A Re-Examination of Newfoundland Mi'kmaq Phonetics

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Abstract

The phonology of Newfoundland Mi'kmaq was first examined in detail by Russell Bragg in 1976. Since that time, with the advancement of computer programs such as Phon and Praat, one can examine the phonetics more accurately. The goal of this thesis is to re-examine the phonetics of Newfoundland Mi'kmaq and expand upon the original observations made over 45 years ago. Ten audio hours of the same data that was first collected in the early 1970s was re-transcribed using Phon. The waveforms and spectrograms of the data were then examined in Praat in order to more accurately transcribe the data. This thesis specifically focuses on the consonants and is able to solidify some of the original observations made in 1976, expand the phonological inventory, and discover allophonic variations that were not originally noticed. Additionally, this thesis examines various voicing characteristics, consonant length, and confirms the existence of a glottal catch that the original study discussed.

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Chapter 1: Introduction

1.1 Background

1.1.1 Algonquian Language Family

The Algonquian language family is one of many Indigenous language families located in Native North America. It belongs to the larger Algic language family, which includes the Yurok and Wiyot languages spoken along the northwestern coast of California. Originally, Yurok and Wiyot were not considered to be part of any language family until it was proposed to belong to the Algonquian language family by Edward Sapir (1913). At the time, Sapir's proposal was considered controversial, but has since become widely accepted after Yurok and Wiyot were compared phonologically, morphologically, and semantically with other Algonquian languages and were shown to possess similarities beyond simply borrowing (Goddard 1975).

Geographically, Algonquian languages are spoken across the majority of Canada from Labrador to Alberta and extend as far south into the United States as present day Wyoming (Junker & MacKenzie 2005). It is unclear what the exact number of Algonquian languages is, for example Mithun (1999) lists a total of twenty eight distinct languages and their subsequent dialects – see Table 1 for a complete list – whereas the website Ethnologue, which documents languages around the world, indicates that there are thirty nine Algonquian languages (Eberhard, Simons & Fennig 2021). Variations such as these are bound to occur when one must decide when a language is distinct or a dialect of another language. Additionally, several Indigenous languages that would have been actively spoken during the time of European contact did not have the chance to be documented before the language became dormant. Many languages were mentioned by name alone in early writings of European travellers, but there are

no surviving documents to indicate that these languages were studied. Other languages that are included in Table 1 – for example Etchemin – have a scarce amount of surviving documents to verify their existence (Mithun 1999).

Table 1: List of Algonquian Languages and their Dialects[1]

ALGONQUIAN (Mithun 1999)	
Central and Plains Algonquian	**Eastern Algonquian**
Shawnee	Mi'kmaq = Mi'kmag = Micmac
Fox (=Mesquakie)-Sauk-Kickapoo	Maliseet-Passamaquoddy
Miami-Illinos = Peoria*	Etchemin*
Potawatomi	Eastern Abenaki*
Menominee = Menomini	*Penobscot = Old Town*
Blackfoot	*Caniba*
Cree	*Aroosagunticook*
Eastern Cree:	*Pigwacket*
East Cree	Western Abenaki = Abnaki = St. Francis*
Naskapi	Loup A*
Montagnais = Innu-aimun	Loup B*
Western Cree:	Massachusett = Natick*
Plains Cree	*North Shore*
Woods Cree	*Natick*
Swampy Cree	*Wampanoag*
Eastern Swampy Cree	*Nauset*
Moose Cree	*Cowesit*
At(t)ikamek(w) = Tête de Boule	Narragansett*
Mi(t)chif	Mohegan-Pequot*
Ojibwa = Ojibway = Ojibwe = Chippeway	*Mohegan*
Saulteaux	*Pequot*
Northwestern Ojibwa	*Niantic*
Southwestern Ojibwa	*Montauk*
Severn Ojibwa	Quiripi-Naugatuck-Unquachog-Shinnecock*
Central Ojibwa	Mahican*
Ottawa = Odawa	*Stockbridge*
Eastern Ojibwa	*Moravian*
Algonquin	Munsee = Delaware*
Cheyenne	*Munsee*

1 Languages followed by an asterisk had become dormant a the time Mithun was creating her book

Cheyenne *Sutaio = So'taa'e**	*Wappinger* Unami = Delaware = Lenape*
Arapaho-Atsina	*Northern*
Arapaho	*Southern*
*Besawunena**	*Unalachtigo*
Gros Ventre = Atsina = Aáni	Nanticoke*
*Nawathinehena**	*Nanticoke*
*Ha'anahawunena**	*Choptank*
	Piscataway
	Conoy
	Powahatan = Virginia Algonquian*
	Pamilco = Carolina Algonquian = Pamtico = Pamticough*

It is exciting to note that since the publication of Mithun's book in 1999 there have been language revitalization efforts for multiple Algonquian languages that were classified as dormant or had a low number of speakers. Most notably is Miami-Peoria (also known as Miami-Illinois) which has undergone strong revitalization efforts over the past twenty years. In 2011, ten years into the revitalization efforts, there were "hundreds of Miami people with some knowledge of the language and [...] about fifteen people with conversational proficiency. Many Miami families have incorporated the language into their daily communication, and a few children are being raised with the language" (Leonard 2008: 25–26). Additional revitalization efforts included the Breath of Life[2] program, specifically the one held in Washington DC in 2011, of which a lot of the participants spoke a language from Algonquian language family. During these workshops Algonquian speakers "investigated Sauk, Kickapoo, Meskwaki, Shawnee, Ojibwe, and Penobscot" (Sammons & Leonard 2011: 214).

2 The Breath of Life program (also called the Breath of Life Language Restoration Workshop for California Indians) was first started in 1995 "as a workshop for the revitalization of California's sleeping languages" (Sammons & Leonard 2011: 211). The program allows participants to attend workshops, work in groups with speakers of their language and a linguist, and they are able to "[explore] and [use] the vast archives of California Indian languages and materials for their own efforts in language reclamation" (AICLS 2020). It has since inspired similar workshops in other areas such as Oklahoma, Washington DC, and Oregon.

Within the Algonquian language family a further distinction can be made between its Eastern and Central languages. Goddard (1978) indicates that there are several unique attributes that set the Eastern Algonquian languages apart from the rest. Because of these differences, Goddard proposed that the Eastern Algonquian languages "descend[ed] from an ancestral Proto-Eastern Algonquian Language (PEA) that had a certain period of independent development after branching off from the common parent of the whole family, Proto-Algonquian (PA)" (Goddard 1978: 70). Goddard estimates that this divergence began around 2,000 years ago. Of the Eastern Algonquian languages, only two – Mi'kmaq and Maliseet-Passamaquoddy – are actively spoken today.

1.1.2 The Mi'kmaq People[3]

It is unclear what the exact population of the Mi'kmaq people was preceding European contact. On the higher end, Jesuit missionary writings estimate that there was anywhere between 50,000 to 100,000 Mi'kmaq people living on the East Coast of North America (The Confederacy of Mainland Mi'kmaq 2007), while others claim the Mi'kmaq population was as low as 6,000 (Jackson 1993). Nevertheless, the Mi'kmaq were most likely the first people to come into contact with Europeans. When French colonials arrived they identified two groups of Indigenous people on the East coast that they called the Souriquois (Mi'kmaq) and the Etechemin (Maliseet-Passamaquoddy). Later on the Souriquois began to be called Mi'kmaq, "from the word *nikmaq*[4], which means 'my kin-friends'" (Davis 1997: 23).

At that time of European arrival to the East coast, Mi'kmaq territory was spread across all of "Nova Scotia and Prince Edward Island, part of the Gaspé Peninsula, Newfoundland, and most of New Brunswick" (The Confederacy of Mainland Mi'kmaq 2007: 11). As time passed, however, Mi'kmaq territory and its population began to shrink as more and more people arrived and forced the Mi'kmaq to

3 For more information regarding the history of the Mi'kmaq of Newfoundland please reference Appendix E

4 This word "was a form of greeting used by the Mi'kmaq in the early seventeenth century and became associated with the people themselves" (Davis 1997:23)

move. Presently, Mi'kmaq territory consists of seven districts: Epekwitk aq Piktuk, Eskikewa'kik, Kespukwitk, Sipekni'katik, Siknikt, Unama'kik aq Ktaqmkuk, and Kespek – see Figure 1 below.

