheme *-ichihch*?

Chapter 7 – Conclusion

In this thesis I have presented a case study of Billy's acquisition of the passive construction and unaccusativity in Northern East Cree from 4;06 – 5;10.

With respect to the passive construction, I have shown that Billy has acquired passive morphology by the first session, but not the grammar of the passive. I split his acquisition of the passive into three stages. In Stage I he relies on unanalyzed chunks ('do'-passives) and shows no evidence of syntactic acquisition. In Stage II he produces errors and self-corrections and demonstrates an understanding of the relationship between the active and passive voices, which I take to be evidence of his ongoing analysis of the passive. In Stage III he shows an excellent command of the passive construction, and his utterances increase in complexity and variety. This is evidence of U-shaped development (Marcus et. al 1992).

With respect to unaccusativity, I have restricted my investigation to the set of *piyi*-derived verbs, which includes unaccusatives, unergative vehicle and emission verbs, relative root verbs and manner verbs. There are no errors in Billy's productions of these verbs in the entirety of the corpus, but I am able to suggest from causative alternations that he productively uses the causative-inchoative alternation (transitive pairs of unaccusative verbs) earlier than he shows command of morphological causativization of unergative verbs. However, there is not enough data for these findings to be conclusive. I show that he produces a restricted range of verbs, but that the morphological complexity in these verbs rises significantly at 5;06, in line with his mastery of the passive. There is

some suggestion that his acquisition of the syntax of secondary derivation (morphological causatives, passives...) is U-shaped across his grammar, which forms an interesting question for future work.

Taken together, these findings show that Billy is an active learner, analyzing his language. This stands in contrast with predictions made by nativist hypotheses like the Maturation Hypothesis (Borer & Wexler 1987), which predicts that Billy's acquisition of the passive and of unaccusativity will be linear. Rather, my findings are in line with other studies of non-Indo-European, polysynthetic languages. As is the case with Sesotho, Zulu, Quiche Mayan and Inuktitut, the structure of Cree plays a role in the acquisition of grammar, as does input frequency (Suzman 1985; Pye & Quixtan Poz 1988; Demuth 1989; 1990; Allen & Crago 1996).

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Appendix I: Passive utterances (Billy's speech)

Billy's passive utterances are listed by session with Cree syllabics, orthography, and a morphological analysis together with a translation. For each utterance, the target morphology (in IPA) is given, as well as his actual morphology (in IPA). Missing morphemes are represented by '_'. Passive utterances are placed in their surrounding context. All names have been changed.[72]

1. Session 1 – Age 4;06.08 (Total passive tokens: 2)

1.1. Conversation 1

	Adult:	ᒥᐧᐃᔭᐦᒪᐤ	ᐊᐦ	ᐧᐃᔭ	ᐊᐦᐃ...
		Miywâyimâu	â	wîyi	âi...
		'Does ... like those ...?			

(1)	Billy:	ᒪᐅᑕᐦ	ᐊᐦᐱᔭᐦᐃᑭᓂᐘᑦ
		Mâu-tâh	âs-piyi-h-âkiniwi-t.
		this-LOC	thusly-DYN-CAUS-PASSIVE.3-3.S
		P,DEM+G.PXL-LOC	ROOT.IC-VI.VBZ-VTA.VBZ-PASSIVE-CIN
		'This is how you make it go / You move it this way.'	

Target:	[maw-tah	s-pi-h-akɪnəwɪ-t^{h}]
Actual:	[mʌ-na	sɪ-pi-h-agənʌ-_]

(B3-2005-11-22#210)

72 Many thanks to Luci Bobbish-Salt, whose commentary on these examples was invaluable. Any errors are my own.

Billy: ᐅᐸᐣₓ

Uyâh.

'This one?'

Adult: ᓀᑎ·ᐊᐞᐤ ᐊᐞ ᓀᓵ ᑭᑭᔑᒋᔆ ᐊᓂᐸᐣ ᑲ

Mâtiwâchâu â mân chichishîmish aniyâh kâ

ᐃᔑᔨᓵᑯᔑᔑᐳᑌᐣₓ

îshinâkushishiyich-h.

'Does your little brother play with those sometimes?'

1.2. Conversation 2

(2) Billy: ᓂᑊᐣ ᒋᔨᓂᐣᐅᑯᐞᐃᓇᓵₓ

Ni-chîh misin-ihu-kuwi-n.

1-PAST write-by.instrument-PASSIVE.1/2-1/2

1-PVB ROOT-VTR.VBZ-PASSIVE-IIN

'They wrote my name down (lit: I was written down).'

Target: [nɪ-ʧi-msɪn-ɪhʊ-kʊɪ-n]

Actual: [ʌnɑ n-ʤɪ-msən-o-gwɑ-n]

(B3-2005-11-22#241)

Adult: ᐊ·ᐊᐞ ᑲ ᒋᔨᓂᐣᐅᕽᑲₓ

Awân kâ misinihusk.

'Who wrote your name on it for you?'

Billy: ᐊᐧᐃ James×

Âi James.

'Umm, James.'

Adult: ᐱᓕ ᐃᒋᓴᑦᐤ ᓂᒪ×

Pilî îchishtâu nimâ.

'It is written Billy, eh?'

2. Session 2 – Age 4;07.26 (Total passive tokens: 6)

2.1. Conversation 3

Billy: ᒐ·ᑲᐱᐤ ·ᐃ ᐅᔭ×

Châkwâyiu wî uyâ.

'What is this?'

Adult: ᐊᐧᐦ ᒋᑦᐸᐧ:ᐃ ᐊᐧᐦ ᒋᑦᐸᐧ:ᐃ×

Âh chistâpâwi âh chistâpâwi.

'To wash... to wash...'

(3) Billy: ᐅᒋᐟ ᐊᐞᑐᑎᑭᐧᐃᑌ ᑭᐅᐧᒋᓵ

U-tâh âhtut-ikiniwi-ch kiyipwâ.

this-LOC do-PASSIVE.3-0.S of.course

P,DEM.PXL-LOC ROOT.VTI-PASSIVE-CIN P,AFF

'How you do this.'

Target: [o-'dæ tot-ɛkənowi-tʃ kibɑ]

Actual: [o-da: dod-anʊwɪ-tʃ kɑ:]

Translator comment: Correct verb composition but strange sentence structure.

(B3-2006-01-10#139)

Adult: ᒋᒉ ᓂᑭᓴᐅᒧᐃᓐ

Tâpâ nichischâyimâu.

'I don't know.'

Adult: ᑭᐦᒋᒉᐅᒋᑭᐧᐃᐅ ᐊᓂᑎ ᐃᐃ...

Chishtâpâwitâkiniû anitih âi...

'It is washed there ummm...'

Adult: ᐃᐟ ᑭᐦᒋᒉᐧᐃᑭᓂᐧᐃᐧᐃᒧᑌ ᐊᐟ

Âh chishtâpâwichichâniwiwiyich â.

'When laundry is done?'

2.2. Conversation 4

(4) Billy: ᒋᓂᒋᐦ ᐊᐦ ᐃᐦᑐᑌᑭᓂᐧᐃᒋ ᐁᐣ

Tânitâh âh ihtut-ikiniwi-ch û.

how PVB,CJ do-PASSIVE.3-0.S this

P,WH PVB,CJ ROOT.VTI-PASSIVE-CIN P,DEM.PXL

'How do you do this?'

Target:	[dæn'd	æ	tot-ɪkɪnawə-tʃ	o:]
Actual:	[dand	æ	dod-owanno-t	o:]

Translator comment: Sounds like he begins to say the passive morpheme *-âkiniw* but then changes his mind mid-way through.

(B3-2006-01-10#238)

Adult: ·ᐊᐦ

Wâh.

'What?'

Billy: ·ᐊᐦ

Wâh.

'What?'

Adult: ᑭᐠᒋ·ᐊᐱᐦᐊᑭᓂᐧᐃᐁ

Chistwâwâpiyihâkiniû.

'It is started (lit: you make it, e.g., a skidoo, make a noise).'

(5) Billy: ᒋᓂᑎᐦ ᐊᐧᐦ ᐃᐦᑐᒋᑭᐱᓂᐃᑲᓯᐧᒉ

Tânitih âh ihtut-âkiniwi-ch.

where PVB,CJ do-PASSIVE.3-0.S

P,WH PVB,CJ ROOT.VTI-PASSIVE-CIN

'Where do you do it?'

Target: [dæn'd æ tot-akɪno-ʧ]

Actual: [dʌnd a ʃdɑb-ɪgægəno:-_]

(B3-2006-01-10#242)

Adult: ᐊᓂᒋᐦ ᐊᐳᐦᐧᒉ

Anitâh âyihch.

'Somewhere there.'

Adult: ᐊᐱᑎᐦᒋᑭᐱᓂᐅ ᐩᑲᐟ, ᒋᐧᐊ ᓂᑎᐩᐳᒪᐤ ᐊᐳᐦᐃᑐᑎᐦᒃ

Âpichihtâkiniû châkwân, tâpâ nichischâyimâu âyihtutihk

James, ᐧᐊᓴ ᔭᐳᒋ ᑊᐦ ᐃᓂᐦᒋᑭᑎᐩᐧᒉ

James, wâsh yâyitâ chîh winihtâchichâ.

'We use something, I don't know what James did with it, of course, he must have lost it.'

(6) Billy: ᒐᓂᑎ" ᐊᐧ" ᐃ"ᑐᒋᑭᓂ·ᐃᒃ James×

Tânitih âh ihtut-âkiniwi-ch James.

where PVB,CJ do-PASSIVE.3-0.S name

P,WH PVB,CJ ROOT.VTI-PASSIVE-CIN N

'Where do you do it (name)?'

Target: [dæn'd æ tot-agɪno-tʃ (name)]

Actual: [dʒʊgon a dod-æno-tʃə̥ (name)]

(B3-2006-01-10#245)

Billy: ·ᐊᐧ"×

Wâh.

'What?'

Adult: ᒐᐸ ᓂᑭᐠᐚᐃ"ᒐᓱ ᐊᓂᒐ" ᐊᐧ" ᐃ"ᑎᑯᓂᐃᐠᒃ×

Tâpâ nichischâyihtân anitâh âh ihtikuniyich.

'I don't know where it is.'

2.3. Conversation 5

(7) Billy: ᒐᓂᒐ" ᐊᐧ" ᐃ"ᑐᑎᑭᓂ·ᐃᒃ ᐊᐧ" ᑭᐱ"ᐁᑭᓂ·ᐃᒃ×

Tânitâh âh ihtut-ikiniwi-ch âh chip-ih-îkiniwi-ch.

how PVB,CJ do-PASSIVE.3-0.S PVB,CJ close-VTI.VBZ-PASSIVE.3-0.S

P,WH PVB,CJ ROOT.VTI-PASSIVE-CIN PVB,CJ ROOT-VTI.VBZ-PASSIVE-CIN

'How is this closed?'

Target: [dɑn'd a tʰot-ɪkə'no-dʒ ɛ tsp-ʰ-iga'no-tʃ]

Actual: [dæn'd a dɔd-ano-ʤ a ʤap-ʰ-a'no-ʧ]

(B3-2006-01-10#650)

Adult: ᐊᑯᑦ" ᐊᓂᑦ" ᐊᑦ" ᐃ"ᑐᑎᑭᓂ·ᐃᒃₓ

Âkutâh anitâh âh ihtutikiniwich.

'That's how it is done.'

3. Session 3 – Age 4;09.14 (Total passive tokens: 2)

3.1. Conversation 6

Billy: ᐊᐃ, ᓂᑊ" ᐅᑎᑦᒥ"ᐅᐣ ... James ᓅᑭᓭ"ᒃₓ

Âi nichîh utitâmihukw ... James nîchinâhch.

'James hit me at our house.'

Adult: ᐊᐤ ᓭᔪᒃ ᐊᑦ" ᒥ"·ᑲᐳᒃₓ

Aw nâshch âh mihkwâyich.

'Aw, it's very red.'

Adult: ᒐ·ᑲᐳᐤ ·ᐊᑦ"ᑭ ᑊ" ᐅᑦᒥ"ᐅᕃᒃₓ

Châkwâyiu wâhchi chîh utâmihusk.

'Why did he hit you?'

(8) Billy: ᐊᐃ, ᐅ ᒪᐅᑦ" ᑲ ᐃ"ᑐᑎᑭᓂ·ᐃᒃₓ

Âi û mâu-tâh kâ ihtut-ikiniwi-ch.

PRO,HES this this-LOC PVB,CJ do-PASSIVE.3-0.S

PRO,HES P,DEM.PXL P,DEM+G.PXL-LOC PVB,CJ ROOT.VTI-PASSIVE-CIN

Umm, the thing that is done this way.

Target: ['a jo 'u-da ka dod-ɪkanowi-tʃ]

Actual: [a jo wʌ-də ga dəd-ajgʌne-jt]

(B3-2006-02-28#79)

Billy: ᐃ"ᐃˣ

Îhî.

'Yes.'

Adult: ᒐ·ᑲᐳ°, ᐅᒪᑎ·ᐊᓂᔅ ᐊˣ

Châkwaayiu, umâtiwânish â.

'What? With his toy?'

Billy: ᐃ"ᐃˣ

Îhî.

'Yes.'

3.2. Conversation 7

(9) Billy: Drops ·ᐊᔅ ᑊ" ᐱᑎᖅᑎᑎᓂᕈᓂᐅ" my eyeˣ

Drops wâsh chîh pichischit-in-ikiniu-u-h my eye.

Eng EMPH PAST release-by.hand-PASSIVE.3-3-0.PL ENG ENG

ENG P,DISC PVB ROOT-VTR.VBZ-PASSIVE-IIN-IIN POSS.PRON.1 N

'They're gonna put drops in my eye.'

Target: ['dɹɑps waʃ gʌ bɪts-n-ɪgəno-o-_ m aj]

Actual: [ʤɹɑps ɑʃ tigə bɪts-d-igənano-o-_ dm ʌj]

(B3-2006-02-28#599)

Billy: ᓂᔅᑊᔨᑯ"ᖏˣ

Nishchîshikuhch.

'In my eye.'

Adult: ᑎᑎᓂᑊᔨᑯᐧᐣᓗ ᐊᓵ

Chichishchîshikuhch â.

'In your eye?'

Billy: ᓴᓂᑦᐸᐣ ᓴᓂᑦᐸᔭ ᓂᑦᐣᑯᐣᐃᑯᓵ ᒪᓵᐣᓵ

Nâshtâpwâh nâshtâpwâh nitâhkuhikûn mânh.

'It hurts lots usually.'

Adult: ᑎᒪᑐᓵᓵ

Chimâtun.

'Are you crying?'

Billy: ᐃᐣᐃ, ᓅᐧᔨᐤ ᐧᐊᓂ ᐅ ᒪᓵ ᓂᑎᐣ ᐃᑎᑯ ᓂᑲᐃᓵ

Îhî, nîshwâu wâsh û mân nichîh îtikw nikâwî.

'Yes, my mother said twice (e.g., drops twice a day).'

4. Session 4 – Age 5;00.13 (Total passive tokens: 1)

4.1. Conversation 8

Adult: ᐅᒥᔭᑎᔨᓂᐣᓄ ᒐᐣ ᐋᐣᑎᐱᐅᐅᓄ ᔮᑲᐅᐤ,

Umischisinihch châh pîhchipiyiyich yâkâyiu,

ᐊᔪᐧᐃᑯ ᐧᐊᐣᑎ ᐃᐅᑎᑲᓵ

âyuwikw wâhchi îyitik.

'Sand will go inside her shoes, that's why I said (that about it).'

Billy: ᐊᐡ ᑭᔑᒋᐣᐠ ᐊᓂᔭᐣᐤᐡ ᓂᒪₓ

Âh chishitâyich aniyâyiuh nimâ.

'When it's hot those right?'

Adult: ᐃᐡᐃₓ

Îhî.

'Yes.'

(10) Billy: ᐊᐡ ᒥᓂᓂᑭᓂᐞᐃᐞᐣᐡ

Âh min-in-ikiniwi-wiyi-ch-h

PVB,CJ pull.off-by.hand-PASSIVE.3-OBV-0.S-0.PL

PVB,CJ ROOT-VTR.VBZ-PASSIVE-OBV-CIN-CIN

ᐅᔭᐣᐤᐡ ᓂᒪₓ

u-yâyiu-h nimâ.

this-OBV-INAN.PL right

P,DEM.PXL-OBV-INAN.PL P,NEG

'You take these off, right?'

Target: [ˈa mən-_-ɪgənə-wi-ʧ-_ w-iajɔ-_ nəmʌ]

Actual: [ʌ mn-_-ɪgonegonɔ-j-ʧ-_ ə-ojea-ç nɑ]

(B3-2006-05-27#57)

Adult: ᐃᐡᐃₓ

Îhî.

'Yes.'

5. Session 5 – Age 5;02.12 (Total passive tokens: 2)

5.1. Conversation 9

(11) Billy: ᒋᐟᐟ ᑎᐱᐟᐃᑭᓂᐅ ᐊᔪᔨ

Chîh tipi-hi-ikiniu-u wâsh.

PAST measure-by.instrument-PASSIVE.3-3 P,EMPH

PVB ROOT-VTI.VBZ-PASSIVE-IIN P,EMPH

'It was paid.'

Target: [ʤi dəp-i-gɛˈnoː-_ waʃ]

Actual: [ʤi təp-ʰi-təno-_ wəʃ]

(B3-2006-07-26#265)

Adult: ᒋᐟᐟ ᑎᐱᐟᐃᓯᓂᐅ ᐊᓫ

Chîh tipihîchâniû â.

'Was it already paid?'

Billy: ᐃᐟᐃ ᒋᑭ ᑎᐱᐟᐃᓯᓂᐅ ᐧᐊᔪᔨ

Îhî chiki tipihîchâniû wâsh.

'Yes, it will be paid.'

Billy: Graduate-ᐅᔨᓀᓫ

Graduate-uyânâ.

'When I graduate.'

Adult: ᐅᐟᓫ

Uh.

'Oh!'

5.2. Conversation 10

Adult: ᒋ·ᐊᐣᓭ ᐯᐣᐸ ᐞ ·ᐊᐱᒋᐠ ᓂᑎ·ᐊᐱᒋᐦᑲ ᐯᐣᐸ,

Chîwâyinâ kiyipwâ châ wâpimit nitiwâpimiskâ kiyipwâ,

ᐞ ·ᐊᐱᒋᐠ, ᐊₓ

châ wâpimit, â.

'You will see her when you go home, you will see her when she comes to get you, ok?'

Adult: ᑭᐦᔨᑎᒧ·ᐊᐸᓂ·ᐃᑭᐞ ·ᐊᓴ ᐊ° ᑭᐦᔨᑎᒧ·ᐊᐸᓂ·ᐃᑭᐞ

Chiskutimuwâkiniwîchichâ wash,aw, chiskutimuwâkiniwîchichâ,

ᐊᐱᑎᔨᑭᐞ ·ᐊᓴₓ

âpitisîchichâ wash.

'She must be in class, aw she must be working.'

(12) Billy: ᓂᒧᐃ ᑭᐦᔨᑎᒧ·ᐊᐸᓂ·ᐃᐣ°ᑊ [??]ₓ

Nimui chiskutim-uw-âkiniwi-yi-u-h [??].

not teach-VTA.VBZ-PASSIVE.3-OBV-3-OBV

P,NEG ROOT-VTA.VBZ-PASSIVE-OBV-IIN-OBV

'His [indecipherable] is not going to school.'

Target: [nəˈmʊj t'skʊdəm-w-ɔgnɔ-j-o-_*]

Actual: [mʊj skʊdom-_-ənaw-_-u-_ *]

(B3-2006-07-26#377)

Adult: ᐊᐱᑎᓯᒋᒍᓀ ᑭᔨᐧᐋᐦ, ᐊᐱᑎᓯᒋᒍᓀᕽ

Âpitisîchichâ kiyipwâ, âpitisîchichâ.