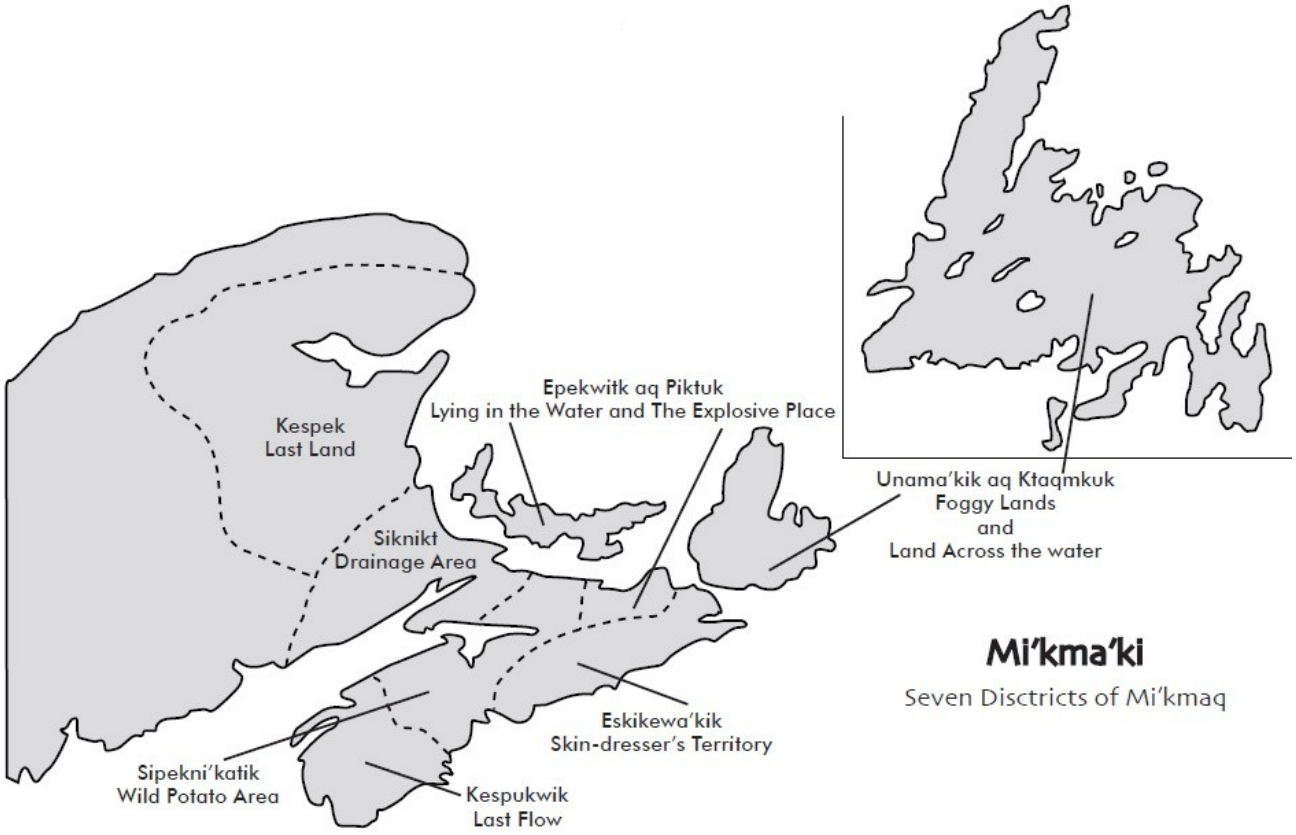

Figure 1: Mi'kmaq Territory and its Seven Districts

source: (The Confederacy of Mainland Mi'kmaq 2007: 11)

1.1.3 The Mi'kmaq Language

The Mi'kmaq language is highly agglutinative, fusional, and allows for noun incorporation. This means a single word in Mi'kmaq contains multiple morphemes and can be translated as an entire sentence in English. For example the word *Pemie'plewinatawijajika'sit*[5] means 'S/he, who knows how to do this well, is in the process of moving along very close to the edge (of shore): so close that s/he almost falls in, but because of her/his skill does not'. This sentence is broken down in the following example:

5 This word is written using Francis-Smith orthography

(1)	pemi	PV[6]	in the process	
	e'plewi-	PV	over doing	
	natawi-	PV	ability	
	jajik-	R	follow along the edge	
	-a'si	AI.VF	reflective	
	-t	AI.3.Indep.neut		(from Inglis 2004)

Because of the agglutinative nature of the language, a Mi'kmaq speaker is able to freely adjust the word order of a sentence without losing the original meaning. The morphemes that attach to the verb stem indicate what the subject and object of the sentence are regardless of word order. In some languages a sentence such as 'The man sees the table' can only be pronounced in a limited number of ways before the inherent meaning of the sentence is lost, but in Mi'kmaq this sentence can be said six different ways and is able to retain the original meaning. All possible sentence orderings can be seen in the following table (from Inglis 2004).

Table 2: Free Word Order in Mi'kmaq[7]

Word Order	Mi'kmaq Sentence	English Meaning
VOS	Nemitoq pataluti ji'nm	The man sees the table.
VSO	Nemitoq ji'nm pataluti	The man sees the table.
OVS	Pataluti nemitoq ji'nm	The man sees the table.
OSV	Pataluti ji'nm nemitoq	The man sees the table.
SVO	Ji'nm nemitoq pataluti	The man sees the table.
SOV	Ji'nm pataluti nemitoq	The man sees the table.

6 The abbreviations stand for preverb (PV), root (R), animate intransitive (AI), and verb final (VF).

7 The Mi'kmaq sentences in this table were written using the Francis-Smith Orthography

In terms of pre-contact writing, the Mi'kmaq people "wrote in hieroglyphs which were scratched into tree bark or animal hides" (The Confederacy of Mainland Mi'kmaq 2007: 20) or carved into stone[8]. The earliest developed orthography was created by Reverend Silas T. Rand in the late 1800s in order to document Mi'kmaq (Rand 1888). Shortly after, a missionary known as Father Pacifique compiled a book with his own version of an orthography (Buisson 1939). In terms of contemporary orthographies there are three. First, the Francis-Smith orthography was created by Bernard Francis and Douglas Smith. It is the most widely used of the three orthographies in the provinces of Nova Scotia, New Brunswick, and Prince Edward Island and is "the official orthography of the *Sante' Mawio'mi* (Grand Council)" (Nova Scotia Archives 2020). Second, the Listuguj orthography is primarily used by the Mi'kmaq speakers of Quebec. The third orthography, known as the Lexicon orthography, was created by Albert DeBlois and Alphonse Metallic in 1984 but is not widely used (DeBlois & Metallic 1984). A summary of the orthographies and the corresponding IPA sounds they represent can be seen below in Table 3.

Table 3: Mi'kmaq Orthographies and their Corresponding Sounds

IPA	**i**	**i:**	**e**	**e:**	**a**	**a:**	**ə**	**o**	**o:**	**u**	**u:**	**p**	**t**	**k**	**q**	**m**	**n**	**l**	**tʃ**	**s**	**w**	**j**
Francis-Smith	i	í/i'	e	é/e'	a	á/a'	ɨ	o	ó/o'	u	ú/u'	p	t	k	q	m	n	l	j	s	w	y
Listuguj	i	i'	e	e'	a	a'	'	o	o'	u	u'	p	t	g	q	m	n	l	j	s	w	y
Lexicon	i	i:	e	e:	a	a:	ɨ	o	o:	u	u:	p	t	k	q	m	n	l	j	s	w	y
Pacifique	i		e		a			ô		o		p	t	g		m	n	l	tj	s		
Rand	ĭ	e	ĕ	ā	ă	a â	ŭ	ŏ	o ō	ŏŏ	oo u	b p	d t	g k	h	m	n	l	dj tc	s	w	y

8 More than 500 different petroglyphs (pictures carved into stone) have been found in Kejimkujik National Park in Nova Scotia. Making "it the largest number of petroglyphs in eastern North America" (The Confederacy of Mainland Mi'kmaq 2007: 8)

The Mi'kmaq language, as well as other Indigenous languages, suffered greatly during the enforcement of residential schools which lasted "for more than 160 years, with upwards of 150,000 [Indigenous] children passing through their doors" (The Royal Canadian Geographical Society/Canadian Geographic 2018) with the last school closing as recently as 1996. These children were forcibly separated from their families and punished for speaking the only language they knew. The words of Isabelle Knockwood, who attended a residential school in Shubenacadie, Nova Scotia from 1936 to 1947, describe the lasting effects these schools had on her and countless others in terms of her relationship with the Mi'kmaq language:

> "Although many of those who so relentlessly punished the children entrusted to them [the priests and nuns who ran the residential schools] are now dead, the effect of their savage punishments has outlived them. Not only were little children brutally punished for speaking their mother tongue, reducing them to years of speechlessness, but the Mi'kmaw language was constantly referred to as 'mumbo-jumbo' as if it were some form of gibberish. [...] The punishment for speaking Mi'kmaw began on our first day at school, but the punishment has continued all our lives as we try to piece together who we are and what the world means to us with a language many of us have had to re-learn as adults." (Knockwood 2015: 108)

Despite the relentless punishments endured inside residential schools, the Mi'kmaq culture and language refuse to fade. In recent decades there has been strong language revitalization efforts, such as high school immersion programs (McGee Jr. 2008), in Mi'kmaq communities throughout the Atlantic provinces. As of 2016, the number of Indigenous people in Canada who speak Mi'kmaq was 8,870 with the majority of the people living in either New Brunswick (24.6%) or Nova Scotia (61.9%) (Statistics Canada 2017).

While some First Nation communities have several hundred – in some cases a couple thousand – fluent Mi'kmaq speakers others are struggling to reclaim their lost language. In Newfoundland the last fluent Mi'kmaq speaker died in the 1980s. Since that time Mi'kmaq language classes have been

included in the school curriculum in Miawpukek so that Indigenous children can learn their native language. Community classes have also been implemented so people of any age can come and learn Mi'kmaq (Angela Christmas, pc, 2021).

1.2 Purpose of Study

The purpose of this study is to re-examine the phonology of Newfoundland Mi'kmaq which was last examined over 45 years ago in 1976 (Bragg 1976). This thesis focuses more specifically on the consonant inventory, although there is a discussion surrounding the vowel inventory of Newfoundland Mi'kmaq as well. The main goal of this paper is to examine the waveforms and spectrograms of Newfoundland Mi'kmaq recordings in closer detail, which allows for a more accurate transcription and for the inventory proposed by Bragg to be expanded upon. This phonological re-examination includes determining underlying phonemes and identifying possible allophones, examining sonorant consonant lengthening, and verifying the existence of the 'glottal catch'.

1.2.1 Mi'kmaq Phonology[9]

In Bragg's original paper the underlying phonetic inventory of Newfoundland Mi'kmaq consisted of eleven consonants and six vowels – see Table 4 for consonant inventory and Table 5 for vowel inventory. All of these vowels, with the exception of schwa /ə/, possess long vowel counterparts. Bragg

9 Some of the symbols used in other linguistic papers to represent the consonants are based on the Francis-Smith orthography or the Listuguj orthography. These symbols have been changed to reflect the current symbols used in the International Phonetic Alphabet chart. For example, Bragg uses the symbols /y/ and /č/, which I have changed to /j/ and /tʃ/.

noted that the phoneme /q/ appeared to have several different surface representations[10] in comparison to the other phonemes – this will be discussed further in §3.2.1.