'She must be working, yes, she must be working.'

6. Session 6 – Age 5;05.00 (Total passive tokens: 7)

6.1. Conversation 11

Billy: ᒐᐧᑲᓐ ᐅᔨᐟᕽ

Châkwân ûyiu.

'What is this?'

Adult: ᐊᐦ ᒪᑎᐧᐊᓂᐧᐱᐠᕽ

Âh mâtiwâniwich.

'It's a game.'

(13) Billy: ᒑᓂᒑᐦ ᐊᐦ ᐱᐦᑐᑌᑎᐧᐊᓂᐧᐱᐠᕽ

Tânitâh âh ihtut-ikiniwi-ch.

how PVB,CJ do-PASSIVE.3-0.S

P,WH PVB,CJ ROOT.VTI-PASSIVE-CIN

'How do you use this?'

Target: ['danda a 'tot-ɪgəno-ʧ]

Actual: [tand a tən-ɑno-tʰ]

(B3-2006-10-14#311)

Adult: ᐊᐦ ᐊᐱᐦᐃᑎᐧᐊᓂᐧᐱᐠ ᐊᕽ

Âh âpihîkiniwich â.

'To open it?'

Billy: ᐃ"ᐃₓ

Îhî.

'Yes.'

6.2. Conversation 12

Adult: ᑎᑎᓴᐤ ᐊ ᐊᐤ ᑭᓯ ᑲ ᐃᔑᓐᐚᑯᐢᑲₓ

Chitiyân â an chîyi kâ îshinâkuhch.

'Do you have one that looks like this?'

Adult: ᓂᒧᐃ ᐊ ᑎᑎᓴᐤₓ

Nimui â chitiyân.

'You don't have one?'

(14) Billy: ᓱᓴ ᑭ" ·ᐊᐱ"ᑎᑭᓂᐅᓂᐅₓ

Shâsh chîh wâp-iht-ikiniu-u.

already PAST light-by.head-PASSIVE.3-3

P,TIME PVB ROOT-VTI.VBZ-PASSIVE-IIN

'It's already been seen.'

Target: ['ʃaʃ ʤi wap-ʰtʰ-ɪkʰən-o]

Actual: [ha ʤi jɑpˀ-t-əgɪn-ʌpˀ]

(B3-2006-10-14#445)

Adult: ᑎᑭ" ᐃᓴᐤ ᐊ ᒪᐤₓ

Chichîh iyân â mân.

'Did you have one before?'

(15) Billy: ᓱᓴ ᑊᐩ ·ᐁᐱᓂᑭᓂᐅᓵ

Shâsh chîh wâp-in-ikiniu-u.

already PAST throw.out-by.hand-PASSIVE.3-3

P,TIME PVB ROOT-VTR.VBZ-PASSIVE-IIN

'It was already thrown out.'

Target: ['ʃaʃ ʤi wab-ən-ɪgən-o]

Actual: [haʃ ʤi wɑb-n-ɪgən-oʔ]

(B3-2006-10-14#447)

Adult: ᐊ·ᐁᵊ ᑲ ·ᐁᐱᓂᐩᐠ

Awân kâ wâpinihk.

'Who threw it away?'

(16) Billy ᓇᐩᑕ·Δ, ᑊᐩ Δᐠ·ᑲᓭᑭᓂᐅᓵ

N-ûhtâwî, chîh iskwâ-s-ikiniu-u.

1-father PAST burn-VTI.VBZ-PASSIVE.3-3

1-NAD PVB ROOT-VTI.VBZ-PASSIVE-IIN

'My father; it was burned.'

Target: [n-ɔ'tawiʔ ɪʤ iskɔ-s-əgən-o]

Actual: [m-ədawt ʤi ʃkɑ-s-ɪgn-ʊpˀ]

(B3-2006-10-14#449)

Billy: Δᐩ·Δᵪ

Îhî.

'Yes.'

Adult: ᐃᔭᐠᑫᓂᐅᐤ ᐊᐧ ᒪᐢ ᑎᒪᑎᐧᐊᑭᓂᔪᐤ×

Iskwâsikiniûh â mân chimâtiwâkinish-h.

'Are your toys burned sometimes?'

Adult: ᐊᐧᐤ ᐱᑯᐱᔨᔨᒡᐤ ᐊᐧ×

Âh pîkupiyiyich-h â.

'Those that were broken? / When they are broken?'

Billy: Mhm good×

'Mhm good.'

6.3. Conversation 13

Adult: ᒐ ᓂᐠᒋᔭᐢ ᑭᔭᐧᐸ ᐱᓯᒪ×

Châ nikwâtâyin kiyipwâ pîsim.

'You will catch the sun with your snare.'

Adult: ᐊᐧᐠᑎᒋᐢ ᐅ, ᒐ ᓂᐠᒋᔭᐢ ᑭᔭᐧᐸ ᐱᓯᒪ×

Akwâtitân û, châ nikwâtâyin kiyipwâ pîsim.

'I said, "You will catch the sun with your snare".'

(17) Billy: Ỉ·ḃᵊ ◁ᵊ "◁̇" ᓂ·ḃĊᑭᓂ·ᐃᑦ"ₓ

Châkwân an "âh nikwâ-t-âkiniwi-t."

what that PVB,CJ snare-VTA.VBZ-PASSIVE.3-3.S

PRO,WH P,DEM.DST PVB,CJ ROOT-VTA.VBZ-PASSIVE-CIN

'What is the meaning of "âh nikwâtâkiniwit"?'

Target: ['ʤagwan ən a nəgɔ-t-əgano-tʰ]

Actual: [tʰəgʌn _ ə gɑ-b-egəmʌ-ʧ]

(2006-10-14#516)

Adult: ᑭᑦᐃᓱ"Ċᵊ ◁̇ ◁ᵊₓ

Chichischâyihtân â an.

'Do you know that...?'

(18) Billy: Ỉ·ḃᵊ ◁ᵊ "◁̇" ᓂ·ḃĊᑭᓂ·ᐃᑦ"ₓ

Châkwân an "âh nikwâ-t-âkiniwi-t."

what that PVB,CJ snare-VTA.VBZ-PASSIVE.3-3.S

PRO,WH P,DEM.DST PVB,CJ ROOT-VTA.VBZ-PASSIVE-CIN

'What is the meaning of "âh nikwâtâkiniwit"?'

Target: ['ʤagwan ən a nəgɔ-t-əgano-tʰ]

Actual: [ʧəgʌn _ ə gɑ-d-agənʌ-ʧ]

(2006-10-14#518)

(19) Billy: ᒐ·ᑲᵃ ᐊᵃ "ᐊ" ᓂ·ᑲᑫᑭᓂ·ᐃᑦ"ₓ

Châkwân an "âh nikwâ-t-âkiniwi-t."

what that PVB,CJ snare-VTA.VBZ-PASSIVE.3-3.S

PRO,WH P,DEM.DST PVB,CJ ROOT-VTA.VBZ-PASSIVE-CIN

'What is the meaning of "âh nikwâtâkiniwit"?'

Target: ['ʤagwan ən a nəgɔ-t-əganɔ-tʰ]

Actual: [ʤɪgʌn _ ɪ ŋogɑ-d-agəno-ʧ]

(2006-10-14#519)

Adult: ᐊ" ᓂ·ᑲᑫᑭᓂ·ᐃᒃ ᐊ ᒐ·ᑲᵃₓ

Âh nikwâtâkiniwich â châkwân.

'To catch something in a snare?'

Billy: ᐃ"ᐃₓ

Îhî.

'Yes.'

Adult: ᐊᐃ, ᑭᓵ·ᐸ, ·ᐊ>ᔭ, ᑕᑎᒋᓵ"ᑫᵃ,

Âi, kiyipwâ, wâpush, chichischâyihtân,

·ᐊ>ᔭ ᐊ" ᓂ·ᑲᑫᑭᓂ·ᐃᑦₓ

wâpush âh nikwâtâkiniwit.

Hmm, yes, rabbit, do you know, to snare a rabbit?'

Billy: ᐃ"ᐃₓ

Îhî.

'Yes.'

Adult: ᐊᒧ ᒐᐱᑊᑲᓂᐞᐃᓴᓗₓ

Âh tâpikwâniwich.

'To set snares.'

Billy: ᓂᒥᒪᐦ, ᓂᑭ ᓵᔑᑊᐦᐠ ᐋᔑᓪ, ᐊᒧₓ

Nimimâh, niki pâschiswâu pîsim, â.

'No, I will shoot at the sun, okay?'

7. Session 7 – Age 5;05.22 (Total passive tokens: 4)

7.1. Conversation 14

(20) Billy: ᒐᵃ ᐊᐃ ... ᒐᓂᒐᐦ ᐊᐦ ᐃᐦᑐᑎᑭᓂᐞᐃᓴᓗₓ

Tân âi ... tânitâh âh ihtut-ikiniwi-ch.

P,WH PRO,HES ... how PVB,CJ do-PASSIVE.3-0.S

P,WH PRO,HES ... P,WH PBV,CJ ROOT.VTI-PASSIVE-CIN

'How is it done?'

Target: [tan aji tant a htʊt-ɪkɪnʊ-ʧ]

Actual: [tan aj tan a wtt-ɪkɪno-ʧ]

(B3-2006-11-06#249)

Adult: ᒐᐸ ᓂᑭᔑᑎᐦᐅᐳᵃ ᑭᔭᐦ ᓅᐟ, ᑎᐦᐃᵃ ᐊᒧₓ

Tâpâ nikischihun kiyâh nîyi, chîhin â.

'I don't know how to do it either, is it working?'

Billy: ᓂᒥᒪᐦₓ

Nimimâh.

'No.'

7.2. Conversation 15

Adult: ᐊᐅᑦ ᐃᐢᒉᑦ ᐋᒃ ᑭᔭᑦᐊᐱᐢᑦᑕᐱᓐ,
Mâutâh ihtût-h âkâ chistwâwâpiyihtâyin,

ᓂᒥ ᑭᑭ ᑭᔭᑦᐊᐱᐢᐤ
nimi chiki chistwâwâpiyiu.
'Do this to turn the sound off, so it won't make a noise.'

Adult: ᓂᒥ ᑭᑭ ᑭᔪᑦᐊᐱᐢᐤ, ᓂᐊᓭ
Nimi chiki chishwâwâpiyiu, nimâ.
'So it won't make a loud noise, right?'

(21) Billy: ᑦᓂᑦ ᐋᐢᒉᑎᑭᓂᐞᐃᓴ
Tânitâh âhtut-ikiniwi-ch.
how do-PASSIVE.3-0.S
P,WH IC.ROOT.VTI-PASSIVE-CIN
'How is this done?'

Target: [tantah tʰut-ɪkɪnʊ-ʧ]
Actual: [tɑ tut-ɪkɪnɑw-ʧ]

(B3-2006-11-06#343)

(22) Billy: ᒋᓂᒋᐟ ᐊᐞᑐᑎᑭᓂ·ᐃᓴₓ

Tânitâh âhtut-ikiniwi-ch.

how do-PASSIVE.3-0.S

P,WH IC.ROOT.VTI-PASSIVE-CIN

'How is this done?'

Target: [tant ahtʰut-ɪkɪnʊ-ʧ]

Actual: [tan ɑtut-ɪkɪnʊn-ʧ]

(B3-2006-11-06#344)

Adult: ᐞᐤ ᓇᓂᑎᐤ ᐊᐞ jumpᐅ·ᐃᐣᓇ, ᑭᔭᐟ ᐞᓴ ᐅₓ

Mâu nânitiu âh jumpuwiyin kiyâh mâk û.

'I think this one is pressed to jump, or this one.'

7.3. Conversation 16

(23) Billy: Susie ᐊᐞ ᐃᐟᒋᑦ ᓂᑭᐟ ᐃᑎᑭᐤᐃᓐ, ᓂᑲᐞᐃₓ

Susie âh iht-â-t ni-chîh iti-kiwi-n n-ikâwî.

name PVB,CJ be-VAI.VBZ-3.S 1-PAST tell-PASSIVE.1/2-1/2 1-mother

N PVB,CJ ROOT-VAI.VBZ-CIN1-PVB ROOT-PASSIVE-IIN 1-NAD

'(Name)'s place, they told me, my mother.'

Target: [(name) a jtʰ-ah-t _-ʧ itʊ-kʊ-n n-ɪkawi]

Actual: [(name) o jt-a-t nɨ-ʦta n-ʧ itə-kʊ-n n-ɪkawi]

(B3-2006-11-06#628)

Billy: ᓂᐸᓯᒪᔨᓴᐢᓵ

Nipâschichâshin.

'I (little me) shoot/I shoot a little bit.'

Billy: ᐊᐧᐦ ᐸᓯᒪᔨᓴᐱᐢ, ᑭᐧᐊᐱᐧᐦᒋᐢᓵ

Âh pâschichâshiyân chiwâpihtân.

'When I (little me) shoot, do you see?'

8. Session 9 – Age 5;10.06 (Total passive tokens: 7)

8.1. Conversation 17

(24) Billy: ᒋᓂᒋᐧᐦ ᐊᐧᐦᑐᑎᑭᓂᐧᐦᒋᐣᓵ

Tânitâh âhtut-ikiniwi-ch.

how do-PASSIVE.3-0.S

P,WH IC.ROOT.VTI-PASSIVE-CIN

'How is it done? (How do you do this?)'

Target: [tant ahtʰut-ɪkano-ʧ]

Actual: [bəh adod-əno-ʧ]

(B3-2007-03-19#6)

8.2. Conversation 18

Adult: ᐊᐧᔨᐢ ᓂᒧᐃ ᐃᑭᔨᓗ ᐊᓂᒋᐧᐦᒋᐦ ᒥᐣ ᑭᑎᑲ ᐊᐧᐊᔨᐧᐦᓵ

Âshkw nimui iskulû anitâh mîn kutik awâshish.

'No other child is going to school there yet.'

(25) Billy: ᒋᐦ ᐃᔑᑎᐦᐊᐧᐸᓂᐅ ᐧᐊᔨ ᐊᓂᑕᐦ ᐊᐧᐊᔨᔪₓ

Chîh itûtih-âkiniu-u wâsh ani-tâh awâshish.

PAST take-PASSIVE.3-3 EMPh that-LOC child

PVB ROOT.VTA-PASSIVE-IIN P,DISC P,DEM.DST-LOC NA

'They took the child over there.'

Target: [ʧi tʰuth-a-kɪno waʃ ɪn-tah əwaʃː]

Actual: [ʤi dobotʰ-a-gən ɑʃ ɪn-da wɑʃ]

(B3-2007-03-19#201)

Adult: ᑕᓂᑕᐦₓ

Tânitâh.

'Where?'

Billy: ᐊᓂᑕᐦ ᐊᐦ ᐊᐱᑯᓗᐧᐃᔅₓ

Anitâh âh âskûluwit.

'Where he goes to school.'

8.3. Conversation 19

Adult: ᒋᐱᐧᑲᔨᐦᑕᓐ ᐊᐧ ᒋᔨ Easterₓ

Chipikwâyihtân â chîyi Easter.

'Are you anxious for Easter to come?'

Adult: ᒋᒋᐱᔨᐦᑕᓐ ᐊᐧ ᐱᐧᑲᓐ Easterₓ

Chichischâyihtân â châkwân Easter.

'Do you know what's Easter?'

(26) Billy: Eggs ᐊᐞ ᐸᑎᑭᓂᐧᐃᐣᓭ
Egg-s âh pât-ikiniwi-ch-h.
ENG-ENG PVB,CJ bring-PASSIVE.3-3.S-0.PL
N-PL PVB,CJ ROOT-PASSIVE-CIN-CIN
'When eggs are brought (e.g., Easter).'

Target: [ek-s a-pat-ɛkano-ʧ-_]
Actual: [eg-s ɑ-bɑd-ɑgəno-ʧ-_]

(B3-2007-03-19#350)

Adult: ᑭᓵᐸᒥᐞᐊᐅᑭᔑᑲ°, ᓂᒪₓ
Chishâyimihâuchîshikâu, nimâ.
'It's Easter, right?'

Billy: ᐧᐊᐞₓ
Wâh.
'What?'

Adult: ᑭᓵᐸᒥᐞᐊᐅᑭᔑᑲ° ᐃᓇᓂᐅₓ
Chishâyimihâuchîshikâu înâniû.
'We say Easter.'
Lit. 'It is said Great Sunday.'

8.4. Conversation 20

Adult: ᑭᑭᓴᐸᒪᐧᐃᓴ ᐊ angelsₓ
Chichischâyimâwich â angels.
'You know angels?'

Billy: ᐃ"ᐃₓ

Îhî.

'Yes.'

(27) Billy: ᓂᑊ" ·ᐃ"ᑎᒪᑭᐃᓱ ᐊᐱᔑᓵᓂₓ

Ni-chîh wîht-im-â-kiwi-n apishîsh...

1-PAST tell-by.head-APPLIC-PASSIVE.1-1/2 little

1-PVB ROOT-VTA.VBZ-VTA.VBZ-PASSIVE-IIN P,QUANT

'I was told a little about (angels)...'

Target: [n̥-ʧi wiht-ɪm-a-kɔw-n ɪpʃiʃ]

Actual: [mə-ʤi _-tʰəm-ɑ-gʌ-n ɪpʃiʃ əwedɑ]

(B3-2007-03-19#370)

Adult: ·ᐊ"ₓ

Wâh.

'What?'

(28) Billy:

ᓂᒋᐦ	ᐧᐃᐦᑎᒪᐩᐃᓐ	ᐊᐱᔨᐦᐁᓐ	late
Ni-chîh	wîht-im-â-kiwi-n	apishîsh	late
1-PAST	tell-by.head-APPLIC-PASSIVE.1-1/2	little	ENG
1-PVB	ROOT-VTA.VBZ-VTA.VBZ-PASSIVE-IIN	P,QUANT	ADV

ᐊᐦ	ᐩᐃᔨᒪᐧᐣᓵ
âh	kiwishim-u-ch.
PVB,CJ	go.to.bed-VAI.VBZ-3.PL
PVB,CJ	ROOT-VAI.VBZ-CIN

'I was told they go to bed a little too late.'

Target:	[n̥-ʧi	wiht-ɪm-a-kow-n	ɪpiʃ	lejtʰ	a kɔwʃim-ʊ-ʧ]
Actual:	[ən-ʤiʤi	wet-əm-ɑ-gʊ-n	ɪpʃiʃ	ledaj	ɑ gɑʃum-ɪ-ʧ]

(B3-2007-03-19#372)

Adult:

ᐊᐧᐊᐦ	ᑲᐦ	ᐧᐃᐦᑎᒪᐃᓴᐧ
Awân	kâh	wîhtimâsk.

'Who told you?'

Billy:

ᐧᐊᐦᐧ
Wâh.

'What?'

Billy:

ᐊᐃ	Jamesˣ
Âi	James.

'Umm, James.'

8.5. Conversation 21

(29) Billy: ᓂᑊᐦ ᒥᔦᐱᐢᑭᐦᐅᑭᐧᐃᓐ ᐋᒋ ᓵᓴ

Ni-chîh misin-âpiski-hu-kiwi-n wâsh shâsh.

1-PAST write-metal,mineral-by.instrument-PASSIVE.1/2-1/2 EMPH already

1-PVB ROOT-MEDIAL-VAI.VBZ-PASSIVE-IIN P,DISC P,TIME

'I was already videotaped / I already had my picture taken.'

Target: [nˌ-ʧi msn-apsk-u-ku-n əwɑʃ ɛʃ]

Actual: [_-ʤɪ msn-æpsk-o-ko-n ɑʃ ɑʃ əmiaj]

(B3-2007-03-19#582)

Billy: ᒌᐦ ᓂᑎᒪᔨᐦᒌᓐ

Tâpâ nichischâyihtân.

'I don't know.'

Adult: ᒌᐃᐧᐦ

Tâisp.

'When?'

Billy: ᐋᒋᐢᑭᓯ

Wâshkich.

'Long ago.'

8.6. Conversation 22

(30) Billy:

ᐊᐅᐳᐟ	ᐊᐧ	ᐊᐤ	up and down
Âukw	â	an	up and down
that.one	P,QST	that	ENG ENG ENG
PRO,FOC	P,QST	P,DEM.DST	ENG ENG ENG

ᐊᐧ" ᐃᓴᐱᐣᐦᑭᑭᓂᐧᐊᓴᓂᓵ

âh is-piyi-ht-âkiniwi-ch.

PVB,CJ thusly-DYN-CAUS-PASSIVE.3-0.S

PVB,CJ ROOT-VI.VBZ-VTI.VBZ-PASSIVE-CIN

'Is this what is used to make it go up and down?'

Target:	[aw	a	n	ʌp an tawn	a	js-pi-ht-akanow-ʧ]
Actual:	[awg	a	n	ab ə dınd	aw	is-pi-td-agəno-ʧ]

(B3-2007-03-19#617)

Adult: ᐃ"ᐃₓ

Îhî.

'Yes.'

Adult: ᓂᒥ ·ᐊᐧ·ᐊᓴ ᓱ"ᒋ ᒋᐱᐦᒋᓱᐦᑕᑭᑲᐱᐣₓ

Nimi wâwâch nûhchi chipihchinâhtâkupin.

'It looks like I didn't even turn it off.'

9. Session 10 – Age 5;10.18 (Total passive tokens: 4)

9.1. Conversation 23

Billy: James ᒋᐩ ᐱᒥᐱᓯ°, ᓂᓯ on the back ᓂᒋᐩ ᐃᐩᑕᐧᐊᓵₓ
James chîh pimipiyiu, nîyi on the back nichîh ihtâwân.
'James was driving and I sat in the back.'

(31) Billy: ᒥᓵ ᑲᐩ ᐱᒥᐱᓯᐩᐊᒋᑭᓂᐧᐃᑦ Susieₓ
Mîn kâh pim-ipiyi-h-âkiniwi-t Susie.
again PVB,CJ move-DYN-CAUS-PASSIVE.3-3.S name
P,QUANT PVB,CJ ROOT-VI.VBZ-VTA.VBZ-PASSIVE-CIN N
'Then it was Susie's turn, (name) had a ride.'

Target: ['min ga bəm-bi-h-agənɔ-t (name)]
Actual: [min ga vɪm-bi-ʰh-agəno-d (name)]
(B3-2007-04-02#63)

Billy: ᒥᓵ ᐊᐃ ᑲᐱᐧᒋᒍᐧᐣᐠ ᐅᑎᐧₓ
Mîn âi kâpîhchichâyâhch utih.
'Then, hmm, we came in(side) here.'

Adult: ᐅᐧₓ
Oh.
'Oh!'

9.2. Conversation 24

Adult: Daycare ᐊᐧ ᐃᐦᑕᔑᐣᐦᐧₓ
Daycare â ihtâshiyiuh.
'Is she at the daycare?'

Billy: ᐃᐦᐃₓ
Îhî.
'Yes.'

(32) Billy: ᑕᐧᐸ ᑭᐱᐦᐃᑭᓂᐅ ᐊᐧᓴᐦᑌ daycareₓ
Tâpâ chip-ih-îkiniu-u anûhch daycare.
not close-VTI.VBZ-PASSIVE.3-3 today ENG
P,NEG PVB-VTI.VBZ-PASSIVE-IIN P,TIME ENG
'The daycare's not closed today.'

Target: [daba tsəˈp-ʰ-igəno ajnɔʧ dekʰɛɹ]
Actual: [ba ʤəb-ʰ-ɪgnu ənoʧ dikʰɛɹ]
(B3-2007-04-02#193)

9.3. Conversation 25

Billy: ·ᐊᐧᐱᒪ ᒪₓ
Wâpim mâ.
'Look at him/it.'

Adult: ·ᐊᐧᐦₓ
Wâh.
'What?'

(33) Billy: ᐊᐅᐣ ᐊᐤ ᐞ ᒥᔨᓇᐱᐢᑲᐦᐁᐧᐋᑭᓂᐧᐋᑦ

Âukw an châ misin-âpisk-ihw-âkiniwi-t.

that.one that FUT write-metal,mineral-VTA.VBZ-PASSIVE.3-3.S

PRO,FOC P,DEM.DST PVB,CJ ROOT-MEDIAL-VTA.VBZ-PASSIVE-CIN

'It will be the one that is filmed.'

Target: [awkʷ ən ʤʌ msn-ʌmsˈk-w-agənɔw-tʰ]

Actual: [awg ən ʤə nbɪsn-ask-w-odnʊ-tʰ]

(B3-2007-04-02#306)

(34) Billy: ᒥᔨᓇᐱᐢᑲᐦᐁᐧᐋᑭᐅ ᐊᐞ ᐃᐱᐦᐁᐃᐧ ᐅᒋᐧᐤ

Misin-âpisk-ihw-âkiniu-u â iskîtû utâh.

write-metal,mineral-VTA.VBZ-PASSIVE.3-3 P,QST skidoo here

ROOT-MEDIAL-VTA.VBZ-PASSIVE-IIN P,QST NA P,DEM.LOCATION

'Is the skidoo going to be filmed like this?'

Target: [psn-ʌbˈsk-w-agən-o a skidu ˈʊta]

Actual: [ɪpsn-ɑpsk-ʰ-ɑgən-ol ɑ sgido ɪdæ]

(B3-2007-04-02#307)

Adult: ᑲᔦᒋᐧᐤ ᐞ ᐃᑎᐧᐤ

Kwâshtâh mâ îtîh.

'Place it on the other side.'

Billy: ᐅᒋᐧᐤ

Utâh.

'This way?'

Adult: △"△×

Îhî.

'Yes.'

Appendix II – Analysis of passives in CDS

SESSION	2005-11-22	2006-01-10	2006-02-28	2006-05-27	2006-07-26	2006-10-14	2006-11-06	2006-12-11	2007-03-19	2007-04-02	TOTAL (of 86)	%
Morphological form												
Basic	7	12	6	2	6	7	4	5	4	2	55	64.0%
Causative	2	0	0	0	0	0	0	1	0	1	4	4.7%
Do-passive	0	1	0	0	0	0	1	0	0	0	2	2.3%
Medial	1	5	3	1	3	0	5	1	1	0	20	23.3%
Applicative	0	0	2	0	0	2	0	0	1	0	5	5.8%
Additional morphology												
Obviative	2	0	0	0	0	0	1	0	0	0	3	3.5%
Plural	0	3	3	1	2	3	2	1	1	0	16	18.6%
Locative phrase	1	0	0	0	0	0	0	0	0	0	1	1.2%
Habitual	0	1	0	0	0	0	0	0	0	0	1	1.2%
Patient NP	2	2	0	0	0	1	3	1	0	0	9	10.5%
Diminutive	1	0	1	0	0	0	0	0	0	0	2	2.3%
Subjunctive	0	0	2	0	0	0	1	0	0	0	3	3.5%
Adverbial	2	0	0	0	0	0	0	1	0	0	3	3.5%
Person												
SAP	2	9	4	1	1	2	3	2	4	0	28	32.6%
non-SAP	8	9	7	2	8	7	7	5	2	3	58	67.4%
Verb type												
Actional	6	10	8	3	7	8	6	5	4	3	60	69.8%
Non-actional	4	8	3	0	2	1	4	2	2	0	26	30.2%
Verb class												
VTI	5	6	2	0	2	2	4	2	1	3	27	31.4%
VTA	4	6	5	3	6	4	6	2	3	0	39	45.3%
transitive AI	1	2	0	0	0	1	0	1	1	0	6	7.0%
di-VTA	0	4	4	0	1	2	0	2	1	0	14	16.3%
Inflection												
IIN	5	5	5	1	5	4	3	4	3	1	36	41.9%
CIN	5	13	6	2	2	5	6	3	2	2	46	53.5%
IDP	0	0	0	0	2	0	1	0	1	0	4	4.7%

Actional verbs
attach (2), bring, burn, buy, close (3), do (3), drive (2), give (9), go (2), go to, handcuff, lock, make (4), open (4), press (2), put (2), say (5), snare (2), spin, take, take care of (4), teach (2), tell (2) video-record (4)

Non-actional verbs
allow (4), be named (6), hear, know (2), look (2), make sound, notice, see (8), want

Appendix III – Analysis of passives in Billy's speech

Session	2005-11-22	2006-01-10	2006-02-28	2006-05-27	2006-07-26	2006-10-14	2006-11-06	2007-03-19	2007-04-02	TOTAL (of 35)	%
Morphological form											
Basic	1	1	1	1	2	6	1	2	1	16	45.7%
Causative	1	0	0	0	0	0	0	1	1	3	8.6%
Do-passive	0	5	1	0	0	1	3	1	0	11	31.4%
Medial	0	0	0	0	0	0	0	1	2	3	8.6%
Applicative	0	0	0	0	0	0	0	2	0	2	5.7%
Additional morphology											
Obviative	0	0	0	1	1	0	0	0	0	2	5.7%
Plural	0	0	1	1	0	0	0	1	0	3	8.6%
Locative phrase	0	0	1	0	0	0	0	0	0	1	2.9%
Habitual	0	0	0	0	0	0	0	0	0	0	0.0%
Patient NP	0	0	1	0	0	0	0	2	3	6	17.1%
Diminutive	0	0	0	0	0	0	0	0	0	0	0.0%
Subjunctive	0	0	0	0	0	0	0	0	0	0	0.0%
Adverbial	0	0	0	0	0	0	0	0	0	0	0.0%
Person											
SAP	1	0	0	0	0	0	1	3	0	5	14.3%
non-SAP	1	6	2	1	2	7	3	4	4	30	85.7%
Verb type											
Actional	2	6	2	1	2	6	4	7	4	34	97.1%
Non-actional	0	0	0	0	0	1	0	0	0	1	2.9%
Verb class											
VTI	0	6	2	1	1	4	3	3	1	21	60.0%
VTA	2	0	0	0	1	3	1	2	3	12	34.3%
transitive AI	0	0	0	0	0	0	0	0	0	0	0.0%
di-VTA	0	0	0	0	0	0	0	2	0	2	5.7%
Inflection											
IIN	1	0	1	0	2	3	1	4	2	14	40.0%
CIN	1	6	1	1	0	4	3	3	2	21	60.0%
IDP	0	0	0	0	0	0	0	0	0	0	0.0%

Actional verbs
bring, burn, close (2), do (11), drive, move (2), pay, release, snare (3), take, teach, tell (3), throw out, video-record (3), write

Non-actional verbs
see

Appendix IV – Unergative Misanalysis Hypothesis

This appendix consists of an overview of four experimental studies of the acquisition of split intransitivity, beginning with two studies of Russian acquisition that support the unergative misanalysis hypothesis (Borer & Wexler 1992).

Babyonyshev et. al. (2001) find support for the unergative misanalysis in their study of the acquisition of the Russian genitive-of-negation (GoN) construction. The GoN construction is one in which an underlying direct object (Pesetsky 1982) may be marked with genitive case if it is both nonspecific and indefinite and the sentence is negative, as in example (1b) below.[73]

(1) RUSSIAN GENITIVE-OF-NEGATION

a. Ja ne polučil **pis'ma**.
I not received letter-ACC.PL
'I didn't receive the/some letters.'

b. Ja ne polučil **(nikakix)** **pisem**.
I not received (NEG-kind-GEN.PL) letter-GEN.PL
'I didn't receive any letters.'

73 Levin & Rappaport Hovav (1995) note that Pesetsky's (1982) characterization of the GoN construction as a diagnostic for unaccusativity in Russian does not account for the (small number of) unergative verbs that participate in this construction, as pointed out by Babby (1978; 1980). They suggest that discourse factors may provide a better explanation for this construction, in line with their analysis of the locative inversion construction (see ft. 74, below). Given this consideration, it is interesting that the children tested in Babyonyshev et. al.'s (2001) experiment never produce GoN constructions with unergative verbs. One wonders what the acquisition of this subset of GoN verbs would look like in Russian.

c. Ja polučil **pis'ma/*pisem**.
I received letter-ACC.PL/*letter-GEN.PL
'I received the/some letters'

(Babyonyshev et al. 2001:11, ex. 8)

As the GoN is found on underlying arguments (Pesetsky 1982), it occurs both on direct objects of transitive verbs (as we saw above) and on derived subjects of unaccusative verbs. Compare this with subjects of unergative verbs, which do not permit GoN. We see this below (2).

(2) GENITIVE-OF-NEGATIVE PERMITTED ON DERIVED SUBJECTS OF UNACCUSATIVE VERBS

a. Ne rasstajalo **ni odnoj snežinki**. UNACCUSATIVE
not melted-NEU.SG NEG single-GEN.SG snowflake-GEN.SG
'Not a single snowflake melted.'

b. ***Nikakix devoček** ne tancevalo. UNERGATIVE
NEG-kind-GEN.PL girl-GEN.PL not danced-NEU.SG
'No girls danced.'

One sub-set of Russian unaccusative verbs, called "bleached" unaccusatives, require genitive case in negative constructions.

(3) "BLEACHED" UNACCUSATIVE

a. V gorode ne bylo **vrača**.
in town not was-NEU.SG doctor-GEN.SG
'There was no doctor in town / The doctor was not in town.'

b. * V gorode ne byl **vrač**.
in town not was-MASC.SG doctor-NOM.SG
Intended: 'There was no doctor in town / The doctor was not in town.'
(Babyonyshev et al. 2001:13, ex. 13)

Derived subjects of unaccusative verbs remain *in situ* in Russian, that is, in post-verbal position. Babyonyshev et. al. argue that there is covert movement in Russian, and thus unaccusative verbs require the formation of an A-chain (Babyonyshev et al. 2001:14-18). Thus, the prediction of the Maturation Hypothesis is that children will produce GoN constructions on the objects of transitive verbs, but they will analyze all intransitive verbs as unergative and will not permit GoN constructions on the derived subjects of unaccusative verbs, even bleached unaccusatives.

To test this, the researchers used a sentence completion task, where 30 children (3;0-6;6) were prompted to finish a sentence, providing the argument of a transitive, unergative, unaccusative or bleached unaccusative verb. The Maturation Hypothesis makes the prediction that pre-mature children will only produce arguments bearing nominative case for all intransitive verbs, even for (common) bleached intransitives, ignoring the fact that these verbs require GoN on their arguments. The results of the experiment are as follows (4).

(4) RUSSIAN GENITIVE-OF-NEGATION SENTENCE COMPLETION TASK RESULTS

Sentence type	% genitive responses
Transitive	73
Unergative	0
Unaccusative	45
Bleached unaccusative	47

Children produce genitive case-marked nominals to complete transitive sentences at a rate significantly higher than they do with unaccusative verbs. This result supports the Maturation Hypothesis, which predicts that children will have difficulty with intransitives. The authors argue that the rate of genitive responses to unaccusative verbs is partly a result of the age of each child: with respect to A-chain formation, some of the respondents are pre-mature, while others are mature. Overall, the researchers found seven different patterns of responses, most easily accounted for by the Maturation Hypothesis. One set of respondents gave genitive responses to regular unaccusative verbs but nominative responses to bleached unaccusative verbs, which is a marginal case for the Maturation Hypothesis, and the researchers speculate that these children are in flux, or that they fail to treat unaccusative verbs consistently, or that there is some interaction with the Uniformity of Theta Assignment Hypothesis (UTAH) (Baker 1988).

Another paper in support of maturation considers the acquisition of defective *v* in Russian locative inversion constructions (Kallestinova 2007). The locative inversion construction refers to a word order variation possible only with unaccusative verbs in Russian (Babyonyshev 1996).[74] Consider an example of the locative inversion in the

74 Levin & Rappaport Hovav (1995) argue that, at least in English, the locative inversion is not a diagnostic for unaccusativity, showing that both unaccusative and unergative verbs may participate in

English example below (5a).

(5) LOCATIVE INVERSION IN ENGLISH

a. In the distance appeared the towers and spires of a town which greatly resembled Oxford. [L. Bromfield, *The Farm*, 124]

b. The towers and spires of a town which greatly resembled Oxford appeared in the distance.

(Levin & Rappaport Hovav 1995:218, ex. 1,2)

In Russian, the locative inversion may appear with either VS or PP VS word order, as below (6a).

(6) LOCATIVE INVERSION IN RUSSIAN

a. UNACCUSATIVE VERB

(Na kuxne) svistit chainik.
In kitchen whistles-PRES.3SG kettle-NOM.SG
In the kitchen whistles the kettle.'

b. UNERGATIVE VERB

??(Sebe pod nos) svistit Vanya.
self-DAT undernose whistles-PRES.3SG Vanya-NOM
'To himself whistles Vanya.'

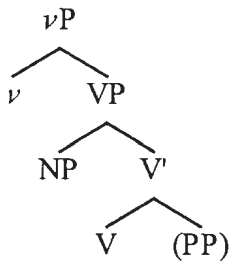
(Babyonyshev 1996:27)

---

this construction, which is triggered by discourse factors. See also, e.g., Birner & Ward (1998).

To account for the various word orders available for unaccusative verbs, Kallestinova (2007) proposes that unaccusative verbs project a defective *v*, as in the following structure (7).

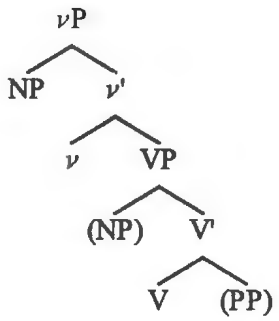
(7) UNACCUSATIVE VERB STRUCTURE IN RUSSIAN



(Kallestinova 2007:336, ex. 7)

The above structure yields all possible unnacusative word orders: SV(PP) and (PP)VS, with some additional complications with respect to optional adjunct phrases that are ignored here. As there is no intervening agent argument projected in Spec-*v*P, the NP and (optionally null) PP are within the same minimal domain and either phrase could raise to check the strong EPP feature (Chomsky 1995). On the other hand, unergative verbs project Spec-*v*P, meaning that the agent NP Merged in Spec-*v*P is the only NP available to check the EPP feature, following the Minimal Link Condition (Miyagawa 1993; Chomsky 1995). Thus, given this structure, the only possible word order for unergative sentences is SV(PP) (8).

(8) UNERGATIVE VERB STRUCTURE IN RUSSIAN



(Kallestinova 2007:337, ex. 8)

Following the UPH and the unergative misanalysis, children acquiring Russian unaccusative verbs are expected to treat the defective *v*-projection in the unaccusative verb structure in (7) as though it were a full *v*P as in (8).

Kallestinova (2007) finds experimental evidence for the unergative misanalysis with a picture-description task. Unaccusative word order was analyzed in the productions of 30 monolingual Russian-speaking 3-year-olds, 31 6-year-olds, and 47 adults. The results are as follows (9).

(9) EXPERIMENTAL RESULTS: RUSSIAN LOCATIVE INVERSION

WORD ORDER	UNACCUSATIVE SENTENCES			UNERGATIVE SENTENCES		
	3-y-o	6-y-o	Adults	3-y-o	6-y-o	Adults
SV	113 82.5%	109 75.2%	162 63.5%	152 95.0%	196 98.5%	284 92.2%
LOCATIVE INVERSION	24 17.5%	36 24.8%	93 36.5%	8 5.0%	3 1.5%	24 7.8%
TOTAL	137	145	255	160	199	308

(Kallestinova 2007:340)

The key finding of this experiment is that there is no significant difference between the productions of unaccusative and unergative word order by 3-year-old children, and all productions utilize the word order typical of unergative verbs. On the other hand, word order productions of the two types of sentences are significantly different in the speech of 6-year-old children and adults.