Table 4: Underlying Consonant Inventory of Newfoundland Mi'kmaq (Bragg 1976)

	Bilabial	**Alveolar**	**Post Alveolar**	**Palatal**	**Velar**	**Uvular**
Plosive	p	t			k	q
Nasal	m	n				
Fricative		s	tʃ			
Approximant	w			j		
Lateral Approximant		l				

Table 5: Underlying Vowel Inventory of Newfoundland Mi'kmaq (Bragg 1976)

	Front	**Central**	**Back**
Close	i, i:		u, u:
Mid	e, e:	ə	o, o:
Open		a, a:	

Hewson (1986) notes that the glides [j] and [w] are most likely allophones of the vowels /i/ and /u/. The supporting evidence provided in that paper was the reaction of native Mi'kmaq speakers who "resent the use of w and y in the orthography, claiming that they are not needed" (Hewson 1986: 444). While the orthography opinions of native speakers do not outright confirm a lack of existence of the glides in the underlying consonant inventory, other linguists such as Fidelholtz have proposed the same possible allophony. Fidelholtz found in his 1968 examination of Listuguj Mi'kmaq that the

10 In Bragg's thesis one of the surface representations of /q/ is the voiced velar fricative [ɣ]. It should be noted that the underlying phoneme for the voiced velar fricative differs from a previous thesis written in 1971 concerning the morphology of Newfoundland Mi'kmaq. Alan Humber indicated in his description of the consonant inventory that in certain contexts the voiceless velar plosive /k/ could surface as the voiced velar fricative [ɣ]. The environment in which /k/ surfaced as [ɣ] was when the phoneme was preceded by either an [o] or an [a] and followed by the vowels [a] or [o], any consonant, word finally, or a morpheme boundary. Otherwise, the /k/ would surface as [k] or [g].

surrounding environments in which [w] and [u] are found are specific and are never shared by both phonemes. A similar pattern was seen between the phonemes [j] and [i] – "between vowels we find only y, between consonants only i:" (Fidelholtz 1968: 26).

It is generally agreed that Mi'kmaq consonants are underlyingly voiceless and become voiced intervocalically – see (2) for Voicing rule and (3) for an example. According to Bragg this rule can be triggered across word boundaries, for example, if the previous word ends in a vowel and the following word begins with a CV sequence this places the initial consonant between two vowels and will trigger voicing – see example (4).

(2) Voicing: C [-voice] → C [+voice] / V_V

A voiceless consonant becomes voiced when it is between two vowels.

(3) /pəle**k**u/ [pəle**g**u] 'nail'

(4) /kesi **p**iley/ [kɛzɪ **b**ɪley] 'it's very new'

Bragg noted three exceptions to this rule: consonant voicing can occur word initially and word finally (see examples (5), (6), and (7)), following long vowels (see examples (7) and (8)), and in loanwords (see example (9)). During this re-analysis, these unexplained exceptions in the data are closely examined in Praat to see whether or not there is in fact word initial or word final voicing. Additionally, the environments immediately preceding and following the pronunciation of the word are examined to see whether or not any outside factors were affecting the voicing of the plosives.

(5) /**p**apit/ [**b**ɑbɪt] 'he plays, has fun'

(6) /nepa**t**/ [nebɑ**d**] ‘he sleeps’

(7) /ka:**t**/ [kɑ:**d**] ‘eel’

(8) /qalipu:**k**/ [hɑlibu:**g**] ‘caribou pl.’

(9) /**k**upəlnowəl/ [**g**ubəlnɔwəl] ‘government’

There is an interesting pattern that emerges concerning consonant clusters. According to Bragg’s data, consonant clusters that begin with a sonorant consonant trigger what Bragg calls a ‘glottal catch’[11] between the two – see examples (10) and (11). Additionally, when this type of consonant cluster occurs word initially the sonorant becomes devoiced – see examples (12) and (13).

(10) /lə**nt**ukw/ [lə**n̥ˀt**ukw] ‘deer’

(11) /ə**lp**a:/ [ə**l̥ˀp**ɑ:] ‘really’

(12) /**ms**ət/ [**m̥ˀs**ət] ‘all, every’

(13) /**nq**un/ [**n̥ˀq**un] ‘my heel’

Bragg also discusses something he calls ‘long liquids’[12]. Long liquids occur in the initial section of a consonant cluster and cause the second consonant in the cluster to become voiced – see examples (14) and (15). When these sonorants are ‘long’ the devoicing “of nasal liquids in initial position in both word and the cluster does not occur” (Bragg 1976: 24) (examples were not provided). According to Bragg these long liquids are different from the geminate liquids that are also occurring in the data, but he does not indicate how to discern the difference between the two.

11 Throughout Bragg’s paper a glottal catch was transcribed with the symbol [ˀ]

12 Bragg groups the sonorant consonants /m,n,l/ in this category even though the nasal segments are not considered ‘liquids’ in modern terminology.

(14) /mə**n:t**u/ [mə**n:d**u] ‘devil’

(15) /ə**l:p**a:tu/ [ə**l:b**ɑ:du] ‘boy’

1.3 Significance

This thesis is the first in depth examination of Newfoundland Mi’kmaq phonetics since 1976. Since that time the way we analyze phonemes has changed with the ability to use computer programs such as Praat to closely examine the waveform and spectrograms of speech. Therefore, this examination is needed in order to expand upon the phonemes and allophones of Newfoundland Mi’kmaq and review the observations originally made by Bragg over forty five years ago. This thesis will help to expand our understanding of Mi’kmaq dialectology and has the potential to aid in the revitalization of the Newfoundland Mi’kmaq dialect by providing an in depth examination and analysis of the pronunciation of Mi’kmaq words by two native speakers.

Chapter 2: Review of Literature

2.1 Early Linguistic Analysis

The oldest surviving documents that analyzed the Mi'kmaq language were written by French missionaries living in and around the Atlantic coast of Canada during the eighteenth century. The first Mi'kmaq grammar book was compiled by Father Maillard and was published posthumously in the mid nineteenth century by Father Bellenger. This first documentation of Mi'kmaq contained mostly verbal paradigms. The first English to Mi'kmaq dictionary was published by another religious figure, Reverend Silas Rand (1888), but contained several issues. For instance, Rand "over-differentiated voiced and unvoiced variants thus leading us to consider, quite mistakenly, that voicing is phonemic in this language" (Bragg 1976: 3). The third major work that was published about the Mi'kmaq language was a comprehensive grammar compiled by Father Pacifique Buisson (1939). His work, although extensive and helpful to the understanding of the language, employed a transcription system that was too broad. For example, Father Pacifique rarely marked when vowel length occurred even though Mi'kmaq contains six short vowels and five long vowels. Because of its importance, Father Pacifique's work was re-transcribed in 1990 (Hewson & Francis 1990) in order to both preserve his original findings as well as transcribe his work in a more uniform manner. For example, where Father Pacifique wrote <oigoèg> Hewson and Francis wrote [wi:kue:k].

2.2 Modern Linguistic Analysis

The first modern linguistic study of Mi'kmaq was completed in 1968 by James Fidelholtz. His PhD dissertation examined the morphophonemics of Mi'kmaq, specifically noun plurals, contractions,

intransitive verbs, transitive verbs, and noun possession (Fidelholtz 1968). The dialect of Mi'kmaq that was used for Fidelholtz's dissertation was spoken in Restigouche, Quebec – presently known as the Listiguj dialect. Following Fidelholtz's dissertation there was a surge of linguistic interest in the Mi'kmaq language between the late 1960s to the late 1980s. These papers mainly focused on the peoples of the Miawpukek First Nation of Newfoundland due to the dwindling numbers of fluent speakers in their community as well as the Mi'kmaq spoken in Nova Scotia. During that time, the language was described in detail from the perspective of phonology, morphology, and semantics among others (Humber 1971, Hewson 1973, 1980, 1985, 1986; Bragg 1976; Proulx 1978; Williams & Jerome 1979; Denny 1983; Inglis 1986; Dawe-Sheppard 1988). Within these papers there was a strong sense of worry for the Miawpukek First Nation speakers as linguists scrambled to document as much as they could before no fluent speakers remained. It is noted by Inglis in her 2002 PhD thesis that Mi'kmaq "was spoken in Newfoundland... until the late 1980s" (Inglis 2002: 3).

Once this time period passed there was not as much activity in terms of linguistic analysis for roughly ten years. Then in 2009 research was conducted on language revitalization which continued to be examined throughout the years (Sarkar et al. 2009; Little et al. 2015; Sarkar 2017). These papers focused on the Mi'kmaq spoken in Quebec and Nova Scotia.

Chapter 3: Analysis & Discussion

3.1 Data & Methodology

Between 1969 and 1975 Memorial University Professor John Hewson and grad student Alan Humber[13] recorded roughly thirty hours of taped interviews with brothers Matthew and Paul Jeddore, who were born and raised in Conne River (now known as the Miawpukek First Nation) where they spoke Mi'kmaq as their first language (Chief Mi'sel Joe, pc, 2022). These recordings have been stored at Memorial University in their original form on cassette tapes and reels and were copied to CDs in 2009. These recordings are now stored in digital form in the Labrador Languages Preservation Archive at Memorial University. The original 285-page handwritten transcriptions of these interviews were used as the data source for Bragg's (1976) thesis.

Roughly ten hours of the audio was used to re-examine Newfoundland Mi'kmaq phonetics, the majority of which came from Matthew Jeddore (a total of 8.73 hours), and was recorded between July 7-13 in 1971[14]. At the time of recording Matthew was 75 years old. The remaining 1.23 hours of audio used in this analysis was from his older brother Paul Jeddore and was recorded on the dates of August 12-13 in 1969. At the time of recording Paul was 75 years old. Ideally, the hours should have been split between both men as equally as possible, but there were significantly fewer interviews with Paul Jeddore and the audio quality of some of these interviews made it impossible to accurately analyze on the computer, which led to their disqualification from this analysis.

13 Despite my best efforts to track down exactly who worked on this project alongside Dr. Hewson and Alan Humber to give credit where it's due I was unable to find out who worked with them beyond some first names that were written on one of the original project notes. Thank you to Sandra, Larry, Leila, Donna, Ruth, and Pam for your contributions to this project.

14 The specific tapes re-transcribed to create the data for this thesis were: 2, 3, 6, 7, 8, 12, 17, 19, and 20. There was a total of 22 tapes recorded during that time period.

3.1.1 Transcriptions

The primary software programs used to examine the data were Phon (Hedlund & Rose 2020) and Praat (Boersma & Weenik 2021). Data was excluded from the final analysis if the interviewer was talking at the same time as a word was being pronounced, if background noises were loud enough to effect the formants of the word or the ability to accurately determine sound boundaries within the word, if the speaker didn't know the word that the interviewer was asking about (even if they pronounced it), or if words were pronounced by the speakers but no definition was provided or could not be found.

The entirety of the data was examined three separate times to ensure both the transcriptions and the English definitions attached to each transcription were as accurate as possible. The initial examination recorded the transcriptions based on the audio alone. During the second examination each word was examined in closer detail in Praat in order to mark sound boundaries and correct any noticeable transcription errors. A third examination was conducted to ensure there were no potential errors left in the transcriptions that would be used for this analysis.

The waveforms and spectrograms were examined in conjunction with the audio in order to determine the consonants and vowels pronounced in each word[15]. The dark formants in the spectrogram and amplitude in the waveform made the identification of the vowels relatively easy. The identification of the nasals and lateral liquid was based off of the lower amplitude of the waveform in comparison to amplitude of the vowels as well as the less prominent formants in the spectrogram. Figure 2 gives a clear picture of both the waveform lowering and the spectrogram becoming lighter when the sounds shift between the alveolar nasal [n] and vowels.

15 The book *A Field Manual of Acoustic Phonetics* by Joan Baart (2010) was also used as a reference in order to more accurately identify and differentiate the consonants.

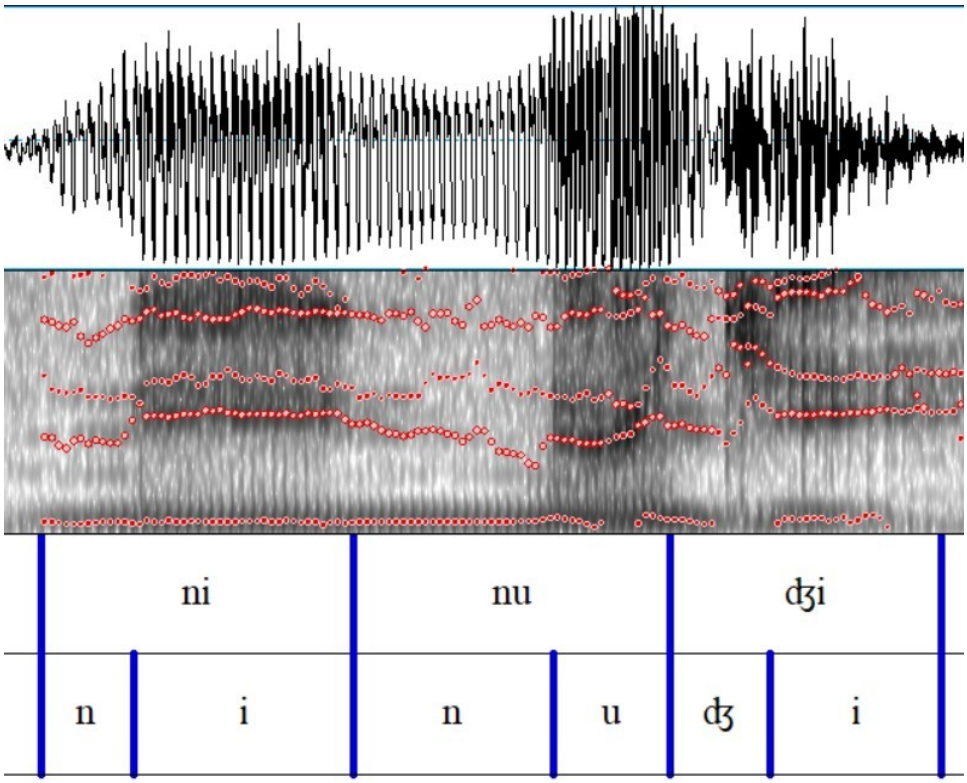

Figure 2: Pronunciation of 'my head'

(Speaker: Matthew)

The glides were immediately identifiable through spectrograms due to the way they affected the formants of the vowels that immediately followed them. The formants tended to be lower during the pronunciation of the glide and then arch upward as the sound transitioned into a vowel. The boundaries between glides and vowels was marked only after the formants of the vowel stabilized. An example of this can be seen in Figure 3 below.

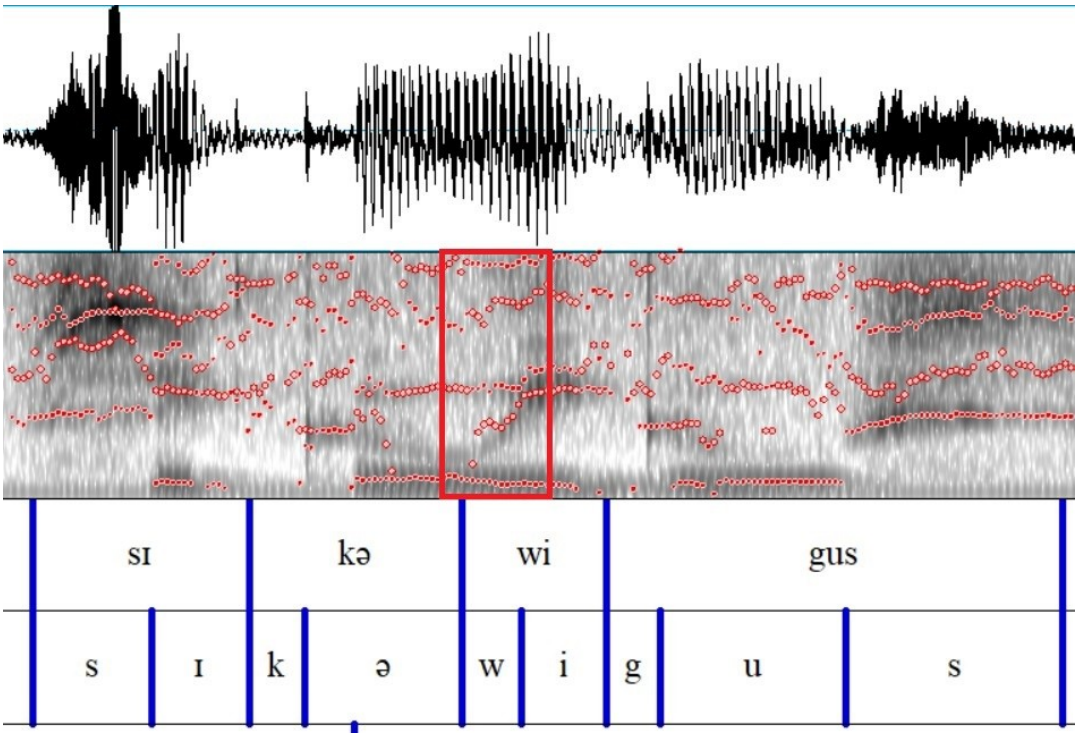

Figure 3: Pronunciation of 'Spring month'

(Speaker: Matthew)

Fricatives and affricates were identified by the irregularity of their waveforms as well as the darkness that typically gathers at the top of the spectrograms when these sounds are pronounced. Additionally, when affricates occurred in the data the sound was sometimes preceded by a release burst due to an affricate being a combination of a stop and a fricative. See Figure 4[16] for examples of fricatives [s] and [χ] and Figure 5 for an example of the affricate [dʒ].

16 One observation to note of in Figure 4 is the amplitude of the alveolar fricative [s] and the voiceless uvular fricative [χ]. I noticed that the fricatives farther back in the mouth had a tendency to create a smaller amplitude in its pronunciation than that of the alveolar fricatives. Of course this was not a guaranteed way of identifying these sounds, but it helped to narrow down sounds I should be focusing on.