Kallestinova (2007) observes that children first acquire the locative inversion with prototypical unaccusatives such as verbs of change of location, change of state and appearance (Sorace 2004), then extend this word order to other classes of unaccusatives. This observation seems to be more consistent with theories of emergent grammar than with maturation. If maturation is correct, we would expect children to begin to produce all types of unaccusative verbs with the locative inversion order at the same time. Instead, it seems that Russian-speaking children first acquire the most "basic" unaccusative verbs and then gradually master the more abstract or ambiguous verbs. This type of gradual mastery is not consistent with a maturational view (see Rose & Brittain 2011 for similar findings in the acquisition in Cree).

Two studies of Japanese acquisition, a study of "full" unaccusatives (Sano, Endo, & Yamakoshi 2001) and a study of *te-iru* aspect constructions (Shimada & Sano 2007), do not support the Unergative Misanalysis or the Maturation Hypothesis.

Sano, Endo & Yamakoshi (2001) demonstrate that Japanese unaccusative require the formation of an A-chain. They show that, by age 3 (n=8, mean age 3;6), Japanese children are able to distinguish between the thematic roles of the subjects of null-object transitive verbs (agent) and the subjects of unaccusative verbs (theme) in a

comprehension task (40/46 correct responses = 87%), as in the following stimulus sentences (10).[75]

(10) NULL-OBJECT TRANSITIVE VERBS AND UNACCUSATIVE VERBS IN JAPANESE

a. TRANSITIVE

Zou-san	ga	(~~buta-san~~ ~~o~~)	umeta	ka	na?	AGENT
elephant	NOM	(~~pig~~ ~~ACC~~)	buried	Q		

'Did the elephant bury (pro)?'

b. UNACCUSATIVE

Buta-san	ga	umatta	ka	na?	THEME
pig	NOM	buried.UNACC	Q		

'Was the pig buried?'

(Sano, Endo, & Yamakoshi 2001:674, ex. 19)

This finding, taken together with the previous finding that Japanese treat the subjects of unergative and unaccusative verbs differently (e.g., Miyata 1992), leads Sano, Endo & Yamakoshi (2001) to conclude that Japanese children are able to form A-chains by age 3.

The researchers further test children's comprehension of "full" unaccusatives (that is, unaccusatives with a *by*-phrase) as compared to comprehension of full passives (passives with a *by*-phrase). These are exemplified below (11).

75 Note that the children tested have more difficulty understanding the null-object transitive verbs than the unaccusative verbs, with 3-year-olds responding correctly to the transitive stimulus sentences only 68.1% of the time (32/47). 4- and 5-year-olds perform excellently with both unaccusative and transitive verbs.

(11) JAPANESE FULL UNACCUSATIVES AND FULL PASSIVE VERBS

a. FULL UNACCUSATIVE

Buta-san ga zou-san ni **tsukamat**-ta ka na?
pig NOM elephant by **catch.**UNACC-PAST Q
'Was the pig caught by the elephant?'

b. FULL PASSIVE

Buta-san ga zou-san ni tsukamae-**rare**-ta ka na?
pig NOM elephant by catch-PASSIVE-PASTQ
'Was the pig caught by the elephant?'

(Sano, Endo, & Yamakoshi 2001:677, ex. 24b,c)

Sano, Endo & Yamakoshi found that children comprehend full unaccusatives earlier than full passives, which is shown by the rates of correct responses to the above stimulus questions (12).

(12) CORRECT RESPONSE RATES: UNACCUSATIVES VS. PASSIVES (SANO, ENDO, & YAMAKOSHI 2001)

VERB TYPE	3-YEAR-OLDS	4-YEAR-OLDS	5-YEAR-OLDS
FULL UNACCUSATIVE	14/30 46.7%	21/28 75.1%	27/30 90.0%
FULL PASSIVE	13/28 46.4%	15/29 51.7%	17/31 54.8%

Note that by age 5 children answer full unaccusative prompts correctly 90% of the time, but still only 54.8% of the time with full passive prompts. Sano, Endo & Yamakoshi interpret this finding as evidence against the Maturation Hypothesis. If the ability to form

A-chains matures, both full unaccusatives and full passives should be acquired at the same time, which is not what they find. However, Machida, Miyagawa & Wexler (2004) reinterpret these findings using the Unergative Misanalysis hypothesis, claiming that Japanese children interpret full unaccusative verbs as though they are unergatives and do not require an A-chain, which results in better performance with full unaccusatives than full passives.

Shimada & Sano (2007) undertake a study of the Japanese *te-iru* aspect construction. *Te-iru* is always compatible with a progressive reading, but passive and unaccusative verbs in the *te-iru* construction are additionally compatible with a resultative reading, because this reading requires an A-binding relationship (e.g., A-chain formation) between the subject and object (Takezawa 1991). This is exemplified below (13).

(13) JAPANESE *TE-IRU* CONSTRUCTIONS

a. UNERGATIVE — Progressive ✓

Buta-san-ga hasit-te-iru. — Resultative ✗

pig-NOM run-TE.IRU-PRES

'The pig is running'

b. UNACCUSATIVE — Progressive ✓

Buta-san-ga agat-te-iru. — Resultative ✓

pig-NOM rise-TE.IRU-PRES

'The pig has risen. / The pig is rising.'

c. DIRECT PASSIVE — Progressive ✓

Buta-san-ga ager-arare-teiru. — Resultative ✓

pig-NOM rise-PASSIVE-TE.IRU

'The pig has been raised. / The pig is being raised.'

(Shimada & Sano 2007:390, ex. 13)

The unergative misanalysis hypothesis therefore predicts that pre-mature children will disallow the resultative reading in unaccusative verbs in the *te-iru* construction.

Shimado & Sano (2007) tested this prediction with a Truth-Value-Judgment-Task (Crain & McKee 1985; Crain & Thornton 1998). A situation was acted out with puppets, and then the puppets were hidden behind a curtain. When the curtain was removed, the action was either continuing (e.g., the pig puppet was still running), or the action had stopped (e.g., the pig puppet had stopped running and was trying to catch his breath). One of the two experimenters played the role of a puppet named Wanchan, who described the situation after the curtain was lifted with sentences such as the following .

(14) STIMULUS SENTENCES (SHIMADA & SANO 2007)

a. UNERGATIVE

Buta-san-ga ima hasit-teiru-yo.

pig-NOM now run-TE.IRU-PRES

'The pig is now running.'

	Correct answer
Progressive: The pig is still running	✓ (accept)
Resultative: The pig has stopped running	✗ (reject)

b. UNACCUSATIVE

Kaeru-san-ga ima umat-te-iru-yo.

frog-NOM now bury-TE-IRU-PRES

'The frog is (has been) buried now.'

	Correct answer
Progressive: The frog is still being buried	✓ (accept)
Resultative: The frog is completely buried	✓ (accept)

(Shimada & Sano 2007:390-391, ex. 17)

The unergative misanalysis hypothesis predicts that children will treat all intransitive verbs as unergative verbs, therefore rejecting all instances of *te-iru* constructions describing resulting states. This is not what the researchers find. Even the youngest participants at 3 years old (n=6, mean age 3;8) correctly differentiate between unergatives and unaccusative verbs with respect to the resultative reading. The rates of correct responses to the stimulus questions (e.g., correctly accepting/rejecting) are given below (15).

(15) CORRECT RESPONSES TO TRUTH-VALUE-JUDGMENT-TASK (SHIMADA & SANO 2007:392)

		3-YEAR-OLDS	4-YEAR-OLDS	5-YEAR-OLDS	6-YEAR-OLDS	ADULTS
UNERGATIVE	Progressive ✓	18/18 100.0%	29/30 96.7%	30/30 100.0%	9/9 100.0%	33/33 100.0%
	Resultative ×	16/18 88.9%	30/30 100.0%	29/30 96.7%	9/9 100.0%	33/33 100.0%
UNACCUS-ATIVE	Progressive ✓	16/18 88.9%	24/30 80.0%	24/30 80.0%	6/9 66.7%	29/33 87.9%
	Resultative ✓	18/18 100.0%	29/30 96.7%	30/30 100.0%	9/9 100.0%	33/33 100.0%

Shimada & Sano (2007) interpret the results of their experiment as evidence against the unergative misanalysis hypothesis and the Maturation Hypothesis. They show that Japanese-speaking children differentiate between unergative and unaccusative verbs already at 3years of age. This finding, they argue, is felicitous because if children really do misanalyze unaccusative verbs as unergative verbs, they are able to violate UTAH, which leaves theta assignment unrestricted in child grammar.

Appendix V – *Piyi*-derived utterances (Billy's speech)

Billy's intransitive *-piyi* verbs are listed by session with Cree syllabics, orthography, and a morphological analysis together with a translation, and an identification of the sub-class of *-piyi* verb (Unaccusative, Vehicle, Emission, Relative Root, Manner). For each utterance, the target morphology (in IPA) is given, as well as his actual morphology (in IPA). Missing morphemes are represented by '_'. Each *-piyi* verb is placed in its surrounding context, and all names have been changed. When an utterance cannot be transcribed because of recording quality, the utterance is represented as '---'.[76]

1. Session 1 – Age 4;06.08 (Total *-piyi* tokens: 13)

1.1. Conversation 1

Context: Billy and his caregiver are discussing Billy's team, and a trip that the team will take. They can't go on the trip before they fundraise.

Adult:	ᒋᐦᐧ	ᒋᐧᐱᐱᔨᓇ	ᐊᐧ	ᐦᐯᔨ	
	Chichîh	chihchipiyin	â	chîyi.	
	'Did you leave by vehicle?'				

Adult:	ᒋᐦᐧ	ᒋᐧᐱᐱᔨᓇᐎᐅᐧᐊᐧ	ᐦᐯᔨᐧᐊᐧᐣ	ᐊᐧᐃ	ᒋᑲᐧᐃᐧᐧ
	Chichîh	chihchipiyinâuwâ	chîyiwâu	âi	chikâwî.
	'Did you and your mother leave by vehicle?'				

76 Many thanks to Luci Bobbish-Salt, whose commentary on these examples was invaluable. Any errors in the text are my own.

Billy: ᓂᒥᒋᐦᐧ

Nimimâh.

'No.'

Billy: ᓂᒥᒋᐦᐧ

Nimimâh.

'No.'

Adult: ᓂᒧᐃ ᐊᐧ ᑯᐦᑎᑎᐦᑎᐱᐃᐧᐨᐅᐳᐊᐧ

Nimui â kuhchichihchipiyinâuwâ.

'No, you didn't go?'

(1) Billy: ᒑᐧᐸ ᓄᐦᑎ ᑎᐦᑎᐱᐃᐧᐨᓵᐦᐧ VEHICLE

Tâpâ n-uhchi chihchi-piyi-nân.

not 1-PAST.NEG leave-DYN-1.PL

P,NEG 1-PVB ROOT-VI.VBZ-IIN

'No, we (excl.) did not go.'

Target: [tapa n-oʧə ʧɪ-pijɪ-nan]

Actual: [bɑ n-oʧ ʤɪ-bɪ-nə]

(B3-2005-11-22#20)

Billy: ᐧᐊᐧ

Wâh.

'What?'

Adult: ᒋᓱ ᑲ ᐃᔨᐦᑎᐊᕆᔨᐣ ᓯᑲᓴ

Tân kâ iyihtiyâkw mâk.

'What did you do then?'

Adult: ᒋᓱ ᑲ ᐃᔨᐦᑎᐊᔨᓱᓴ

Tân kâ iyihtiyin.

'What did you do?'

Billy: ᐊᐃᐃ...

Âi...

'Uh...'

Billy: ᓯ·ᑲᐩ ᓂᑊᐦ...

Mâkwâch nichîh...

'During, I was/we were...'

Billy: ᓭ:ᐃᔪᓱ ᓂᐯᐅᔑᐦᐊᐃᓀᓱ ᐱᑎᒪᐟ

Shuwiyân nikiushihânân pitimâ.

'We have to make money first.'

(2) Billy: ᐊᐞ ᑭᐟᑭᐱᐣᐠᐧᐣᐦ VEHICLE

Âh chihchi-piyi-yâhch.

PVB,CJ leave-DYN-1.PL

PVB,CJ ROOT-VI.VBZ-CIN

'When we go.'

Target: [a ʧhʧə-pɪ-jahʧ]

Actual: [ɑ ʧtə-bi-ɛʧ]

(B3-2005-11-22#27)

1.2. Conversation 2

(3) Billy: ᐊᐧᓀ ᐊᐧ ᑲ ᐃᔨᐱᐣᐦ RELATIVE ROOT

Anna â kâ is-piyi-t.

name P,QST PVB,CJ thusly-DYN-3.S

N P,QST PVB,CJ ROOT-VI.VBZ-CIN

'Anna goes this way?'

Target: [(name) a ka js-pʰi-tʰ]

Actual: [(name) ɑ gɛ s-pi-tʰ]

(B3-2005-11-22#88)

Adult: ᐃᐞᐃᐣ

Îhî.

'Yes.'

Billy: ᐃᐞᐃᐣ

Îhî.

'Yes.'

1.3. Conversation 3

(4) Billy: Mhm ᐊᐱᐦᐃᐱᐢᐤ ᐅᐧ UNACCUSATIVE

Mhm âpihî-piyi-u û.

P,INTJ open-DYN-3 this

P,INTJ ROOT-VI.VBZ-IIN P,DEM.PXL

'This opens.'

Target: [ɪhɪʔ apʰah-pij-w aw]

Actual: [əhɛ̃ əpʰʌ-pi-ə aw]

(B3-2005-11-22#198)

Adult: ·ᐊᐧ

Wâh.

'Eh?'

Adult: ᑭᐢᐧᐸ, ᑊᐦᐃᐤ ᐊᐧ, ᓂᑎᐦᐊᐧ

Kiyipwâ, chîhin â, nitihâ.

'Yes, is it working? Let me see.'

Adult: ᓀᐢ ᒪ ᓂᑭ ᐊᐱᐦᐊᐤ

Nîyi mâ niki âpihân.

'Let me open it.'

Adult: ᓂᑭ ᑯᑎᐦᑖᐤ ᐊᐧ

Niki kuchihtân â.

'I will try it, okay?'

Adult: ·ᐊᐡᑭ ᑊᐡᐃᓴ, ᒪᐅ ᐅᑎᐡ, ·ᐊᐡᑭ

Wâhchi chîhich, mâu utih, wâhchi

ᐊᐱᐡᐃᑭᐦᐃᔪᐦᐃᔨᓴ ᐃᓭᐱᒥᐦᐃᓴ, ᑭ·ᐊᐱᐡᑕᐢᐧₓ

âpihikiniwishich ishpimihch, chiwâpihtânh.

'It works. It (something small) can be opened from the top. Do you see?'

1.4. Conversation 4

Adult: ᒥ·ᔭᐣᒪᐤ ᐊᒋ ·ᐃᐣ ᐊᐃ...

Miywâyimâu â wîyi âi...

'Does … like those …?'

(5) Billy: ᒪᐅᑕᐡ ᐊᒋᐱᐣᐊᑭᑭᐢᐃᐧₓ RELATIVE ROOT

Mâu-tâh âs-piyi-h-âkiniwi-t.

this-LOC thusly-DYN-CAUS-PASSIVE.3-3.S

P,DEM+G.PXL-LOC ROOT.IC-VI.VBZ-VTA.VBZ-PASSIVE-CIN

'This is how you make it go / You move it this way'

Target: [maw-tah s-pi-h-akɪnəwɪ-tʰ]

Actual: [mʌ-na sɪ-pi-h-agənʌ-_]

(B3-2005-11-22#210)

Billy: ᐅᔭᐡₓ

Uyâh.

'This one?'

Adult: ᒪᑎ·ᐊᐃᑉ° ᐊᐃ ᒪᐤ ᑭᑭᔨᒋᓂ ᐊᓂᔭᐦ"

Mâtiwâchâu â mân chichishîmish aniyâh

ᑲ ᐃᔨᓀᐦᔨᔨᔪᒡᐦ"ₓ

kâ îshinâkushishiyich-h.

'Does your little brother play with those sometimes?'

1.5. Conversation 5

Adult: ᐊᐃᓂᑯ ᐊᐃ ᓂᒥ ᑭᐱᐊᒋᒥᔨᐱᐤᓐₓ

Âshkw â nimi chipipâmiskupiyin.

'You don't skate yet?'

Billy: ᐊᐃᐃ...

Âi...

'Uhh...'

Adult: ·ᐊᐃ"ₓ

Wâh.

'Eh?'

(6) Billy: ᓀᒧᐃ ᓀᑊᐣ ᑭᔑᐱᔨᐢₓ VEHICLE

Nimui ni-chîh chishi-piyi-n.

not 1-PAST fast-DYN-1/2

P,NEG 1-PVB ROOT-VI.VBZ-IIN

'I can't go fast.'

Target: [nɪmujɪ n-ʧi ʧʃɪ-pi-n]

Actual: [mojo _-ʤi ʧʃɪ-pi-_]

(B3-2005-11-22#272)

Adult: Daycare ᐊᑊᐣ ᐃᑐᐣᑕᔭᐟ ᑭᑎᑐᐣᑕᓇᐧᐊᐧᐊ ᒪᐢ arenaₓ

Daycare âh îtuhtâyâkw chitituhtânâwâ mân arena.

'When you're at the daycare, do you go at the arena?'

Billy: Mhmₓ

Mhm.

'Yes.'

1.6. Conversation 6

(7) Billy: ·ᐊᐱᐩᑎᐤ ᐞ ᐊᐞᐱᐩᔨᒡ RELATIVE ROOT

Wâp-iht-ih mâ âs-piyi-ch.

light-by.head-VTI.THM.IMP EMPH thusly-DYN-0.S

ROOT-VTI.VBZ-VTI.THM.IMP P,DISC ROOT.IC-VI.VBZ-CIN

'Look how it goes.'

Target: [wap-ht-h ma ajs-pi-ʧ]

Actual: [u:o-_-_ ma ajs-pi-ʧ]

(B3-2005-11-22#306)

Adult: ᐅᐦ, ᓂ·ᐃᔪ ᒥᔪᐱᐞᐦᔨᐧ ᓂᐞᒡ

Oh niwich miyupiyishiu nimâ.

'Oh it (diminutive) runs well eh?'

Billy: ᓂᐱᐞᑎᐦᐅᓵᒡ ᓂᐱᐞᑎᐦᐅᓵ ᐊ ᓱᓴᒡ

Nikischihun. Nikischihun â shâsh.

'Am I doing it the right way? Am I doing it the right way now?'

Translator comment: Billy uses English-style intonation for the first question, instead of the question word â.

Adult: ᐱᐅ·ᐸᒡ

Kiyipwâ.

'Of course.'

1.7. Conversation 7

Billy: ᓭᐟ ·ᐊᐟ ᓂᑎᐄᓇᓇᐣ ᓃᐄᓐˣ

Shâsh wâsh nitiyânân nîyân.

'We already have that.'

Adult: ᐊ·ᐊᐣ ᐊᐄᕀˣ

Awân âyât.

'Who has it?'

Billy: ᓅ"Ċ·Δˣ

Nûhtâwî.

'My father.'

Adult: ᐊᐳ·ᐊ Δᐄᐱᑭ"Ċᑦ ᒪᐣ ᐊ" ᒥ·Ċ"ᑎᑕᕀˣ

Âyiwâ iyâpichihtât mân âh mitwâhtitât.

'That's what he uses to call?'

Billy: Mhmˣ

Mhm.

'Yes.'

(8) Billy: ᐊᐃ ᐊᐩ ᑭᐢᑭᐱᔭᐢᐣᓵ VEHICLE

Âi âh chihchi-piyi-yâhch.

PRO,HES PVB,CJ leave-DYN-1.PL

PRO,HES PVB,CJ ROOT-VI.VBZ-CIN

'When we leave / When we go on a trip.'

Target: [a hʧhʧɪ-pijɪ-ahʧ]

Actual: [aj a ʧʤɪ-bi-ɛʧ]

(B3-2005-11-22#371)

Adult: ᐊᐧ ᐊᐩ ᑭᐢᑭᐱᔭᐠᑲᓵ

Aw âh chihchi-piyi-yâkw-â.

'Aw when you go out of town?'

1.8. Conversation 8

(9) Billy: ᐊᐩ ᐋᑯᐱᔭᐣ ᐅᔭᐢᓵ UNACCUSATIVE

Âh pîku-piyi-ch û-yâh.

PVB,CJ break-DYN-0.S this-OBV

PVB,CJ ROOT-VI.VBZ-CIN P,DEM.PXL-OBV

'It's broken, this one.'

Target: [ah pɪko-pijɪ-ʧ u-ja]

Actual: [a bɪgo-biə-ʤ o-ja]

(B3-2005-11-22#453)

Adult: ᐅᐢᓵ

Oh.

'Oh.'

1.9. Conversation 9

Adult: Ouch ᑲ ᐃᐦᑎᐣᓵᐧᐣ
Ouch kâ ihtiyân.
'I did ouch!'

Adult: ᑲ ᑲᓯᐦᐧᑲᐅᐣᓵᐧᐣ
Kâ kâsîhkwâuyân.
'I wiped my face.'

(10) Billy: ᒋᒋᐦ ᐸᐦᑲᐱᐟᓵᐧᐣ UNACCUSATIVE
Chi-chîh pâhkâ-piyi-n.
2-PAST bleed-DYN-1/2
2-PVB ROOT-VI.VBZ-IIN
'Did you bleed?'

Target: [ʧ-ʧih pahka-pi-n]
Actual: [_-ʃɪ bajga-bɪ-_]

(B3-2005-11-22#512)

Adult: ᑲ ᒋᑭᒧᔨᐦᑌ ᐅᑎᐦ ᐃᐧᑲᐧᐣ
Kâ chikimushich utih châkwân.
'There was something (diminutive) stuck here.'

Adult: ᐃᐦᐃ ᐊᐱᔨᐦᔮ ᓂᒋᐦ ᐸᐦᑲᐱᐟᔨᔨᓵᐧᐣ ᓂᒧᐃ ᑭᐱᐧᐁᐦᐸ ᓵᐦᔮᐦ ᒥᔨᑎᐦ.
Îhî apishîsh nichîh pâhkâpiyishin nimui kiyipwâ nâshch mishtîh.
'Yes, I was bleeding a little, not too much.'

1.10. Conversation 10

Adult: ᓂᐧᐃᓗ ᒥᐧᔭᔑᐢ ᒥᓯᓂᐦᐄᑭᐣ ᓂᒪᓵ
Niwich miywâshiu misinihîkin nimâ.
'It's a nice book, eh?'

Billy: ᓂᐧᐃᓗ ᓴᐅᓐᓵ
Niwich nâush.
'It's taking a long time.'

Adult: ᔑᓐ ᐧᐃᐱᓗ ᐊᐦᐧ
Shâsh wîpich â.
'Very soon, ok?'

(11) Billy: ᒐᐧᑲᓐ ᐃᓐᐱᐱᐱᐟᒐᓵ VEHICLE
Châkwân chishch-ipiyi-ch-â.
what leave-DYN-0.S-SUBJUNCTIVE
PRO,WH ROOT-VI.VBZ-CIN-SUBJUNCTIVE
'What (thing) will start?'

Target: [ʧakɒn ɪʃpʃ-ɪpi-ʧ-a]
Actual: [ʤəgə ɹtsʃə-bi-ʧ-a]

(B3-2005-11-22#619)

1.11. Conversation 11

(12) Billy: ᐅᑦᑊ chimney ᑲ ᐃᓵᐱᓗₓ RELATIVE ROOT

Û-tâh chimney kâ is-piyi-ch.

this-LOC ENG PVB,CJ thusly-DYN-3.PL

P,DEM.PXL-LOC N PVB,CJ ROOT-VI.VBZ-CIN

'This is how the chimney went (e.g., from gesture, crumbled).'

Target: [ʊ-ta ʧɪməni a js-pijɪ-ʧ]

Actual: [əhə̃ ə-nda ʧɪməni a js-piɪ-ʧ]

(B3-2005-11-22#655)

Billy: ᑦᐸ ᐅᖕᒋ...

Tâpâ uhchi …

'No...'

Billy: Chimneyᐃᖏ Santa Claus ᓂᒪₓ

Chimneyihch Santa Claus nimâ.

'In the chimney Santa Claus, eh?'

Adult: ᐊᖕᐊₓ

Îhî.

'Yes.'

1.12. Conversation 12

Adult: James ᑲ ᐱᒥᐱᐃᖕᐊᑦ ᓂᒪₓ

James kâ pimipiyihât nimâ.

'James drove it, eh?'

Adult: Jamesₓ

James.

'James.'

Billy: ·ᐊˈˈₓ

Wâh.

'What?'

(13) Billy: ᓂᒧᐃ ᐱᒥᐱᔨᐦᐁᐤ ·ᐃᔨₓ VEHICLE

Nimui pimi-piyi-h-â-u wîyi.

not move-DYN-CAUS-THM-3 3

P,NEG ROOT-VI.VBZ-VTA.VBZ-THM-IIN PRO

'He doesn't drive it himself (dirt bike).'

Target: [nmʊwi pɪm-pi-h-a-w wɪj]

Actual: [mwi bɪm-bi-h-a-w wĩ]

(B3-2005-11-22#778)

Adult: ᐊᐩᔨᐤˈˈ ski-doo ᑭᔨ·ᐸ ᒥᑯ, ᐃˈˈᐃ ᓂᒪ ski-dooₓ

Âyiyiuh ski-doo kiyipwâ mikw, îhî nimâ ski-doo

'A ski-doo only, oh yea, a ski-doo only. Yes, right?'

2. Session 2 – Age 4;07.26 (Total *-piyi* tokens: 1)

2.1. Conversation 13

(14) Billy:

ᒋᓱ	ᐊᑊ	ᐃᐠᐱᔨᐠ	ᐅᓯ	RELATIVE ROOT
Tân	âh	is-piyi-ch	û	
P,WH	PVB,CJ	thusly-DYN-0.S	this	
P,WH	PVB,CJ	ROOT.IC-VI.VBZ-CIN	P,DEM.PXL	

'Why is this going this way (in this manner)?'

Target:	[dæn'd	a	s-pi-dʒ	o]
Actual:	[wɑn	a	js-pi-dʒ	ɔ:]

(B3-2006-01-10#123)

Adult:

ᐊᑊᑲᐠᐱᔨᐠ	ᐧᐊᓴᓯ
Akwâspiyich	wâsh

'It does that / That's how it goes.'

3. Session 3 – Age 4;09.14 (Total *-piyi* tokens: 4)

3.1. Conversation 14

Adult:

ᑭᐧᐊᐱᐢᒋᓱ	ᐊ	ᐊᓂᐢᐃ	ᑲ	ᒪᒪᐢᑭᔑᓴᑲᐢᐢ
Chiwâpihtân	â	anihî	kâ	mâmâhchîshinâkuhch-h

ᑲ	ᐱᒪᐸᑭᒧᔑᓴᐢᐢ	ᐊᓂᒋᐢ	ᐱᐱᑭᒥᐢ	ᐱᐢᑦ	ᐊᑌᑎᐢᐧ
kâ	pimâpâkimushihch-h	anitâh	pitikimihch	pîhch	âkutih anitih.

'Do you see those fancy things (decorations) that are strung inside?
Inside there, that is where they are.'

Billy: ᒐᓂ"Δₓ

Tânihî.

'Where are they?'

(15) Billy: ᒐᓗ ᐊᔨᐱᔨᒡ ᒪᑲ ᐅᑎ"ₓ RELATIVE ROOT

Tân âs-piyi-ch mâk u-tih.

P,WH thusly-DYN-0.S so here-LOC

P,WH IC.ROOT-VI.VBZ-CIN P,CONJN P,DEM-LOC

'What about here? What happens if I touch this?'

Target: ['dɛn ɛʃ-bi-tʃ mæg ɔ-tʰ]

Actual: [ajn ɻs-pi-ʧə mak ʊ-t]

(B3-2006-02-28#337)

Adult: ᐊᑯᐧᑕ" ᐊᓂᑕ" ᐊᑎ ΔᔨᑕᐸᑭᒧΔᔪᒡ ᐊᓂ"Δ ᒪᑲᓂ"Δₓ

Âkutâh anitâh âti iyitâpâkimuishich anihî châkwânihî.

'That's where those things (diminutive) are strung along.'

Billy: ᐅₓ

Û.

'This.'

Billy: Δ"Δₓ

Îhî.

'Yes.'

3.2. Conversation 15

Adult: ᐊᐞ ᐃᓂ·ᑲᐱ"ᑕᑭᔑᑲᓯᐠ ᐊᐧ ᑭᐣᔨᔆᐃᓐᓵᐢ

Âh îshkwâpihtâchîshikâch â chiskulûwin.

'Are you going to school in the afternoon?'

(16) Billy: ᓂᑭ ᑭ·ᓴ·ᐊᐱᐞ"ᐦᑕᓐ ᒪ ᐊᐠ EMISSION

Ni-ki chishwâwâ-piyi-htâ-n mâ â.

1-FUT.1/2 noise-DYN-CAUS-1/2 EMPH P,QST

1-PVB ROOT-VI.VBZ-VAI+O.VBZ-IIN P,DISC P,QST

'I am going to turn up the sound, okay?'

Target: [nɪ-gɪʧʃɪwɔˈ-bi-tʰa-n ma ʔa]

Actual: [_-_ uʃʌ-bi-tə-n mæh æ]

(B3-2006-02-28#345)

Adult: ·ᐊ"ᐠ

Wâh.

'Eh?'

Billy: ᐃ"ᐃᐠ

Îhî.

'Yes.'

Adult: ᐊᐞ ᐞᑭᓴᐦᐣᐢ ᐊᐧ ᑭᑎᔑᑲᓯᐠ

Âh châchishâpâyâch â chitiskulûwin.

'You go to the school in the morning?'

(17) Billy: ᓂᑭ ᑎ·ᓱ·ᐊᐱᐣᒋᔑᓐ ᑊᓐ, ·ᑲₓ EMISSION

Ni-ki chishwâwâ-piyi-htâ-si-n mîn, kwâ.

1-FUT.1/2 noise-DYN-CAUS-INTENS-1/2 again of.course

1-PVB ROOT-VI.VBZ-VAI+O.VBZ-INTENS-IIN P,QUANT P,AFF

'I am going to turn this up a bit, okay?'

Target: [nɪ-gɪ ʧʃɪwɔ-bi-tʰæ-sɪ-n mɪn gɔ]

Actual: [ə̃-_ ʧʃɑ-bɪ-tda-sə-n ən gɔ]

(B3-2006-02-28#349)

Adult: ᐃₓ

Î

'Ok.'

3.3. Conversation 16

Adult: ᒋᓐ ᐊᑦᒋᐊᒧᐃᔨᓐ ᒪᑲᓐ ᒪᔭᑐᐦᒋᐦᒋᐃᔨᓐₓ

Tân âtwâwâmuchâyin châkwân châstuhchichâyin.

'What kind of music are you playing? What are you playing?'

(18) Billy: Bambi ᐅᒋᐣ ᑲ ᐃᔭᐱᔨᒡ rainᐃᔨᐤₓRELATIVE ROOT

Bambi u-tâh kâ is-piyi-yi-ch rain-iyiu.

name here-LOC PVB,CJ thusly-DYN-OBV-0.S ENG-OBV

N P,DEM-LOC PVB,CJ ROOT-VI.VBZ-OBV-CIN N-OBV

'In Bambi (e.g., movie) when the rain came down.'

Target: [o'-da ka js-piə-dʒ 'ren-i-o]

Actual: [bambi gə-də gə ʤis-pi-ɪʧ ɹen-ij-a]

(B3-2006-02-28#529)

Billy: ᐅᑦᐣₓ

Utâh.

'Like this.'

Adult: Bambiₓ

Bambi.

'Bambi (e.g., movie).'

Adult: ᑦᓂᑦᐣ ᐊᐢᐱᔨᔨᒡₓ

Tânitâh âspiyiyich.

'How does it move?'

Adult: ᒐ·ᒃᔨᐤₓ

Châkwâyiu.

'A what?'

Billy: Rainᐃᔨᐤ ᒃ ᑭᒧ·ᐃᓂᔨᒡₓ

Rainiyiu kâ chimuwiniyich.

'Rain, when it was raining.'

4. Session 4 – Age 5;00.13 (Total *-piyi* tokens: 8)

4.1. Conversation 17

(19)	Billy:	ᐃᓵᐱᔨᐃᓴ	·ᐊᓂ	ᑭᔭᐦ	ᐅᑦᐦ	RELATIVE ROOT
		Is-piyi-yi-wich	wâsh	kiyâh	utâh.	
		thusly-DYN-OBV-3.PL	EMPH	and	here	
		ROOT-VI.VBZ-OBV-IIN	P,DISC	P,CONJN	P,DEM.LOCATION	
		'They go this way, then this way.'				

Target:	[ɪs-b-jə-ʤ	ɔʃ		gjcalə	uta]
Actual:	[ʔisis-kʷi-ju-ʤ	ʌʃ	dawda	kolə	sda]
				(B3-2006-05-27#1)	

Adult: ᐃ"ᐃₓ
Îhî.
'Yes.'

Billy: ᐃ"ᐃ ᐃ"ᐃₓ
Îhî îhî.
'Yes yes.'

Adult:	ᑕᒧᑕ"ᐃᓄᒐ	ᑋᔨ	ᐊᓂᑋ	ᑲ	ᐃᔨᓱᓄᔨᔪ	·ᐊᐧ"ₓ
	Chimûchihîkuchâ	chîyi	anichî	kâ	îsinâkusich	wâh.
	'Do you have fun with those kinds, eh?'					

4.2. Conversation 18

Billy:	ᒋᑭᒧᐃᐣ	floorᐦᐩ	ᐃᐦᐃₓ
	Chikimuyiu	floorhch	îhî.
	'Yes, it is stuck to the floor.'		

Adult:	ᐊᓂᑦᐦ	ᐊᐧ	ᐊᔪᑦᐃᐣₓ
	Anitâh	â	ashtâyiu.
	'It is sitting there?'		

Billy:	ᒋᑭᒧᐃᐣₓ
	Chikimuyiu.
	'It is stuck.'

Billy:	ᒋᑭᒧᐃᐣₓ
	Chikimuyiu.
	'It is stuck.'

(20) Billy: ᒋᑭ ᐃᐢᑐᑎᒻ ᐅᑦᐦ ᐊᑲ ᐋᑯᐱᐩᓂ UNACCUSATIVE

Chiki ihtut-im û-tâh châ pîku-piyi-ch.

FUT.3 do-DIR this-LOC FUT break-DYN-0.S

PVB ROOT.VTI-THM P,DEM.PXL-LOC PVB,CJ ROOT-VI.VBZ-CIN

ᐊᓂ-ᑦᐦ floorx

ani-tâh floor.

that-LOC ENG

P,DEM.DST-LOC N

'If I do it like this the floor will break'

Target: [dʒɪg ətot-əm o-ˈdaː dʒa pʰekə-bajɛ-ʧ əs flɔɹ]

Actual: [ɪmdʒɪ ɪn dʒɪk ədod-ob ʌ-tə dʒæ bɪgo-biɪ-dʒ is flɔɹ]

(B3-2006-05-27#163)

Adult: ᑦᐧᐸᐢ ᐊx

Tâpwâh â.

'Really?'

4.3. Conversation 19

Billy: ᑦᐸ ᓂᓂᐸᐧᐟᓐ ᐧᐊᔨx

Tâpâ ninipânân wâsh.

'We don't sleep.'

Billy: ᒪᐟᐢ daycarex

Mânh daycare.

'At the daycare.'

Billy: ᒋᐧᐦ ᓂᓂᐦᐃᓇᓵ ᓱᐦᓵ

Tâpâ ninipânân shâsh.

'We don't sleep anymore.'

Adult: ᐊᐤ ᓂᐅᐃᐧ ᐊᐦ ᓱᐦᓵ ᒋᓂᐦᐃᓇᐧᐊᐤᓵ

Aw nimui â shâsh chinipânâwâu.

'Aw! You don't nap anymore.'

(21) Billy: ᓂᒋᒪ" thunderstorm ᐧᐊᐦ ᒪᐤ" ᐃᐠᐱᐱᐤᓵ RELATIVE ROOT

Nimimâh thunderstorm wâsh mânh is-piyi-u.

no ENG EMPH normally thusly-DYN-3

P,NEG N P,DISC P,TIME ROOT-VI.VBZ-IIN

'No, there's a thunderstorm happening.'

Target: [nə'mʌ 'θʌndəɹstɔɹm 'waʃ man ɪs-'pi-ʊ]

Actual: [əs-bij-ɔ]

(B3-2006-05-27#346)

Adult: ᐩᐧᑲᐤ ᐊᓵ

Châkwân â.

'A what?'

Billy: Thunderstormᓵ

Thunderstorm.

'Thunderstorm.'

Adult: Thunderstorm×

Thunderstorm.

'Thunderstorm.'

4.4. Conversation 20

Adult: ᒋᒋʰ ᑯᓵᒋᒋᓐ ᐊ˙×

Chichîh kushtâchin â.

'Were you scared?'

Billy: Ạ̇ʰẠ̇×

Îhî.

'Yes.'

Billy: Kitchenᐃʰᑲ ·Ạ̇ᓯ ᐊ˙Ạ̇×

Kitchenihch wîyi âi...

'In the kitchen, he umm...'

Billy: ᓰʰʰᑲ ᒋʰ ᒐ·ᐸᓯᐤ×

Sûhk chîh tâpwâsiu.

'It was loud.'

Consultant comment: This verb is usually tâpwâu, but in current language tâpwâsiu is also said.

Adult: ᒐ·ᐸʰ ᐊ˙×

Tâpwâh â.

'Really?'

Billy: ---

Billy: ᒋᐣ ᒥᔭᑭ·ᐊᐤ ᐊᐠᐱᐧᓴ

Chîh miskiwâu ayâpich.

'They were still hard.'

(22) Billy: ᓵᐣᑲ ᒋᐣ ᑭ·ᓭ·ᐊᐱᐢᐤ EMISSION

Sûhk chîh chishwâwâ-piyi-u.

hard PAST noise-DYN-3

P,INTJ PVB ROOT-VI.VBZ-IIN

'It made a loud noise.'

Target: [ʤi ʧɔw-ˈa-bi-ə]

Actual: [sʊkʰ ʤe dɑm-_-bij-o]

(B3-2006-05-27#380)

Billy: ᑲ ᑎᔨᔑᐣᓴᐣ ·ᐢᑭᑭᔑᔑᓴᐧᓴ

Kâ tikushihch-h pwâchikîshich.

'The little boogeymen came.'

4.5. Conversation 21

(23) Billy: ᐊᐧ ᐱᒥᐱᐩᐧᐃᑭᐧᑊ ᐅₓ VEHICLE

Âh pimi-piyi-h-ichihch û.

PVB,CJ move-DYN-CAUS-1.PL this

PVB,CJ ROOT-VI.VBZ-VTA.VBZ-CIN P,DEM.PXL

'When we drive this one.'

Target: [æ pʰəm-bi-'hi-ʤɪʧʰ o]

Actual: [ajæ bɪn-bi-ha-jæʧ o]

(B3-2006-05-27#505)

Billy: ᓂᐧᑭᐧ ᐊᑯᔑᒪᐧᐊᑲᓇᐟₓ

Nichîh âkushimuhânân.

'We (excl.) hid him.

Adult: ᐅᐧₓ

Oh.

'Oh!'

Billy: ᐊᐧ ᓂᔨᐧᐅᔦᐧᑊ ᓂᑕᐱᑭᐧᐊᑲᓇᐟₓ

Âh nitûhuyâhch nitâpichihânân.