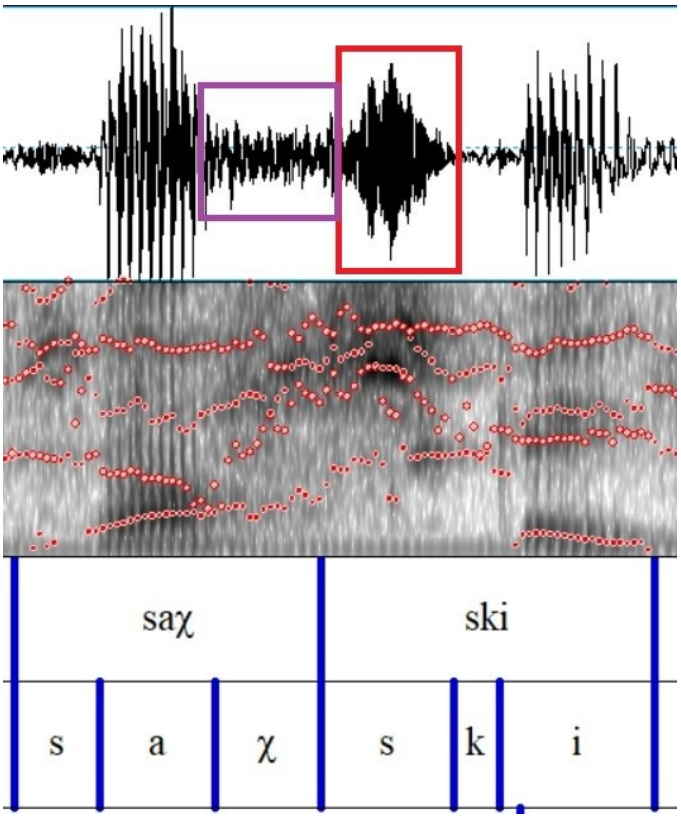

Figure 4: Pronunciation of 'board'

(Speaker: Matthew)

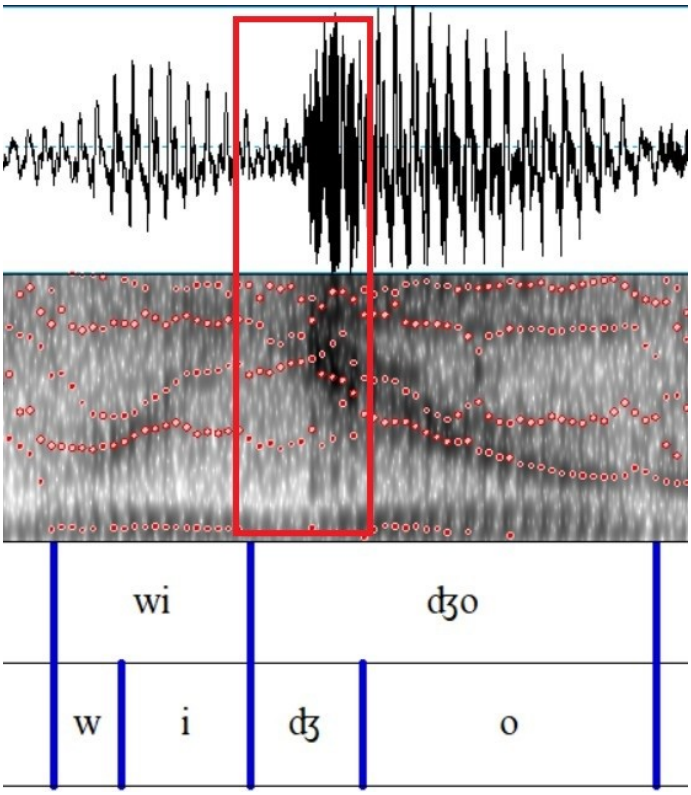

Figure 5: Pronunciation of 'blue fly'

(Speaker: Matthew)

It is important to note that while the VOT of the plosives was not officially measured throughout this analysis I was acutely aware of my biases as an L1 English speaker[17] and was, therefore, extremely meticulous and cautious in determining the voicing of each plosive. The following two figures have been included to demonstrate clear differences in the voicing of the initial plosive between two pronunciations of the word 'he has fun'. In Figure 6, there is little to no voicing occurring before the release burst, but in Figure 7 there is a clear waveform preceding the release burst, indicating voicing on the initial plosive. If the voicing of the plosive was not clear at any time for any reason, the word was excluded from the final analysis of this thesis.

17 In English, aspiration is a factor in identifying voiceless consonants (Schwartzhaupt, Kickhofel Alves & Areas da Luz Fontes 2015), but this is not always the case for other languages. Because of this inherent bias in my perception of voiced and voiceless consonants I was extremely careful in identifying voicing in this analysis.

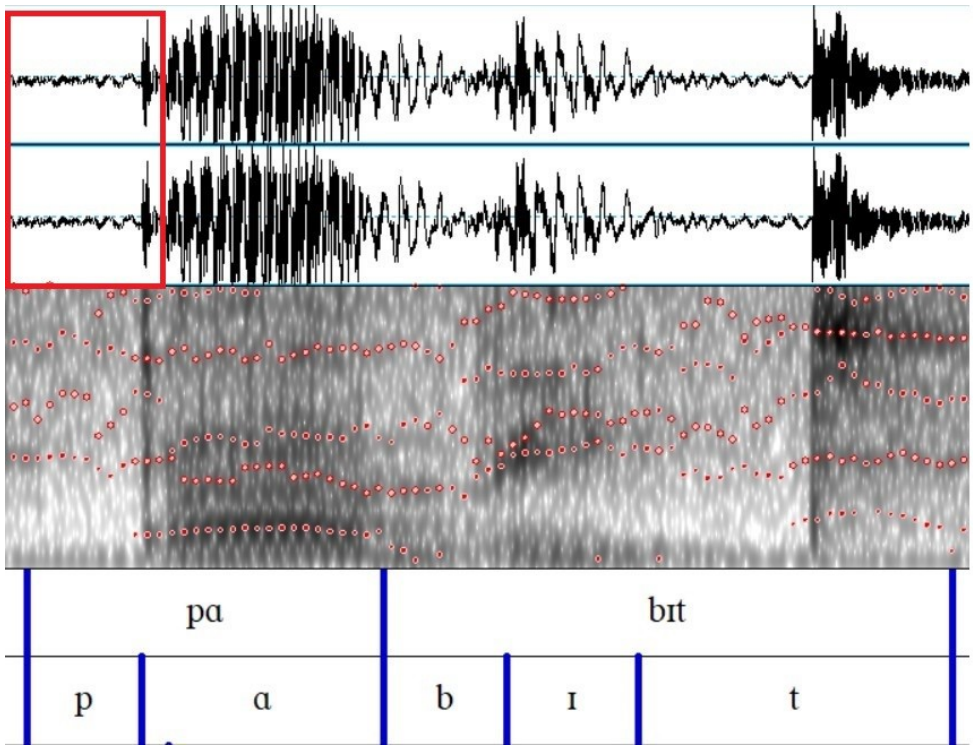

Figure 6: Example of Voiceless Plosive [p]

(Speaker: Matthew)

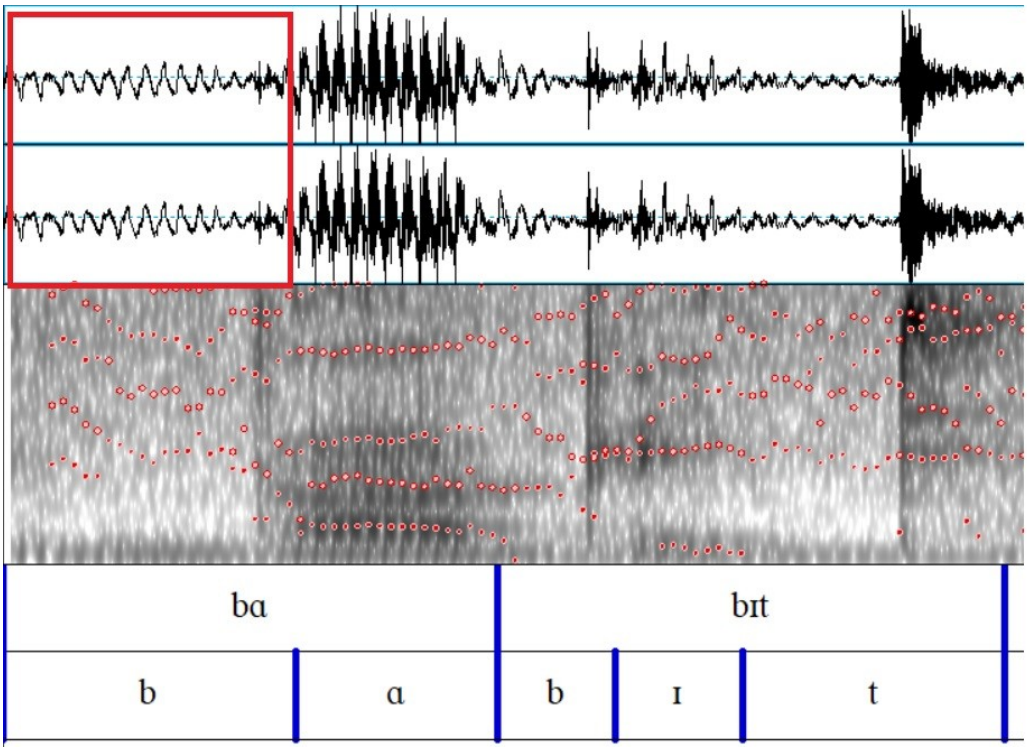

Figure 7: Example of Voiced Plosive [b]

(Speaker: Matthew)

3.1.2 Queries

Phon was also used to perform a closer examination of the consonants and vowels with its Query feature in order to create word lists of each phone. For example, a query would generate a list of all words containing a [p] then a separate query would be run for all words containing a [b] and so on. Within these lists the immediate surrounding environments for each consonant were recorded (to see a complete list of phonetic environments see Appendix B and D) and compared with other consonants in order to determine underlying phonemes and possible allophones. The same was done with the vowels although, due to time constraints, the analysis of the vowels were not as thorough.

Based on the observations made by Bragg in his original thesis additional queries were run specifically focusing on the voicing of plosives both inside and outside of intervocalic environments, the length of pronunciation of sonorant consonants, and the environments containing a glottal catch.

3.2 Consonants[18]

This section provides an updated summary of the consonant inventory of Newfoundland Mi'kmaq (3.2.1) as well as a closer examination of consonant voicing (3.2.2), the glottal catch (3.2.3), and sonorant consonant lengthening (3.2.4). To compare, Table 6 provides a summary of the underlying phonemes and their surface representations based on Bragg's original paper of Newfoundland Mi'kmaq consonants from 1976. This table also provides a brief explanation of where the surface representations would occur in the data based on Bragg's descriptions and summarizes his statements on the underlying phonemes and their surface representations.