'We use it when we went hunting.'

4.6. Conversation 22

Billy: ᓇᓴᑕᐧᐦᐊᐧ ᓇᐅᓴₓ

Nâshtâpwâh nâush.

'It's very long.'

(24) Billy: ·ᐊᐱᐧᑕᐧ ᒪ ᐊᐢᔑᐱᔑᐳᐣₓ MANNER

Wâp-iht-h mâ âshpishi-piyi-ch.

light-by.head-2S EMPH amount-DYN-0.S

ROOT-VTI.VBZ-IMP P,DISC IC.P,QUANT-VI.VBZ-CIN

'Look at the time.'

Target: [o-tʰ-ə' m æʃpʰʃɪ-bi-ʧ]

Actual: [ɑnl-e n ʧi-bi-ʧ]

(B3-2006-05-27#533)

(25) Billy: ·ᐊᐱᐧᑕᐧ ᒪ ᐊᐢᔑᐱᔑᐳᐣₓ MANNER

Wâp-iht-h mâ âshpishi-piyi-ch.

light-by.head-2S EMPH amount-DYN-0.S

ROOT-VTI.VBZ-IMP P,DISC IC.P,QUANT-VI.VBZ-CIN

'Look at the time.'

Target: ['ɔp-ʰt-ʰ əm æʃpʰʃɪ-bi-ʧ]

Actual: [a n ajʃɪ-bi-ʧ]

(B3-2006-05-27#534)

Billy: ᐊᓀᑦᐧₓ

Anitâh.

'Let me see.'

4.7. Conversation 23

(26) Billy:	ᐸᐱᐢᐩ		bus	ᐅᑎ"	ᓇᑦ"	VEHICLE
	Pâ-piyi-ch-â		bus	u-tih	nâtâh	
	along-DYN-3.S-SUBJUNCTIVE		ENG	here-LOC	over.there	
	ROOT-VI.VBZ-CIN-SUBJUNCTIVE		N	P,DEM-LOC	P,DEM,LOC	
	ᐩ	ᐃ"ᑦᐣᐢ	ᐧᐃᐢᐧᐃᑎᒥ"ᓴₓ			
	châ	iht-â-yâkw	wiyiwîtim-ihch.			
	FUT	do-VAI.VBZ-2.PL	outside-LOC			
	PVB,CJ	ROOT-VAI.VBZ-CIN	P,LOC-LOC			
	'When the bus gets here you can go outside.'					
	Target:	['bʌ-bi-ʤa	bas	ʊ-tʰ	'nada ʧe	tʰt-a-jɛkʷ wiw-idəm-ʧ]
	Actual:	[ba-bi-da	bas	ʌ-tˀ	nogɔj gɔj	tst-æ-g ɔjwidɪp-ʧ]
						(B3-2006-05-27#598)
Adult:	ᓇᑦ"	ᐊᑊ	ᐩ	ᐃᑐ"ᑦᐣᐢₓ		
	Nâtâh	â	châ	îtuhtâyâkw.		
	'When the bus comes you go over there?'					
Adult:	ᑭᐣ"	ᐃᑎᑭᐧᐃᓇᐤᐤ°	ᐊᑊₓ			
	Chichîh	îtikiwinâu	â.			
	'You were told?'					
Billy:	ᐃ"ᐃₓ					
	Îhi.					
	'Yes.'					

5. Session 5 – Age 5;02.12 (Total *-piyi* tokens: 7)

5.1. Conversation 24

Adult: ᐧᐊᐱᐣᑦᐣ ᒪ ᐊᐢᐱᔨᐣ ᓇ ᑕᒥᔅᒋᓯᓂ

Wâpihth mâ âspiyich nâ chimischisin.

'Look at how your shoe is (e.g., she notices something wrong with it).'

Adult: ᑕᒥᔅᒋᓯᓂ

Chimischisin.

'Your shoe.'

(27) Billy: ᐋᑯᐱᔨᐤ, ᐊᐃₓ UNACCUSATIVE

Pîku-piyi-u âi...

break-DYN-3 PRO,HES

ROOT-VI.VBZ-IIN PRO,HES

'It's broken, umm.'

Target: [bigʊ-'bi-o aj]

Actual: [bɪkə-b-u ʔajʔ]

(B3-2006-07-26#122)

(28) Billy: Grass◁ᑊ △ᑊ∩ԁᑊᖚ, ᑭᑭ ᐋԁᐱᓀ°ₓ UNACCUSATIVE

Grassâh ihtikuh-ch chiki pîku-piyi-u.

ENG PVB,CJ be-0.S FUT.3 break-DYN-3

N PVB,CJ ROOT.VII-CIN PVB ROOT-VI.VBZ-IIN

'If there's grass on it, it will break.'

Context: There is grass in the velcro on his shoe, so it will not attach.

Target: [ˈgɹæs aj-tʊkʊ-tʃ ə̥tʃə̥kə bigʊ-bi-o]

Actual: [gɹæs ʌ-tˈtə̥kə̥-_ gɹæs ə-dʌ-ʧ ʤɪkə bigu-bij-o]

(B3-2006-07-26#123)

Adult: ᐅᑊ ᑊᓴԁᖚ ◁ ᓂᒍᐃ ᑊᑊᐃᵊₓ

Oh mîshkuch â nimui chîhîn.

'Oh! So it doesn't work.'

Billy: ᓯᑊᖮ ᑭᑭᒍ ᐅₓ

Sûhk chikimuu û.

'This one really sticks.'

Adult: ᐅᑊₓ

Oh.

'Oh.'

5.2. Conversation 25

Adult: ·ᐃᓯ ◁ᓂᐡ ᑊᑊ ᐅᔑᑊᑦ° ᑊᒪᓂᓯ°ₓ

Wîyi aniyâ chîh ushihtâu chîmâniyiu.

'He made the boat himself.'

Billy: ᐧᐃᓕᐧᐊᐧᐊᐤ ᐊᐧ ᐃᐟᑕᐧᐃᓴᓗˣ

Wîyiwâu â ihtâwich.

'Are they there (themselves)?'

Billy: Pirates.

'Pirates.'

Adult: ᐃᐟᐃˣ

Îhî.

'Yes.'

Billy: Pirates.

'Pirates.'

Adult: ᐧᐃᓕᐧᐊᐧᐊᐤ ᐅᔨᐟᑕᐧᐃᓴᓗˣ

Wîyiwâu ushihtâwich.

'They make it themselves.'

Billy: ᒪᐅᑎᐟ door ᓓˣ

Mâutih door nâ.

'The door is here, right?'

Adult: ᐃᐟᐃˣ

Îhî.

'Yes.'

(29) Billy: ᒪᐅᑦᑦ ᐊᐧ ᐧᐃᐧ ᐋᐧᑦᐱᐧᐅᓇᓂᐧᐃᓕᓴ UNACCUSATIVE

Mâu-tâh âh wîh pîhtâ-piyi-hu-nâniwich.

this-LOC PVB,CJ DESID go.inside-DYN-MED.RFLX-IMPERS

P,DEM+G.PXL-LOC PVB,CJ PVB ROOT-VI.VBZ-VAI.VBZ-IMPERS

'This is where you go in order to get in.'

Target: ['maw-daw ʒia wəæ 'bidæ-bi-hʊ-nænotʃ]

Actual: [mɑ-taʔ o wi bida-bi-hʊ-nanoʧ]

(B3-2006-07-26#165)

5.3. Conversation 26

(30) Billy: ᐊᐧᑦᐱᐧᐃᓴ ᒪ ᑲᐧᑲᐧᐃᐤᓴ EMISSION

Âtwâwâ-piyi-si-yi-ch mâ châkwâ-yiu.

sound.thusly-DYN-VAI.VBZ-OBV-0.S EMPH what-OBV

IC.ROOT-VI.VBZ-VAI.VBZ-OBV-CIN P,DISC PRO,WH-OBV

'Something is making (a certain) noise!'

Target: [æd-o-bi-'s-i-z mæ dʒɛgo-jo]

Actual: [nɪd-o-vi-s-ɪ-dʒ ɛn ʧəgɔ-jə]

(B3-2006-07-26#191)

Billy: ᑦᐸ ᐃᐧᑦᐱᐃᓴ ᐅᑎᐧ bicycles, ᓇᓴ

Tâpâ ihtâwich utih bicycles nâ.

'There are no bicycles here, right?'

5.4. Conversation 27

Billy: ᓵᓴᒡᐧᐸᐥ ᒥᐧᔦᐣᐥᑎᓯᐧᐃᒑᓪ ᐊᐧᐃᓂᒋᐣ gymₓ
nâshtâpwâh miywâyihtisiwich awânichî gym.
'Everybody likes to go to the gym.'

Adult: ᐊ°ₓ
Aw
'Aw.'

(31) Billy: ᓵᓴᓪ ᐊᐞᐥ ᐧᐃᐥ ᐱᒥᐱᐃᔦᐣ bicycleₓ VEHICLE
Nâshch âh wîh pim-ipiyi-yân bicycle.
very.much PVB,CJ DESID move-DYN-1.S ENG
P,MANNER PVB,CJ PVB ROOT-VI.VBZ-CIN N
'I really want to ride a bicycle.'

Target: [əʃ a-wi bəm-ˈbij-ɛn bʌjsəkəɬ]
Actual: [d a-we bım-bij-æn bajsıkəl]
(B3-2006-07-26#426)

Billy: ᑭᑎᔦᐣ ᐊᐞ ᑭᐦ keyₓ
Chitiyân â chîyi key.
'Do you have a key?'

Adult: ᒡᓂᑎᐥₓ
Tânitih.
'Where?'

Billy: Bicylce ᒥᵈ ᐊᐞₓ

Bicycle mikw â.

'Only a bike?'

Adult: ᓂᒪ ᑲᐧᐊ ᓂᐱᐩᓵ ᓀᐟᐳ key×

Nimâ tâpâ nitiyân nîyi key.

'No, I don't have the key.'

5.5. Conversation 28

(32) Billy: ᑭᐧᐊ"ᑲᓵ ᐊᐞ ᒐᐞᑲᓵ ᑲ ᐃᐞᑕᐱᐳᓴₓ EMISSION

Chi-pâht-â-n â châkwân kâ îtwâ-piyi-ch.

2-hear-VAI.VBZ-1/2 P,QST something PVB,CJ heard-DYN-0.S

2-ROOT-VAI.VBZ-IIN P,QST PRO,INDEF PVB,CJ ROOT-MEDIAL-VI.VBZ-CIN

'The one that makes that sound.'

Target: [_-ˈbætʰ-ə-mæn zagɔn gaj ˈd-ɔː-bi-ʧ]

Actual: [_-bʌtˈd-a-man ʤukʷʌn di d-o-bi-ʧ]

(B3-2006-07-26#442)

Adult: ᑭᑭ" ᐧᐊ"ᑲᓵ ᐊᐞ ᒪᓵ ᒐᐞᑲᓵₓ

Chichîh pâhtân â mân châkwân.

'Do you hear something?'

Billy: ᐃ"ᐃ ᓂᒧᐃ ᐊᓂᐃ"ₓ

Îhî nimui anitâh.

'Yes. Is it from there?'

Billy: ᑭ·ᐊᐱ"ᒋᓱₓ

Chiwâpihtân.

'Can you hear it? (Lit. Do you see it?)'

6. Session 6 – Age 5;05.00 (Total *-piyi* tokens: 5)

6.1. Conversation 29

Adult:	ᐊ·ᐊᓱ	ᐊ"	ᑭᖅᑎᒪᒋᔭ	gymₓ
	Awân	âh	chiskutimâtâkw	gym.

'Who is teaching you at gym?'

Adult:	ᑭᓵᓵᐅᐱᐅ"ᐅᓭ°	·ᐊ,	ᐊᔨᒋ"	ᐊ"	ᐃᑎᑭᐃᔪᔨᖅₓ
	Chishâshâupîuhunâu	â	âkutâh	âh	îtikiwiyâkw.

'Are you doing exercises? That's what they tell you?'

(33) Billy: ᓵᓴᒋᐧᐦᐃᐤ ᓂᒋᔑᐱᔨᓐ ᐃᒪᐤ ᓂᔨ VEHICLE/RELATIVE ROOT

Nâshtâpwâh ni-chishi-piyi-n mânh nîyi

very.much 1-fast-DYN-1/2 normally 1

P,EMPH 1-ROOT-VI.VBZ-IIN P,TIME PRO

ᐊᒼ ᐃᔑᐱᔨᔭᓐ ᐧᐃᔨᔅ ᐊᓴᒋᐦᐃᐤ

âh is-piyi-yân wiyâsh ani-tâh.

PVB,CJ thusly-DYN-1.S in.some.way that-LOC

PVB.CJ ROOT-VI.VBZ-CIN P,MANNER P,DEM.DST-LOC

'I usually go very fast when I go somewhere (by vehicle).

Target: [nəʃˈtaw nɪ-tˈʃə-bi-n ma ni a jˈs-pi-an wiɛʃ ta]

Actual: [dɑ nɪ-ʧʃɪ-bi-_ mɑ ni a js-bi-jɑn jɛs _-da]

(B3-2006-10-14#36)

Adult: ᒋᒋᐦᐩᑎᓯᓴᐤ

Chitâhkwâtisîn.

'Are you good?'

6.2. Conversation 30

Adult: ᒋᑎᒋᔑᓯᓵᐤ ᐊᒼ ᐃᒪᐤ

Chitichistâsunâu â mân.

'Do you count sometimes?'

Billy: ᑭᓂᐧᐦᐃᐤ

Kiyipwâ.

'Yes.'

Adult: ᐊᐃ ᒪᐦ ᐧᐃ "ᐁ ᐃ ᐅ ᐊ" ᐧᐊᐃ"ₓ

Âi mâk wî 'e i u a' wâh.

'What about *e i u a*, eh? (e.g., syllabic alphabet)'

Billy: ᕉᕆᐧᐸₓ

Kiyipwâ.

'Yes.'

Billy: ᒥᐣ ᐅᑕ" "ᐊ"ₓ

Mikw ûtâh 'a'.

'Only like this (the letter) *a*'

Billy: "ᐁ"ₓ

'e'.

'(The letter) *e*'

(34) Billy: ᒥᐣ ᓂᑎᐧᑕᐧᐊᐱᐅᓀᐢ "ᐁ ᐃ"ₓ EMISSION

Mikw nit-itwâwâ-piyi-nân 'e i'.

just 1-heard-DYN-1.PL ENG ENG

P,MANNER 1-ROOT-VI.VBZ-IIN N N

'We just make the sounds *e i*.'

Target: ['mʊkʷ ɛnd-ədawa-bi-nan ˈe ˈi]

Actual: [mu:g ɪn-dɑ-bi-nɑ i: i:]

(B3-2006-10-14#179)

Billy: “△” ᒥᐧₓ

'I' mikw.

'Just *î*.'

Adult: ᒥᐧ ᐊᐧ “▽ △” ᑎᑎ·ᒋᓇ·ᐊᐧᐤₓ

Mikw â 'e i' chititwânâwâu.

'You only say *e*, *î*?'

6.3. Conversation 31

Adult: ᑎᑎᔨᓭᐦᒋᓇ ᐊᐧ ᑲᐱᐦᐸᒋᐦᔦᒥᑳᐦᒐₓ

Chichischâyihtân â kâpipâmihyâmikihch.

'Do you know an airplane?'

Adult: ᔑᔕ ᐊᐧ ᑎᑏᐦ ᐅᓱᐤ ᐊᐤ ᑏᓴ ᑲ ᒥᔑᐦₓ

Shâsh â chichîh pûsin an chîyi kâ mishâch.

'Have you ever got on it on the big one?'

(35) Billy: Montreal ᐸᑎᓂ △"ᑦᔭ"ᐩ VEHICLE

Montreal pâtish iht-â-yâhch-â

name later be-VAI.VBZ-1.PL-SUBJUNCTIVE

N P,TIME ROOT-VAI.VBZ-CIN-SUBJUNCTIVE

ᒋ"ᒋᐱᔨᔭ"ᐩ Montrealₓ

chihchi-piyi-yâhch-â Montreal

leave-DYN-1.PL-SUBJUNCTIVE name

ROOT-VI.VBZ-CIN-SUBJUNCTIVE N

'When we are in Montreal, we go to Montreal by vehicle.'

Target: [mʌntɹi'ɑl bæʧ t-a-jæʧ-ə ʧi-bi-æʧ-ə mʌntɹiɑl]

Actual: [mʌntɹɑl bwʌʧ d-a-jɛʧ-ə ʃtɪ-bi-jɛt-ə mʌnʧjɑ]

(B3-2006-10-14#572)

Adult: ᑦᐃᔪᐸ ᐩ △"ᑦᔭᐟₓ

Tâisp châ ihtâyâkw

'When are you going to be there?'

Adult: ᒋᑭ ᐅ"ᐱ"ᐅᓐᐤ ᐊₓ

Chiki uhpihunâu â

'Are you going by plane?'

Billy: ᓂᒪ"ₓ

Nimimâh

'No.'

Adult: Montreal ᐊᐤ ᑭᑭ ᐃᔨᐱᔨᓇᐧᐊᐤᐣ ᓂᒧᐃᐦ ᐊᐤ

Montreal â chiki îspiyinâwâu. Nimuih â.

'Are you going to Montreal? No?'

Billy: ᐸᑎᓴ ᑎᐱᓴᑭᒋᓇ, six ᐃᐦᑐᑭᐧᐊᓯᔨᓇᐧᐊᐤ

Pâtish tipishkimânâ six îhtupunwâsiyânâ.

'When I have my birthday when I am six years old.'

6.4. Conversation 32

Billy: ᐱᐸᐦᑭᔑᐱᐦᑦᑯᔑᐣ Dash, ᓂᒪᐤ

Pipâkichishipihtâshiu Dash nimâ.

'Dash (e.g., Disney character) runs fast, doesn't he?'

Adult: ᐃᐦᐃᐤ

Îhî.

'Yes.'

Billy: ᑭᐦᑭᐱᐦᑦᑯᔑᐣᐤ

Chihchipihtâshiu.

'It runs very fast.'

(36) Billy: ᓂᐦᐃᓴ straight ᐃᔨᐱᐧᔨᔨᐤᐦ RELATIVE ROOT

Niwich straight îsh-piyi-shi-yi-u-h

a.lot ENG thusly-DYN-DIM-OBV-3-OBV

P,MANNER ADJ ROOT-VI.VBZ-DIM-OBV-IIN-OBV

'It goes really straight (someone's (little) something).'

Target: ['noʧ stɹet ɪʃ-bi-ʃ-i-o-_]

Actual: [wʊd ʃtɹed iʃ-bi-ʃi-j-o-_]

(B3-2006-10-14#603)

Billy: ᓂᑎᐩᓱᐤ ·ᐊᐣ ᓅᐦᐃᔭ

Nitiyân wâsh nîyi.

'I have it myself.'

Adult: ᒐ·ᑲᐤᔭ

Châkwân.

'What?'

Billy: ᒋᐸ ᐃᐥᑎᑯᐤᔭ

Tâpâ ihtikun.

'It's not here.'

Billy: ᒪᑎ·ᐊᐸᓂᐣᔭ

Mâtiwâkinish.

'Little toy.'

7. Session 7 – Age 5;05.22 (Total *-piyi* tokens: 2)

7.1. Conversation 33

Adult: ᒋᐦ ᒥᓂᐱᐃᐧᐣ ᐊᑊ ᒋᐱᑦₓ
Chîh minipiyiu â chîpît.
'Did your tooth come off?'

(37) Billy: ᒐᑲᑦ ᑲ ᒥᓂᐱᐃᐧᒡ ᓂᒋᐦ ᒥᓂᐱᐃᐧᓇᓐₓ UNACCUSATIVE
Châkât kâ mini-piyi-ch ni-chîh min-in-â-n.
almost PVB,CJ pull.off-DYN-0.S 1-PAST pull.off-by.hand-THM-1/2
P,MANNER PVB,CJ ROOT-VI.VBZ-CIN 1-PVB ROOT-VTR.VBZ-THM-IIN
'When it almost came off, I took it off.'