18 It is important to keep in mind that the observations in the following sections of this paper are subjected to my personal biases as a native English speaker. Because I am not fluent in the language it is entirely possible that I may have missed a contrast or two.

Table 6: Underlying and Surface Representations of Consonants, 1976

Underlying	Surface
/p/	[p] occurs word initially, medially, and finally [b] voiced intervocalically for the most part
/t/	[t] occurs word initially, medially, and finally [d] voiced intervocalically
/k/	[k] occurs word initially, medially, and finally [g] voiced intervocalically
/q/	[q] occurs word initially, medially, and finally [ɢ] (transcribed as [Q]) occurs intervocalically, specifically when preceded by a long back vowel [h] in free variation with [q] word initially [ɣ] occurs intervocalically [χ] (transcribed as [x]) occurs in consonant clusters and word finally
/s/	[s] underlying [z] voiced intervocalically
/tʃ/ transcribed as [č]	[tʃ] underlying [dʒ] voiced intervocalically
/n/	[n] occurs word initially, medially, and finally [n̥] occurs in word initial consonant clusters [n:] occurs immediately before a plosive & causes the plosive to become voiced [nˀ] occurs immediately before a plosive or affricate [nn] geminate (based on examples provided this occurs word medially and finally)
/m/	[m] occurs word initially, medially, and finally [m̥] occurs in word initial consonant clusters [m:] occurs immediately before a plosive & causes the plosive to become voiced [mˀ] occurs immediately before a plosive or affricate
/l/	[l] occurs word initially, medially, and finally [lˀ] occurs immediately before a plosive or affricate [l:] occurs immediately before a plosive & causes the plosive to become voiced [ll] geminate (based on examples provided this occurs word medially and finally)
/w/	[w] occurs word initially, medially, and finally [wˀ] occurs in certain [wC] clusters
/j/ transcribed as [y]	[j] occurs word medially and finally

3.2.1 Consonant Inventory of Newfoundland Mi'kmaq

There are eleven underlying consonants in the Newfoundland Mi'kmaq phonological inventory: four plosives, two nasals, one fricative, one affricate, one lateral approximant, and two glides. The obstruents are underlyingly voiceless, but have voiced allophones as well as occurrences of free variation. The nasals and lateral liquid show evidence of devoicing, syllabification, and are able to trigger glottal catches in certain environments. Each consonant will be examined in closer detail in this section and in §3.2.2.3 I justify the inclusion of an additional consonant /kʷ/ that was not originally considered to be part of the inventory by Bragg. To begin, the following table shows the consonant inventory of Newfoundland Mi'kmaq based on my analysis.

Table 7: Underlying Consonant Inventory of Newfoundland Mi'kmaq

	Bilabial	Alveolar	Post. Alveolar	Velar	Uvular
Plosive	p	t		k kʷ	q
Nasal	m	n			
Fricative		s			
Affricate			tʃ		
Lateral Approx.		l			
Glide	w			j	

Due to the agglutinative nature of Mi'kmaq, it is extremely hard to come across minimal pairs in this language. In fact, out of the ten hours of audio analyzed for this thesis there was only a single minimal pair found in the data and it confirmed the long and short vowels are distinctive phonemes. Despite the lack of minimal pairs to determine whether the voiced consonants are distinct or allophones of the same phoneme, there was a lot of consonant alternations occurring across multiple

pronunciations of the same word that helped determine the voiceless consonants as underlying (consonant alternations will be discussed in further detail in §3.2.2).

3.2.1.1 Bilabial and Alveolar Plosives

The bilabial and alveolar plosives are underlyingly voiceless and occur in all environments – word initially, medially, and finally. The plosives become voiced most commonly between vowels. Both plosives can occur as the initial or final consonant in a consonant cluster. And although both plosives can occur in the middle of a consonant cluster containing three consonants, these occurrences are not common and the environments are restrictive. The bilabial only surfaces between two consonants when the preceding consonant is an [m] and the alveolar surfaces when preceded by either a nasal or the velar plosive.

Bilabial Plosive /p/ Examples:

Word Initially

(16)	[**p**ɪdʒɔʑədi]	‘buttons’	(Paul)
(17)	[**p**lamo]	‘salmon’	(Paul)
(18)	[**p**igaʔaŋ̟]	‘rib’	(Mathew)
(19)	[**p**igun]	‘feather’	(Matthew)

Word Finally

(20)	[sizɪ**p**]	‘bird’	(Matthew)
(21)	[ɑ**p**]	‘do it again’	(Matthew)
(22)	[ntə**p**]	‘my brain’	(Matthew)

Intervocalic [p]

(23) [təmanɪ**p**ɛmadu] ‘he carries it’ (Paul)

(24) [pɛzi**p**ɑzɪt] ‘it breaks’ (Matthew)

(25) [a**p**əktɪk] ‘the other one’ (Matthew)

(26) [ki**p**ɛset] ‘you smell him’ (Matthew)

Intervocalic [b]

(27) [si**b**u] ‘river’ (Matthew)

(28) [a**b**ɑ**b**i] ‘rope’ (Matthew)

(29) [tʃi**b**ak^{h}] ‘afraid’ (Paul)

First Consonant in Cluster

(30) [midʒɪ**p**tʃ] ‘animal that’s good to eat’ (Matthew)

(31) [nin a**p**kwɑdu] ‘I untie it’ (Matthew)

(32) [tə**p**si] ‘alder’ (Matthew)

Middle Consonant in Cluster

(33) [wɛdʒigɪm**p**k^{h}] ‘our brother’ (Matthew)

Last Consonant in Cluster

(34) [kɪs**p**adɪk] ‘dry’ (Paul)

(35) [m**p**ugik^{h}] ‘eye’ (Paul)

(36) [tan**p**azɪk] ‘any’ (Matthew)

Alveolar Plosive /t/ Examples:

Word Initially

(37) [**t**emadu] ‘to break’ (Paul)

(38) [**t**ɛmagito] ‘he saws it’ (Paul)

(39)	[**t**egwa]	‘short stick’	(Matthew)

Word Finally

(40)	[mˀka**t**]	‘ankle’	(Matthew)
(41)	[kobɪ**t**]	‘beaver’	(Matthew)
(42)	[nibi**t**]	‘tooth’	(Paul)
(43)	[alamu**t**]	‘he looks for him’	(Paul)

Intervocalic [t]

(44)	[ka**t**ije]	‘thigh’	(Paul)
(45)	[pɛ**t**ɛkʰ]	‘he strikes it unexpectedly’	(Paul)
(46)	[mɑ**t**edʒuwe]	‘hammer’	(Matthew)
(47)	[me**t**i]	‘my friend’	(Matthew)

Intervocalic [d]

(48)	[mɛbi**d**o]	‘cheek’	(Paul)
(49)	[mi**d**i]	‘poplar tree’	(Matthew)
(50)	[ka**d**ah]	‘eels’	(Matthew)
(51)	[pa**d**a**d**uɛ]	‘left side’	(Matthew)

First Consonant in Cluster

(52)	[kawɑ**t**kʰ]	‘spruce tree’	(Matthew)
(53)	[mə**t**həlnɪs]	‘wren’	(Matthew)
(54)	[mɑhɑ**t**pɑj]	‘I have a big head’	(Matthew)

Middle Consonant in Cluster

(55)	[nan**t**kə]	‘two fives’	(Paul)
(56)	[ə**mt**ludɛw]	‘smoke’	(Matthew)

Last Consonant in Cluster

(57)	[m**t**ən̥]	‘ten’	(Paul)
(58)	[alap**t**ık]	‘he looks for it’	(Paul)
(59)	[nes**t**ə]	‘I understand’	(Matthew)

3.2.1.2 The Velar Plosive

The velar plosive is underlyingly voiceless, occurs in all environments, and becomes voiced most commonly between vowels. This plosive can occur word initially, word finally, and at the beginning, end, or in the middle of a consonant cluster. Additionally, there is evidence to suggest that the velar plosive is in free variation with the consonant [h] and the aspirated plosive [k^h] (not to be confused with the animate plural morpheme [-k^h]).

At times when a word containing a [k] was pronounced more than once the velar plosive would be replaced by the glottal voiceless fricative [h] in some of the pronunciations. This consonant change happened often enough for it to become a noticeable pattern even though the speakers themselves did not appear to realize that they were pronouncing the words differently. Consonant alternations between [k] and [h] occurred most commonly in word initial and word final positions. The following table is a small list of [k] and [h] alternations taken from Matthew’s data[19]. It is important to note that it is very difficult to determine what the underlying consonant for [h] is when there is no consonant alternation across multiple pronunciations because the uvular plosive [q] can also surface as [h].

19 Although Paul’s data is very limited compared to Matthew’s there are still four instances of [k] alternating with [h] in his data.

Table 8: Consonant Alternates [k]/[h] (Speaker: Matthew)

Place	[k] Pronunciation	[h] Pronunciation	Definition
Word Initial	[kɑpsku]	[hɑpsk^{h}]	‘waterfall’
	[kɛginɑmɑzɪt]	[hɛginɑmɑsɪt]	‘he learns’
	[kahəmi]	[hahami]	‘to stand’
	[kil piskwa]	[hil piskwa]	‘you come in’
Word Final	[megwek]	[megweh]	‘red’
	[ɛwɪstek]	[ɛwɪsteh]	‘he smashes it up’
	[apəktɪk]	[abəktəh]	‘the other one’

The velar plosive only becomes aspirated word finally, but as with [h] there are several words in which the final [k] can be aspirated or unaspirated word finally across multiple pronunciations of the same word. Table 9 contains a small list words in which the aspirated and unaspirated velar plosive alternates.

Table 9: Aspiration Alternation [k]/[k^{h}]

[k] Pronunciation	[k^{h}] Pronunciation	Definition	Speaker
[wɑsohək]	[wɑzɔʔek^{h}]	‘you see a light’	Matthew
[tɛmtɛsk]	[tɛmtɛsk^{h}]	‘I break it (by dropping it)’	Mathew
[kɛkunʔk]	[kɛkunk^{h}]	‘he’s got it’	Matthew
[tʃĩbak]	[tʃĩbak^{h}]	‘afraid’	Paul
[winɪmɛk]	[winemɛk^{h}]	‘he curses at it’	Paul
[alaptɪk]	[alap͡tək^{h}]	‘he looks for it’	Paul
[kohwɑlək]	[kohwɑluk^{h}]	‘I grab it’	Matthew

In addition to word final velar plosives becoming aspirated, there is a morpheme containing the same consonant [-k^{h}] that attaches to the end of animate nouns to indicate plurality. Table 10 contains a list comparing singular and plural nouns that are pronounced with the animate plural morpheme suffix

by Matthew and Paul. The animacy of each noun was gathered from the Mi'kmaq Online Dictionary[20] (Haberlin, Williams & Ziegler 1997), which lists the animacy of the word in their definitions. While the majority of the words that were classified as animate in the online dictionary received the animate plural morpheme when pronounced by Matthew and Paul, there were a few instances where nouns listed as inanimate were being pronounced with the animate plural morpheme[21]. This raises the question whether or not these words are classified as animate in Newfoundland Mi'kmaq.

Table 10: [-kʰ] Animate Plural Morpheme

Definition	**Singular**	**Plural**	**Animacy (from Mi'kmaq Online Dictionary)**	**Speaker**
'animal'	[wojzɪs]	[wojzɪskʰ]	Animate	Matthew/Paul
'arctic hare'	[wɑbus]	[wɑbuskʰ]	Animate	Matthew
'gull'	[klɔʔənditʃ]	[klɔʔɔndɪtʃkʰ]	Animate	Matthew
'Indigenous person'	[ələnu]	[ələnukʰ]	Animate	Matthew
'mountain'	[pəmdɪn]	[pəmdənkʰ]	Animate	Matthew
'pipe'	[tɛmɑqɑn]	[tɛmɑʔɑnʔkʰ]	Animate	Matthew
'pot'	[wɔ]	[wɔkʰ]	Animate	Matthew
'little river'	[tʃibudʒitʃ]	[tʃibudʒitʃkʰ]	Inanimate	Matthew
'shoe'	[wɪndʒusnəm̥]	[wɪndʒuksnankʰ]	Animate	Paul
'fingernail'	[m̥qozi]	[mqozɪk]	Animate	Paul
'rope'	[abɑbi]	[abɑbikʰ]	Animate	Matthew
'skin'	[məgegəm̥]	[məgegənʔkʰ]	Inanimate	Matthew
'swallow (n.)'	[kugwɑles]	[kugwɑleskʰ]	Animate	Matthew

Velar Plosive /k/ Examples:

20 The Mi'kmaq Online Dictionary is a project created by the Listuguj Mi'kmaq community of Quebec and therefore could possibly differ in the pronunciation of words as well as animacy assignment.

21 The animacy of the nouns should not be considered definitive. It is possible for the animacy of one noun to differ across different dialects of the same language (for examples see: Kharlamenko 2018; Joseph & Tserdanelis 2008). What may be considered inanimate in Listuguj Mi'kmaq may be considered animate in Newfoundland Mi'kmaq.

Word Initial

(60)	[**k**igligwɪtʃ]	‘hen’	(Paul)
(61)	[**k**wɛlut]	‘he hunts for him’	(Paul)
(62)	[**k**amlami]	‘I breathe’	(Matthew)
(63)	[**k**edʒik]	‘I know’	(Matthew)

Word Final

(64)	[awɔwɪdʒɪdʒɪ**k**]	‘spiders’	(Matthew)
(65)	[kɛsadɪ**k**]	‘bright day’	(Matthew)
(66)	[kɛzustuwɪ**k**]	‘the fire is hot’	(Matthew)

Intervocalic [k]

(67)	[ə**k**idʒuwo]	‘mother’	(Matthew)
(68)	[plɛ**k**o]	‘nail’	(Paul)
(69)	[kɛ**k**unəmən]	‘you got it’	(Matthew)
(70)	[sɪ**k**əwigus]	‘spring month’	(Matthew)

Intervocalic [g]

(71)	[tɛma**g**itu]	‘he saws it’	(Paul)
(72)	[abɑhtu**g**owe]	‘seabird’	(Matthew)
(73)	[na**g**uzɪt]	‘sun’	(Matthew)
(74)	[e**g**ɪn]	‘sometimes’	(Matthew)

First Consonant in Cluster

(75)	[ni**k**tʃitʃ]	‘my little house’	(Matthew)
(76)	[abu**k**sigən]	‘lynx’	(Matthew)
(77)	[**k**lɔgwɪtʃ]	‘star’	(Matthew)

Middle Consonant in Cluster

(78)	[m**k**ludɛw]	‘smoke rising’	(Matthew)
(79)	[n**k**wɪs]	‘my son’	(Matthew)
(80)	[ə**p****k**wiman]	‘blueberry’	(Matthew)

Last Consonant in Cluster

(81)	[an**k**otk^{h}]	‘he looks after it’	(Paul)
(82)	[m**k**adʒigən]	‘leg’	(Paul)
(83)	[m**k**umi]	‘ice’	(Matthew)
(84)	[wap**k**ɛ]	‘daylight’	(Matthew)

3.2.1.3 The Uvular Plosive

The uvular plosive /q/ is the most allophonically complex of all the plosives in Mi’kmaq. In Bragg’s original paper the underlying voiceless plosive could surface as five separate allophones: the voiced uvular plosive [ɢ] (transcribed by Bragg as [Q]) surfaced in intervocalic positions when preceded by a long back vowel (this occurrence is considered occasional by Bragg), the voiceless glottal fricative [h] – which is in free variation with the voiceless uvular plosive [q] – surfaced in word initial positions, the voiced velar fricative [ɣ] surfaced in intervocalic positions, and the voiceless uvular fricative [χ] (transcribed by Bragg as [x]) surfaced in consonant clusters and word finally. Following the re-examination of the data all of the allophones listed in Bragg’s paper do surface in Matthew’s data, although when they surface is not as clear cut as originally described. It should be noted that this wide array of allophones did not occur in Paul’s data with the exception of the glottal fricative [h] being in free variation with the voiceless uvular plosive in word initial position and only a couple instances of the voiced velar fricative surfacing intervocalically, otherwise Paul used the voiceless uvular plosive.

The [h] would also surface word medially and word finally throughout Paul's data rather than the allophones [χ] or [ɢ] as seen with Matthew.

In Matthew's data the uvular plosive does not surface often but when it does it appears word initially, intervocalically, and as the first or last consonant in a consonant cluster. Both the voiceless glottal fricative [h] and the voiceless uvular fricative [χ] surface word initially, medially, and finally. These consonants can also appear within consonant clusters. In the following figure the word 'blue' was pronounced and contained a glottal fricative (red box) and a uvular fricative (purple box). The main way to differentiate between these sounds is by analyzing the audio, in which there is a distinctive sound in uvular frication and the glottal fricative experiences far less turbulence in its pronunciation compared to other fricatives. This is reflective in the subtle differences in the spectrograms and waveforms of the two sounds. In the uvular fricative's waveform there is a minimal amount of amplitude, but it is slightly higher than the glottal fricative's and has more aperiodic shifts. When looking at the spectrograms there is slightly more turbulence in the spectrogram of the uvular fricative versus that of the glottal fricative.

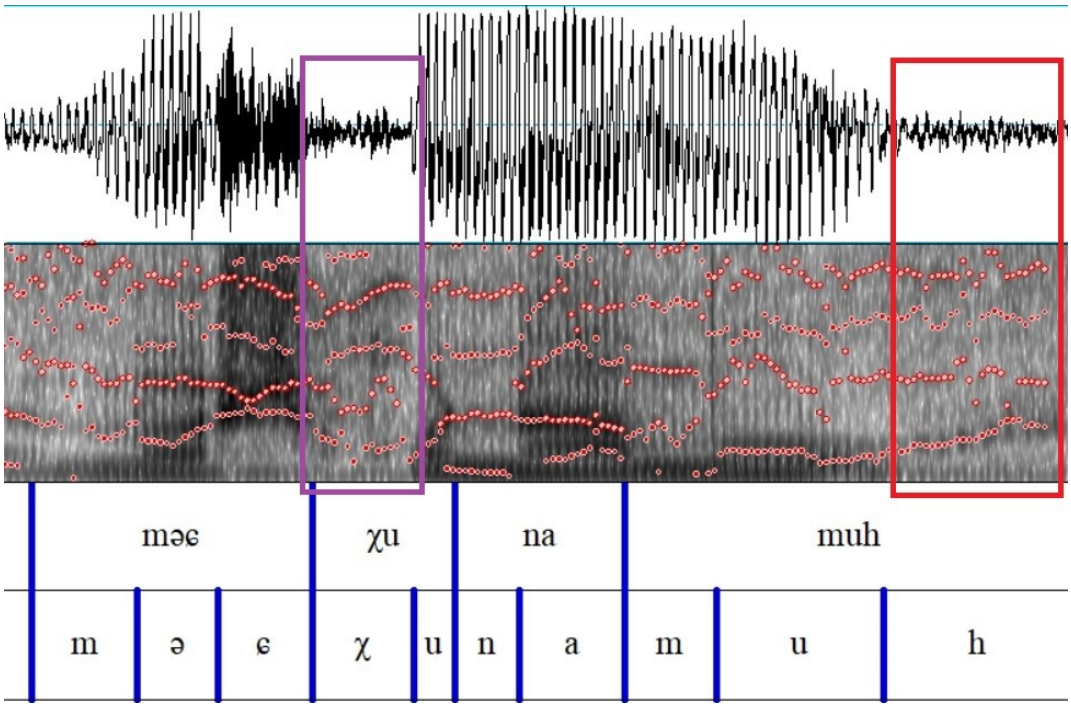

Figure 8: Pronunciation of 'blue'

(Speaker: Matthew)

Due to the diversity of the environments the glottal fricative [h] occurs in it is hard to determine for certain whether or not it is in free variation with [q], but there were instances of these two consonant alternating across multiple pronunciations of the same word – see Table 11 for examples. The voiced velar fricative [ɣ] surfaces exclusively in intervocalic positions, just as Bragg originally described. The voiced uvular plosive [ɢ] also surfaces in intervocalic positions but this plosive only occurs Matthew's data a total of four times – three of these times this consonant alternates across multiple pronunciations with the voiced velar fricative [ɣ]. The rarity of the voiced uvular plosive [ɢ] in combination with the consonant alternations leads me to question whether or not this sound can be classified as an allophone. This phone occurs rarely in Matthew's speech, not at all in Paul's, and does not seem to be predictable. Whether or not this phone is phonologically significant would require a

more detailed study with more data, but at the moment it seems unlikely. It was noted by Bragg that the amount of times this allophone surfaced in the data was "occasional", but is four times in ten hours of speech enough for it to officially be considered an allophone?