Target: [ʧakatʰ ka mənɪ-pij-ʧ _-əʧi mɪn-_-an]
Actual: [ʧəkat ka pɪt-ə-pi-ʧ ni-_ mɪn-_-a]
(B3-2006-11-06#115)

7.2. Conversation 34

Adult: ᓂᒥᒪᐦ ᐊᐅᐩᐢ ᐊᓇᐦᒡᐣ ᑲᐦ ᐊᑐᐦᑖᑦᑕᑦ daycare Janeₓ
Nimimâh îyâkw anûhch kâh îtuhtât daycare Jane.
'No, Jane went to the daycare today.'

(38) Billy: Weekend ᐊᐧ ᑊᐦ ᐃᓴᐱᐟᐤ RELATIVE ROOT

Weekend â chîh is-piyi-u.

Eng P,QST PAST thusly-DYN-0

ADV P,QST PVB ROOT-VI.VBZ-IIN

'Did it happen on the weekend?'

Target: [wikɛnd a ʧi s-pij-u]

Actual: [mwikɪn ã ʧi s-pij-o]

(B3-2006-11-06#297)

Adult: ᐃᐦᐃ, ·ᐊᐧᓀᑫ ·ᐊᐧᓀ ᒪᐦᑫ ᑊᐦ ᐃᑐᐦᑖᐤ

Îhî wâshkich wâsh mâhchich chîh îtuhtâu.

'Yes, she has not gone there for a while.'

8. Session 8 – Age 5;06.27 (Total *-piyi* tokens: 9)

8.1. Conversation 35

(39) Billy: ᐊ·ᐊᐟᐤᐦ ᑲ ᐸᐱᐟᐃᐞᐤ VEHICLE

Awâ-yiu-h kâ pâ-piyi-h-îku-ch.

who-OBV-OBV PVB,CJ along-DYN-CAUS-THM.INV-3.PL

PRO,WH-OBV-OBV PVB,CJ ROOT-VI.VBZ-VTA.VBZ-THM.INV-CIN

'Who brought them by vehicle?'

Target: [we-ˈju-_ kæ bæ-bi-h-igʊ-ʧ]

Actual: [wa-ɛ-_ kə ba-bɪ-d-ikɔ-ʤ]

(B3-2006-12-11#196)

Adult: ·ᐊᐧˮₓ

Wâh.

'Eh?'

(40) Billy: ᐊ·ᐊᐳᐤˮ ᑊ ᐸᐱᐳˮᐃᑯᑦₓ VEHICLE

Awâ-yiu-h kâ pâ-piyi-h-îku-t.

who-OBV-OBV PVB,CJ along-DYN-CAUS-THM.INV-3.S

PRO,WH-OBV-OBV PVB,CJ ROOT-VI.VBZ-VTA.VBZ-THM.INV-CIN

'Who brought him/her here (by vehicle)?'

Target: [we-ˈju-_ kæ bæ-bi-h-igʊ-tʰ]

Actual: [wʌ-ʔ-_ ga baɹ-bi-h-igʊ-tʰ]

(B3-2006-12-11#198)

Adult: Busₓ

'Bus.'

Billy: ᐩ·ᑊᐳᐤ ᐊᑯˮₓ

Châkwâyiu âkuh.

'Why?'

Adult: ·ᐊᐧˮₓ

Wâh.

'Eh?'

8.2. Conversation 36

(41) Billy: ᒋᑭ ᐃᔨᐱᔭᐦᐊᐧ ᐊ Janeₓ RELATIVE ROOT

Chi-ki îs-piyi-h-â-u â Jane.

2-FUT.1/2 thusly-DYN-CAUS-THM-3 P,QST name

2-PVB ROOT-VI.VBZ-VTA.VBZ-THM-IIN P,QST N

'Are you taking Jane (by vehicle)?'

Target: [ʧɪ-ki is-pi-h-a-w a (name)]

Actual: [h-_ ɪs-bi-h-a-_ _ (name)]

(B3-2006-12-11#271)

Adult: ᐊᐃ ᒋᑭ ᐸᒋ ᓴᑎᐦᐅᑲ ᒋᑲᐃᐧₓ

Âi chiki pâchi nâtihukw chikâwî.

'Hey, your mom will come to pick you up.'

(42) Billy: ᒋᑭ ᐃᔨᐱᔭᐦᐊᐧ ᐊ ᐊᵃₓ RELATIVE ROOT

Chi-ki îs-piyi-h-â-u â an.

2-FUT.1/2 thusly-DYN-CAUS-THM-3 P,QST that

2-PVB ROOT-VI.VBZ-VTA.VBZ-THM-IIN P,QST P,DEM.DST

'Are you driving her/him?'

Target: [ʧɪ-ki is-pi-h-æ-w a ɪn]

Actual: [ʧɪ-kə̥h ɪs-bi-h-a-ʌ _ məm]

(B3-2006-12-11#273)

Adult: ᓂᑭ ᓴᑎᐦᐅᐃᐧᐊᐧ ᑊᐦ ᐃᔭᵒₓ

Niki nâtihwâu chîh iyiu.

'She said she would pick her/him up.'

Adult: ᓂᒥᒪᐦ bus ᒋᑭ ᐅᑎᓇᐧᐣ

Nimimâh bus chiki ûtinâu.

'No, she will take the bus.'

8.3. Conversation 37

(43) Billy: ᐊᐦ ᐱᒥᐱᐩᔨᐦᐁ ᑯᓂᐦᐁᓵ VEHICLE

Âh pimi-piyi-yâhch kûn-ihch.

PVB,CJ move-DYN-1.PL snow-LOC

PVB,CJ ROOT-VI.VBZ-CIN NA-LOC

'As we ride on the snow.'

Target: [ah pəm-pi-jaʧ ɪkʊn-ʧ]

Actual: [a bən-bi-aʧ gon-ʧ]

(B3-2006-12-11#389)

Adult: ᐊᐦ ᐱᒥᐱᐩᔨᐦᐁ ᒪᐠᓵ

Âh pimipiyiyâhch mâk.

'As we go.'

Adult: ᐊᐦ ᐱᒥᐱᐩᔨᐦᐁ ᑯᓂᐦᐁᓵ

Âh pimipiyiyâhch kûnihch.

'Dashing through the snow.'

Billy: ᑯᓂᐦᐁᓵ

Kûnihch.

'Through the snow.'

Adult: ᐊᐡ ᑭᔑᐱᐃᔨᐧᐣ ·ᐊᐡˣ

Âh chishipiyiyâhch wâh.

'Going very fast, eh?'

(44) Billy: ᑯᓂᐧᐣ ᐊᐡ ᑭᔑᐱᐃᔨᐧᐣˣ VEHICLE

Kûn-ihch âh chishi-piyi-yâhch.

snow-LOC PVB,CJ fast-DYN-1.PL

NA-LOC PVB,CJ ROOT-VI.VBZ-CIN

'We went fast on the snow.'

Target: [kʊn-ʧ a tʃə-pi-jahʧ]

Actual: [kon-ʧ _ _-_-æʃ]

(B3-2006-12-11#394)

Adult: ᐊᐡ ᑭᔑᐱᐃᔨᐧᐣ ᑯᓂᐧᐣ ᒌᑎᐣᑭᐱᓀᐣᔪ ᐊᐡ ᐱᒥᐱᐃᔨᐧᐣˣ

Âh chishipiyiyâhch kûnihch tâtiyâkinâskw âh pimipiyiyâhch.

'We went fast in the snow using a sled (toboggan).'

(45) Billy:

ᒋᑎᓴᑭᓀᐦᐃᐣ	ᐊᐦ	ᐱᒥ-ᐱᐃ-ᔭᐦᒋᐣ	VEHICLE
Tâtiyâkinâskw	âh	pimi-piyi-yâhch	
sled	PVB,CJ	move-DYN-1.PL	
NA	PVB,CJ	ROOT-VI.VBZ-CIN	

ᐊᐦ	ᐅᑎᑎᐦᐊᒪᐦᒋᐣ	ᓯᐱᐦ
âh	utit-ih-âm-âhch	sîpî.
PVB,CJ	reach-VTI.VBZ-VTI.THM-1.PL	river
PVB,CJ	ROOT-VTI.VBZ-VTI.THM-CIN	NI

'We rode on the toboggan, and got to the river.'

Target:	[tatijask	ɑ	pəm-pi-jahʧ	a	utɪt-ah-m-aʧ	sipi]
Actual:	[dadijask	ʌm	bɪm-bij-a	a	wɛdɪt-a-m-aʧ	ivi]

(B3-2006-12-11#396)

Adult:

ᐊᐦ	ᐅᑎᑎᐦᐊᒪᐦᒋᐣ	ᓯᐱᐦ	ᐱᔭᐱᐦᔭᐦᒋᐣ	ᒪᐠₓ
Âh	utitihâmâhch	sîpî	piyâpiyihyâhch	mâk.

'We reached the river and when we got there...'

(46) Billy:

ᐱᔭᐱᐦᔭᐦᒋᐣ	ᒪᐠₓ	VEHICLE
Piyâ-piyi-yâhch	mâk.	
along-DYN-1.PL	and	
IC.ROOT-VI.VBZ-CIN	P,CONJN	

'As we arrive.'

Target:	[pija-pi-jaʧ	ɪmakʰ]
Actual:	[bija-bij-a	maga:]

(B3-2006-12-11#398)

Billy: ᓱᓱ·ᐊᐟᑎᑕᑭᓵᐟₓ

Shâshâwâhtitâkinh.

'Bells.'

Adult: ᓱᓱ·ᐊᐟᑕᑭᓵᐟ ᐊᐟ ·ᐃᑎᐟᐃᑯᔦᐟᓗ ᐊᐟ ᓂᑭᒧᔦᐟᓗₓ

Shâshâwâhtâkinh âh wîchihîkuyâhch âh nikimuyâhch.

'The bells are helping us to sing.'

8.4. Conversation 38

Billy: ·ᐊᐱᐟᑦᐟ ᒪₓ

Wâpiht-h mâ.

'Look at this.'

(47) Billy: ᑎ·ᓱ·ᐊᐱᔨᐟᑦᐟ ᒪ ᐊᐱᔑᓵₓ EMISSION

Chishwâwâ-piyi-htâ-h mâ apishîsh.

noise-DYN-CAUS-2.S EMPH little

ROOT-VI.VBZ-VAI+O.VBZ-IMP P,DISC P,QUANT

'Turn up the volume a little bit.'

Target: [ʧo-pi-hta-_ m aɪpʃiʃ]

Actual: [ə-bi-tə-_ m apʃiʃ]

(B3-2006-12-11#467)

Adult: ᑦᐸ ᐃᐟᑎᑯᐟ· ᐊᐃ ᐊᐟ ᑎ·ᓱ·ᐊᐱᔨᐟᑕᑭᓂ·ᐃᓗₓ

Tâpâ ihtikun âi âh chishwâwâpiyihtâkiniwich.

'We don't have the button to turn up the volume.'

Adult:	ᐊᐞᐣᐤ	ᒥᓂᖠᐧᑲᐞᐦᐄᒡ	hot chocolateₓ
	Âiyiu	minihkwâwich	hot chocolate.
	'They're drinking hot chocolate.'		

Billy:	ᒋᑎᔭᓱ	ᐊᐞ	remoteₓ
	Chitiyân	â	remote.
	'Do you have a remote?'		

Adult:	·ᐊᐞ"ₓ
	Wâh.
	'Eh?'

Adult:	ᕉᐣ·ᐸᐞₓ
	Kiyipwâ.
	'Yes.'

9. Session 9 – Age 5;10.06 (Total *-piyi* tokens: 5)

9.1. Conversation 39

Adult:	ᑦᓱ	ᐊᐣᐞ"ᑎᑲ	·ᐞ	ᐊᐞᐃ	Jamesₓ
	Tân	âyihtik	wî	âi	James.
	Where is James?				

(48) Billy: ᒋᐟᒋᐱᓀᐤ Ottawa× VEHICLE

Chihchi-piyi-u Ottawa.

leave-DYN-3 name

ROOT-VI.VBZ-IIN N

'He went to Ottawa.'

Target: [ʧhʧɪ-pij-u, ɑtəwah]

Actual: [diʧʧɪ-bi-w ɑdowɑ]

(B3-2007-03-19#169)

Adult: Ottawa ᒋᐟ ᐃᐠᐱᓀᐤ×

Ottawa chîh îspiyiu.

'He went to Ottawa?'

Billy: ᓂᐟᐃ×

Nîhî.

'Yes.'

9.2. Conversation 40

Billy: ᒌᓐ ᐊᓯᓂᑲᓱᑦ×

Tân âsinikâsut.

'What is his/her name?'

Adult: Tom×

'Tom.'

Billy: ᐧᐊᐞˣ

Wâh.

'What?'

Adult: Tomˣ

'Tom.'

Billy: ᐊᐃ ᐊᐤ ᑲ ᒪᑐᑦ ᒪᐤᐞˣ

Âi an kâ mâtut mânh.

'That one who used to cry all the time.'

Billy: ᐊᐤ ᐊ ᑲ ᒪᑐᑦˣ

An â kâ mâtut.

'Is it the one who cried?'

Adult: ᐊᐧᐊᐤˣ

Awân.

'Who?'

Billy: Tomˣ

'Tom.'

(49) Billy:

ᐊʲ"	ᒪᑐᑉ	ᒪᐤ"	ᐊᐅᐣ	ᐊᓂᐠ	VEHICLE
âh	mât-u-t	mânh	âukw	ani-yâ	
PVB,CJ	cry-VAI.VBZ-3.S	normally	that.one	that-OBV	
PVB,CJ	ROOT-VAI.VBZ-CIN	P,TIME	PRO,FOC	P,DEM.DST-OBV	

ᐊʲ"	·ᐃ"	ᑭ"ᑭᐱᐳᑦₓ
âh	wîh	chihchi-piyi-t.
PVB,CJ	DESID	leave-DYN-3.S
PVB,CJ	PVB	ROOT-VI.VBZ-CIN

'He cries because he wants to go (on that trip).'

Target:	[a	mat-ʊ-tə	man	awk	ʊni-jæ	a	wi	ʧhʧ-ɪpi-t]
Actual:	[ɑ	mæd-o-tʰ	manh	awkʰ	ɪn-jaw	ia	wi	ʧʤə-bi-tʰ]

(B3-2007-03-19#194)

9.3. Conversation 41

(50) Billy:

ᐱᑯᐱᐳᐣ"	ᐊʲ	ᐅᓴ"ₓ	UNACCUSATIVE
Pîku-piyi-yiu-h	â	û-yâh.	
break-DYN-OBV-OBV	P,QST	this-OBV	
ROOT-VI.VBZ-OBV-OBV	P,QST	P,DEM.PXL-OBV	

'Is this (belonging to someone else) broken?'

Target:	[pikụ-pi-jụ-h	a	o-jah]
Actual:	[bəgo-bi-jo-h	a	wi-ja]

(B3-2007-03-19#483)

Adult: ᐊᐱᔨᐦ ᑭᐣᐦᐧ ᒥᑯₓ

Apishîsh kiyipwâ mikw.

'Just a little bit.'

Billy: ᐅᑎ"ₓ

Utih.

'Here.'

Billy: ᓂᒧᐃₓ

Nimui.

'No.'

Billy: ᒥᑯ ·ᐊᐦᐧ ᐅᓂᐣ ᐁᐃᔪᑯ ᓂᑎ"ᑐᑎ·ᐊᐧᐃᔪᓴₓ

Mikw wâsh nîyi kuiskw nitihtutiwâwich.

'It's only me that treats them right.'

Billy: ᑲ ᐊᐱᔨᔨᔨᔭᓵ ᓂᒧᐃ ᐁᐃᔪᑯ ᓅ"ᑭ ᓂᑎ"ᑐᑎ·ᐊᐧᐃᔪᓴₓ

Kâ apishîshishiyân nimui kuiskw nûhchi nitihtutiwâwich.

'When I was little, I did not treat them properly.

Adult: ᒑ·ᐦᐧ" ᐊᐧₓ

Tâpwâh â.

'Really?'

Billy: ᓂᐢ" ᐱᐁᐱᒑᔨᐃᔪᓴₓ

Nichîh pîkupitâshiwich.

'I used to break them (diminutive).'

9.4. Conversation 42

Billy: ᒐᓱ ᐊᐧ ᐃᓕᐢᑎᐃᓕᓱᓂᓵ

Tân â iyihtiyin.

'What are you doing?'

Adult: ᒐᐸ ᐃᔭᔪ, ᓂᑭᔨᒋᑳᓵ

Tâpâ wiyâsh nikischikwâsun.

'Nothing, I'm sewing.'

Billy: ᒍᐧᑳᓕᐤ ᐊᑯᐢ

Châkwâyiu âkuh.

'Why?'

Adult: ᒥᑯᓵ

Mikw.

'Only.'

Adult: ᒨᔪ ᐧᐊᔪ ᓂᑭᔨᒋᑳᓵ

Mûshwâsh nikischikwâsun.

'I always sew.'

(51) Billy: ᐊᐞ" ᐋᑯᐱᐦᐠ ᐊ ᑌᑊᓵ UNACCUSATIVE

Âh pîku-piyi-ch â châkwân.

PVB,CJ break-DYN-0.S P,QST something

PVB,CJ VI.VBZ-CIN P,QST PRO,INDEF

'When something is torn/broken?'

Target: [ah pɪku-pi-ʧ a ʦakwɑn]

Actual: [a pɪkə-bi-ʧ a: ʧɪkʰɑ]

(B3-2007-03-19#592)

Adult: ᐊᐞ ᐋᑯᐱᐦᐠ ·ᐊᓴ ᑌᑊᓵ ᓄᐩᔭᓴᒋᓵ

Âh pîkupiyich wâsh châkwân nûyâshtutân.

'When something is broken, I fix it.'

Adult ᒍᓴ ·ᐊᓴ ᓄᐩᔭᓴᑎᒪᓵ ᐅᑌᑊᓂᒥᐧᐊ·ᐊᐤ" ᐊ·ᐊᓂᐦᐠ

Mûsh wâsh nûyâshtutimwân uchâkwânimiwâuh awânichî.

'I always fix other people's things.'

9.5. Conversation 43

(52) Billy:

ᐊᐅᐅᑯ	ᐊᐧ	ᐊᐣ	up	and	down	RELATIVE ROOT
âukw	â	an	up	and	down	
that.one	P,QST	that	ENG	ENG	ENG	
PRO,FOC	P,QST	P,DEM.DST	PREP	CONJN	PREP	

ᐊᐧᐦ ᐃᔨᐱᐦᑎᐦᐊᑭᓂᐘᐦᐧ

âh is-piyi-ht-âkiniwi-ch.

PVB,CJ thusly-DYN-CAUS-PASSIVE.3-3.PL

PVB,CJ ROOT-VI.VBZ-VTI.VBZ-PASSIVE-CIN

'Is this what is used to make it go up and down?'

Target:	[aw	a	n	ʌp	an	tawn a	js-pi-ht-akanow-ɬ]
Actual:	[awg	a	n	ab	ə	dınd aw	is-pi-td-agəno-ɬ]

(B3-2007-03-19#617)

Adult: ᐃᐦᐃᐧ

Îhî.

'Yes.'

Adult: ᓂᒥ ᐧᐊᐧᐊᐠ ᓅᐦᒋ ᒋᐱᐦᒋᐦᑎᐦᑲᑭᐱᐣᐧ

Nimi wâwâch nûhchi chipihchinâhtâkupin.

'It looks like I didn't even turn it off.'

10. Session 10 – Age 5;10.18 (Total *-piyi* tokens: 14)

10.1. Conversation 44

Billy: Round ·ᐊᑊ ᐃᓯᓭᑯᓯᐟₓ
Round wâsh îsinâkusiu.
'Round in shape.'

Adult: ᐊᑊ ᑊᓂ·ᑲᓂᐱᑎᑭᓂᐧᐊᓯᐧ ᐊᐟₓ
Âh chînikwânipitikiniwich â.
'When we turn it?'

(53) Billy: ᑭᐣ·ᐸ ᐅᑦᑊ ᐊᑊ ᐃᔭᐱᔑᓯᐠₓ RELATIVE ROOT
Kiyipwâ utâh âh is-piyi-shi-ch.
of.course here PVB,CJ thusly-DYN-DIM-0.S
P,AFF P,DEM.LOCATION PVB,CJ ROOT-VI.VBZ-DIM-CIN
'It goes like this.'

Target: ['gibʌ 'ʊt a iʃ-'bi-ʃɪ-ʧ]
Actual: [dəgwa ɹog a ɹo-bi-ʃɪ-ʧ]
(B3-2007-04-02#27)

Billy: ᒪᓂᑦᑊ roundₓ
Mânitâh round.
'Like this, round.'

(54) Billy: ᒥᐣ ᑭᔾᐦ round ᐃᔨᐱᐧᐃᓯᐣ RELATIVE ROOT

Mikw kiyâh round is-piyi-shi-u.

just and ENG thusly-DYN-DIM-3

P,MANNER P,CONJN ADJ ROOT-VI.VBZ-DIM-IIN

'It only goes around.'

Target: ['mʊ gjɛ ɹawnd ɪʃ-bi-ʃ-o]

Actual: [mʌj kʰe ɹɑnd ʌjs-pi-ʃ-o]

(B3-2007-04-02#29)

Adult: ᐃᐣ

Î.

'Ok.'

10.2. Conversation 45

Adult: ᒋᐢ ᑲᐦ ᐊᐨᐱᐨᐢ ᐊᓄᐦᑫᐣ

Tân kâh âyihtiyin anûhch.

'What did you do today?'

(55) Billy: ᓂᐦᐣ ᐱᒥᐱᐨᐃᑯᓇᐢᐣ VEHICLE

ni-chîh pim-ipiyi-h-îku-nân.

1-PAST move-DYN-CAUS-THM.INV-1.PL.

1-PVB ROOT-VI.VBZ-VTA.VBZ-THM.INV-IIN

'Someone was driving us.'

Target: [_-ʤɪ bɪm-bi-'h-igə-næn]

Actual: [ən-ʤi bəm-bɪ-ʃ-igu-næn]

(B3-2007-04-02#46)

Billy: ᐊᐧᐃ ᐊᐧᐃ James×

Âi âi James.

'Uhh, uhh... James.'

Adult: ᐊ·ᐊᐧᐣ, James ᐊᐧ ᑭᑦᐦ ᐱᐸᐧᐱᐱᐦᐨ×

Awân James â chichîh pipâmipiyiyihkw.

'Who? James was driving you around?'

Billy: ᐃᐦᐃ×

Îhî.

'Yes.'

Billy: ᓂᒧᐃ ᒥᐨ trailer×

Nimui mikw trailer.

'Not in the trailer.'

Adult: ᐊ°, ᒐ·ᑲᐱ° ᑲᐦ ᐊᐧᐱᐦᑕ·ᐊᐧᐨ×

Aw, châkwâyiu kâh âpichihtâwâkw.

'Aw, what did you use?'

Billy: ᐊᐧᐅ°×

Âiu...

'Uhh...'

Billy: In the back ᓂᑭᐦ ᐊᐱ·ᐊᐧᓴᐣ×

In the back nichîh apiwânân.

'We sat in the back.'

Adult: At the back×

'At the back?'

Billy: ᐃ"ᐃ×

Îhî.

'Yes.'

Adult: ᒐ·ᐸ" ᐊ×

Tâpwâh â.

'Oh yea?'

Billy: ᐃ"ᐃ×

Îhî.

'Yes.'

Billy:	ᓂㄴᐃ	ᒥᐟ	three	ᓂᑊ"	ᐃ"ᑎᔑᓴᓵ×
	Nimui	mikw	three	nichîh	ihtishinân.

'No, there was only three of us.'

Adult: ᒐ·ᐸ" ᐊ×

Tâpwâh â.

'Oh yea?'

Billy:	ᒥᐟ	ᒥᐟ	ᐊᐃ	ᒥᐟ×
	Mikw	mikw	âi	mikw.

'Only, only, only...'

(56) Billy:

James	ᒋʺ ᐱᒥᐱᓀᐤ	ᓂᓀ	in	the	back	VEHICLE
James	chîh pim-ipiyi-u	nîyi	in	the	back	
name	PAST move-DYN-3	1	ENG	ENG	ENG	
N	PVB ROOT-VI.VBZ-IIN	PRO	PREP	ARTCL	N	

ᓂᒋʺ ᐃʺᑦᐧᑕᓵᐤ

ni-chîh iht-â-w-â-n.

1-PAST be-VAI.VBZ-RELATIONAL-VAI.VBZ-1/2

1-PVB ROOT-VAI.VBZ-RELATIONAL-VAI.VBZ-IIN

'James was driving and I sat in the back.'

Target: [* ʤi bɪm-ˈbij-o ˈni ˈɪn ðə ˈbækʰ ən-ʤi ˈtʰ-a-w-a-n]

Actual: [* ʤi bim-bij-o ni n də bækʰ ʌn-ʤi tʰ-a-_-_-n]

(B3-2007-04-02#62)

(57) Billy:

ᒥᓵ	ᑲʺ	ᐱᒥᐱᓀʺᐧᑭᒋᓂᐧᐃᑦ	Janeₓ	VEHICLE
Mîn	kâh	pim-ipiyi-h-âkiniwi-t	Jane.	
again	PVB,CJ	move-DYN-CAUS-PASSIVE.3-3.S	name	
P,QUANT	PVB,CJ	ROOT-VI.VBZ-VTA.VBZ-PASSIVE-CIN	N	

'Then it was Jane's turn, Jane had a ride.'

Target: ['mɪn ga bəm-bi-h-a-gənɔ-t (name)]

Actual: [mɪn ga vɪm-bi-ʰh-a-gəno-d (name)]

(B3-2007-04-02#63)

Billy: ᒥᓵ ᐧᐃᐃ ᑲ ᐋʺᑭᒪᒉʺᐠ ᐅᑎʺₓ

Mîn âi kâ pîhchichâyâhch utih.

'Then, hmm, we came in(side) here.'

Adult: ᐅᐟˣ

Oh.

'Oh!'

10.3. Conversation 46

Billy: ᓵᓴᒋᐧᐦᐟ ᓂᐧᐃᐟ ᐃᐣᐃᐤˣ

Nâshtâpwâh niwîh wiyiwîn.

'I really want to go outside.'

Adult: ᑭᐱᐧᑲᐣᒋᐧᐦᐟˣ

Chipikwâyihtânh.

'Are you anxious?'

Adult: ᓵᐧ ᐧᐊᐧ ᓰᑲᒋˣ

Shâsh wâsh châkât.

'It's almost done.'

Adult: ᓵᐧ ᓰᑲᒋ ᑭᑊ ᒥᓴᐱᐦᑭᐦᐅᑎᐤˣ

Shâsh châkât chichîh misinâpiskihutin.

'I'm almost done videotaping you.'

(58) Billy: ᒌᓱ ᐃᓂᐱᔨᐱᐦᒉᐣ, two o'clockx MANNER

Tân îshpish-ipiyi-ch-â, two o'clock.

P,WH amount-DYN-0.S-SUBJUNCTIVE ENG ENG

P,WH P,QUANT-VI.VBZ-CIN-SUBJUNCTIVE P,NUM ADV

'At what time, two o'clock?'

Target: [tæn ɪʃpʰʃ-ə'bi-dʒ-ə tʰu əklɑkʰ]

Actual: [ant uʃ-əbi-d-a tʰuə kwɑkʰ]

(B3-2007-04-02#77)

Adult: ᓂᒥᒫᐦx

Nimimâh.

'No!'

Adult: ᓂᒧᐃ ᑲᔪᐱᓱ ᐊᓂᐠ twox

Nimui kwâshwân âshkw two.

'Maybe not even at two.'

Adult: ᐊx

Â.

'Ok?'

10.4. Conversation 47

Billy: ᔪᓵ four o'clock ᒋᐊᐱᒌᓱ ᐊx

Shâsh four o'clock chiwâpihtân â.

'It's now four o'clock, do you see?'

Billy: ᒋ·ᐊᐱᐟᑦᓀᓱ ᐊᐞₓ

Chiwâpihtân â.

'Do you see?'

Adult: ·ᐊᐟₓ

Wâh.

'What?'

(59) Billy: ᒋ·ᐊᐱᐟᑦᓀᓱ ᐊ ᔑᔕ four ᐃᔕᐱᔑᐱᐠᐞₓ MANNER

Chi-wâp-iht-â-n â shâsh four ishpish-ipiyi-u.

2-light-by.head-THM-1/2 P,QST already ENG amount-DYN-3

2-ROOT-VTI.VBZ-THM-IIN P,QST P,TIME P,NUM P,QUANT-VI.VBZ-IIN

'Do you see it is now four o'clock?'

Target: [ʤ-wap-t-æ-n ə ʃæʃ fɔɹ əklɑkʰ ɪʃpʰʃ-ɪbij-o]

Actual: [ʧi-_-m-_ a haʃ fɔɹ əklɑg iʃ-ɪbij-o]

(B3-2007-04-02#143)

Adult: ᐅᐟₓ

Oh.

'Oh!'

(60) Billy: Five o'clock ᒋᑭ ᐸᐱᔨᐤ ᓂᐦᑖᐄᐧᐋᐤ VEHICLE

Five o'clock chiki pâ-piyi-u n-ûhtâwî.

ENG ENG FUT.3 along-DYN-3 1-father

P,NUM ADV PVB ROOT-VI.VBZ-IIN 1-NAD

'My father is coming at five o'clock by vehicle.'

Target: [fajv əklɑkʰ ʤɪgə 'ba-bij-o n-otʰawi]

Actual: [ofə klɑg ʤɪgə ba-bj-o ən-əndawe]

(B3-2007-04-02#145)

Adult: What time ᐊ×

What time â.

'At what time?'

Billy: Five o'clock×

'Five o'clock.'

10.5. Conversation 48

Billy: Four o'clock×

'Four o'clock.'

Adult: ᐊᐳᐟ four o'clock×

Âukw four o'clock.

'It will be four o'clock.'

(61) Billy:

One	o'clock	ᐊᐧ	ᐃᓴᐱᐃᓴᐱᐧᐢₓ	MANNER
One	o'clock	â	ishpish-piyi-u.	
ENG	ENG	P,QST	amount-DYN-3	
P,NUM	ADV	P,QST	P,QUANT-VI.VBZ-IIN	

'Is it one o'clock?'

Target:	[wʌn	əˈklɑkʰ	aʔ	ɪʃpʰʃ-ɪpij-o]
Actual:	[wʌn	əklak	a	jʃɪ-bij-o]

(B3-2007-04-02#161)

Adult: One o'clock ᐃᓴᐱᐃᓴᐱᐧᐢₓ

One o'clock ishpishipiyiu.

'It is one o'clock.'

Billy: ᓂᒧᐃₓ

Nimui.

'No.'

Adult: One twenty ᐃᓴᐱᐃᓴᐱᐧᐢₓ

One twenty ishpishipiyiu.

'It is one twenty.'

10.6. Conversation 49

Billy: ᒪᐅᑕᐦ ᑲ ᐃᐱᑦ ᐊᐧᐊᐢₓ

Mâutâh kâ iyit awân.

'This is what someone said (on the radio).'

Billy: Radioᐦᑌᐦ ᑊ ᐃᓕᑦₓ

Radiohch kâ iyit.

'He said on the radio.'

(62) Billy: ᒐ ·ᐊᐱᐦᑕᒥᓐ, ᑕᐦ ᑭᑎ ᐦᐱᐃᓕᐤ busₓ VEHICLE

Châ wâp-iht-amin tâpâ kiti pâ-piyi-u bus.

FUT light-by.head-2.S not FUT.3 along-DYN-3 ENG

PVB,CJ ROOT-VTI.VBZ-CIN P,NEG PVB ROOT-VI.VBZ-IIN N

'You'll see, the bus won't be coming.'

Target: [ʤa ˈwap-ʰt-ɪmɪn ˈdaba ˈgɛtɛ ˈba-bij-o ˈbʌs]

Actual: [ʤa f-_-_ dɪbæ ʤɪgə ba-bij-o bɑs]

(B3-2007-04-02#205)

Adult: ᑕ·ᐦᐦᐣ ᐊₓ

Tâpwâh â.

'Really?'

Billy: ᐃᐣᐃₓ

Îhî.

'Yes.'

(63) Billy: ᓱᓴ ·ᐊᓴ ᓗᐤ ᑦᑊ ᐃᔑᐱᔨᐤ clockx VEHICLE

Shâsh wâsh nâu chîh ishi-piyi-u clock.

already EMPH four PAST thusly-DYN-3 ENG

P,TIME P,DISC P,NUM PVB ROOT-VI.VBZ-IIN N

'The clock already said four o'clock.'

Target: [ˈʃæʃ ˈwaʃ ˈnaw ʤi ˈs-pij-o ˈklɑkʰ]

Actual: [haʃ aʃ ənaw ʤi s-pij-o kʌkʰ]

(B3-2007-04-02#208)

Adult: ᐅᑊx

Oh.

'Oh!'

(64) Billy: ᐊᔥᑎᑊ ᒋᐱᑦᑊ ᐸᐱᔨᐤ ᓱᓴx VEHICLE

Âkutih chipi-chîh pâ-piyi-u shâsh.

right.there should-PAST along-DYN-3 already

P,DEM.FOC.LOCATION PVB-PVB ROOT-VI.VBZ-IIN P,TIME

'It should have already been here (bus?)'

Target: [aˈgʊtʰ ʤɪp-ʧi ˈba-bij-o ˈʃɛʃ]

Actual: [agok ʃʊɪp-ʤia bæ-bi-o ʃʌʃ]

(B3-2007-04-02#210)

10.7. Conversation 50

Billy: ᐃᓵᑭᑊ ᐊᑊ ᒥᓯᒋᐦᑎᔨᔪᑊx

Iskitûh âh misichihtiyich-h.

'A big skidoo?'

Adult: ᓂᒥᐦᐣ ᐊᐱᓯᓯᐅᐣ

Nimimâh apishîshiyiuh.

'No, it is a small one.'

(65) Billy: ᒍᔨ ᐊ ᒋᓂᑎᐩᐊᐅᒪᐧᐊᐧᐊ VEHICLE

Mûsh â chi-nitiw-âyi-m-â-u

always P,QST 2-want-by.mind-by.head-THM-3

P,TIME P,QST 2-ROOT-MEDIAL-VTA.VBZ-THM-IIN

ᑌ ᐱᒥᐱᐅᐦ

châ pimi-piyi-t.

FUT move-DYN-3.S

PVB,CJ ROOT-VI.VBZ-CIN

'Do you always let him drive?'

Target: ['moʃ æ ʤɪ-ndw-aj-m-a-w ʤa bəm-bi-t^{h}]

Actual: [mwʌjaʃ o ʧ-ɪnd-ɔj-m-w-o ʤa gɪn-di-t^{h}]

(B3-2007-04-02#295)

Adult: ᓂᒥᐦᐣ

Nimimâh.

'No.'

Adult: ᒐᐦᐊ ᓂᒥᔭᐅᐣ ᐊᓂᔭᐦ ᐅᐱᐅ

Tâpâ nimiyâyiuh aniyâh wîyi.

'That's not his.'

10.8. Conversation 51

Adult: ᐊᐤ ᐞ ᐱᑭᓱᓂᐣ ᐊᓂᑦᐦ

An mâ pichistinh anitâh.

'Put that there.'

Adult: ᐸᑦᐣ ᐞ ᐊᐤ ᑭᑭ ᐋᔥᑎᓂᐤ

Pâtâh mâ an chiki pîkuhtin.

'Bring that, it will break.'

Billy: ---

Adult: ᐊᑎᑎᐧᐃᔅ ᐞ ᐊᓂᑦᐦ ᐃᔑᐱᐦ

Atitiwîsh mâ anitâh îspit-h.

'Move it more over there.'

Billy: ᓂᐧᐊᐱᐣᑦᐤ

Niwâpihtân.

'I can see it.'

Adult: ᐧᐊᔭ ᐞᐧᑦᐣᑎᓂᐧᐃᐧᐃᒡ

Wâsâ mâtwâhtiniwiwich.

'Oh, no! The phone is ringing.'

Billy: ᑭᐧᐊᐱᐣᑦᐤ ᐊᐠ

Chiwâpihtân â.

'Do you see it?'

Billy: ᑭ·ᐊᐱ"ᑕᓱ ᐊᑊₓ

Chiwâpihtân â.

'Do you see it?'

Adult: Upside down ᐃᔑᓴᑯᓱₓ

Upside down îshinâkun.

'It looks upside down.'

Billy: ---

(66) Billy: ᐊᑯᑕ" ᐩ ᐃᔨᓴᑯᔨᑦ ᐋᑯᐱᐢᐩₓ UNACCUSATIVE

Âkutâh châ isi-nâku-si-t pîku-piyi-ch-â.

OK FUT thusly-appear-VAI.VBZ-3.S break-DYN-0.S-SUBJUNCTIVE

P,DEM PVB,CJ ROOT-VAI.VBZ-VAI.VBZ-CIN ROOT-VI.VBZ-CIN-SUBJUNCTIVE

'This is what it will look like if it's broken.'

Target: [akʷdʌ ʧa jsə-nʌkʷ-sɪ-tʰ bikə-bi-ʤ-ə]

Actual: [ægədʌ ʤ ɪʧ-nɛk-ʃʌ-_ bigo-bi-ʤ-aʔ]

(B3-2007-04-02#431)

Adult: ᐃₓ

Î.

'Okay.'

Morphological inventory of *piyi*-derived verbs by session

			Stage I				Stage II			Stage III		
Orthography	Meaning	Type	Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7	Session 8	Session 9	Session 10
n-	1	1	x									
ni-	1	1						x				x
nit-	1	1						x				
chi-	2	2								x		
-ch	0.s	CIN	x	x	x	x	x		x	x	x	x
-ch	3.s	CIN				x						
-ichihch	1.pl	CIN				x						
-t	3.s	CIN	x							x	x	x
-u	0	CIN							x			
-yâhch	1.pl	CIN	x					x		x		
-yân	1.s	CIN					x	x				
-shi	dim	dim			x			x				x
-n	1/2	IIN			x							
-nân	1.pl	IIN	x					x				x
-u	3	IIN	x			x	x	x		x	x	x
-wich	3.pl	IIN				x						
-h	2.s	imp								x		
-nâniwich	impers	impers					x					
-si	intens	intens					x					
-h	obv	obv						x			x	
-yi	obv	obv			x	x	x	x				
-yiu	obv	obv									x	
-âkiniwi	passive.3	passive	x									x
-kiniwi	passive.3	passive									x	
chiki	fut.3	pvb					x					x
uhchi	past.neg	pvb	x									
chîh	past	pvb	x			x			x			x
chipi	should	pvb										x
ki	fut.1/2	pvb								x		
kiti	fut.3	pvb										x
wîh	desid	pvb					x				x	
âh	pvb,conj	pvb,conj	x	x		x	x	x		x	x	x
châ	fut	pvb,conj				x						x
kâ	pvb,conj	pvb,conj	x		x		x		x	x		x
-â	subjunctive	subjunctive	x			x		x				x
-â	thm.dir	thm.dir	x							x		
-iku	thm.inv	thm.inv								x		x
-hu	medio.frlx	vai.fin					x					
-htâ	caus	vai+o.fin			x					x	x	
-h	caus	vta.fin	x			x				x		x