Table 11: Consonant Alternations [q]/[h]

1st Pronunciation	**2nd Pronunciation**	**Definition**	**Speaker**
[**q**alibu]	[**h**alibu]	'deer'[22]	Paul
[**q**amekʰ]	[**h**ameɪkʰ]	'on the other side of the lake'	Paul
[mɑɬ**q**ətkʰ]	[mɑɬ**h**ətkʰ]	'he softens it up'	Matthew
[**q**ɑzɛwɔχ]	[**h**ɑzɛwo]	'iron'	Matthew
[**q**alibudi]	[**h**alibudi]	'shovel'	Paul
[tɑ**q**təm]	[tɑ**h**təm]	'I strike it'	Matthew
[o**q**wɑt]	[o**h**wɑt]	'north'	Matthew

In addition to the lack of voiced uvular plosives in Matthew's data, there was another sound that caught my attention. There were times when the vowels would sound like they were abruptly cut off before another vowel was pronounced – see Figure 8 for an example. This led me to believe that there was an additional allophone that wasn't originally noticed by Bragg, a glottal plosive [ʔ]. The glottal plosive occurred in Matthew's data nearly 100 separate times and it surfaced most commonly in intervocalic positions, but could also surface in V_C environments, specifically when the following consonant was /m/, /p/, /t/, or /w/. Because of the limited places this consonant surfaces during word pronunciations, I do not consider it to be an underlying phoneme but rather an allophone of the voiceless uvular plosive.

22 The word Paul pronounces when asked for the word 'deer' is actually the word for 'caribou'

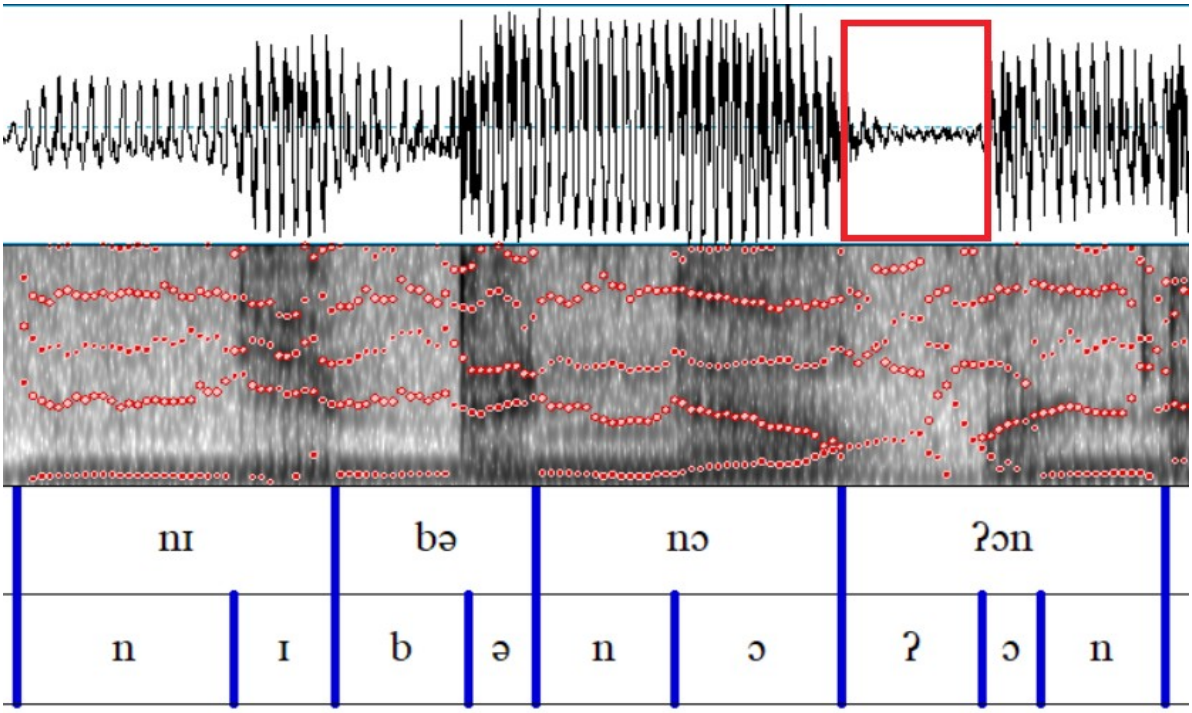

Figure 9: Pronunciation of 'hardwood'

(Speaker: Matthew)

Due to the wide array of allophones, it is not surprising that there was a large amount of consonant alternations occurring across multiple pronunciations of the same word. Table 12 lists some of the alternations seen throughout Matthew's data.

Table 12: Consonant Alternations: Allophones of [q] (Speaker: Matthew)

Alternation	1st Pronunciation	2nd Pronunciation	Definition
q ~ ʔ	[pɑ**q**ɑdɔ]	[pɑ**ʔ**ɑdɔ]	'I bite it'
	[wena**q**ajet]	[wena**ʔ**ajɪt]	'jump'
q ~ χ	[o**q**wɑt]	[o**χ**wɑt]	'north'
	[ə**q**ʊ]	[ə**χ**uχ]	'leech'
q ~ ɣ	[a**q**ɔwɑdʒijah]	[a**ɣ**ɔwɑdʒija]	'alright'
ɢ ~ ɣ	[mɑ**ɢ**ɑtpɑj]	[mɑ**ɣ**ɑtpaj]	'I have a big head'
	[ta**ɢ**əmɑdʒɪl̥]	[ta**ɣ**əmɑdʒɪl̥]	'he strikes him unexpectedly'
h ~ χ	[mə**ɕ**hunamu**h**]	[mu**ɕ**hunamu**χ**]	'blue'
	[po**h**tabaj]	[po**χ**tabaj]	'I start to float'
h ~ ʔ	[tʃɔ**h**ołsi]	[tʃə**ʔ**ołsi]	'kelp'
	[inɑ**h**ɑn̥]	[inɑ**ʔ**ɑn]	'right (direction)'
h ~ ɣ	[klɔ**h**ɔndɪtʃ]	[klo**ɣ**onditʃ]	'gull'
	[udəmɑ**h**ɑn]	[udəmɑ**ɣ**ɑn]	'his pipe'
χ ~ ɣ	[pɑ**χ**əm]	[pɑ**ɣ**əm]	'back/spine'
	[tabɑ**χ**ən̥]	[təbɑ**ɣ**ən̥]	'slide'
ʔ ~ ɣ	[sa**ʔ**ɛwe]	[sa**ɣ**ɑwe]	'stale bread'
	[na**ʔ**anigɪt]	[na**ɣ**anigɪtʰ]	'he scoops'

For clarity purposes the lists of examples for the underlying phoneme and its allophones have been divided into five separate sections.

Uvular Plosive /q/ Examples:

Word Initial

(85) [**q**ɔdɑps] 'still water' (Matthew)

(86) [**q**amɪkʰ] 'on the other side of the river/lake' (Paul)

(87) [**q**ɑlibu] ‘deer’ (Paul)

(88) [**q**ɔn] ‘heel’ (Matthew)

Intervocalic

(89) [wɑ**q**ɑn] ‘knife’ (Matthew)

(90) [pɑ**q**ɑdu] ‘bite anything’ (Matthew)

(91) [to**q**awegus] ‘the fall’ (Matthew)

First Consonant in Cluster

(92) [o**q**wɑn] ‘northern’ (Matthew)

(93) [nutɔ**q**tes] ‘servant girl’ (Matthew)

(94) [wɑ**q**mek] ‘clean’ (Matthew)

Last Consonant in Cluster

(95) [m**q**ozi] ‘fingernail’ (Paul)

(96) [sɪs**q**un] ‘noses’ (Matthew)

(97) [ənˀ**q**unkʰ] ‘my heel’ (Matthew)

(98) [nidʒɪp**q**adegɪt] ‘sparrow’ (Matthew)

Glottal Fricative [h] Allophone Examples:

Word Initial

(99) [**h**ɛnto] ‘he loses it’ (Paul)

(100) [**h**ɑpskuḷ] ‘rapids’ (Matthew)

(101) [**h**ɛptɛ] ‘hut’ (Matthew)

Word Final

(102) [pɛgizidɔ**h**] ‘he brings it’ (Paul)

(103) [wɑbizigwɑ**h**] ‘Atlantic common murre’ (Matthew)

(104) [pida**h**] ‘long’ (Paul)

(105) [pezugwɑda**h**] ‘I’m chasing him’ (Matthew)

Intervocalic

(106) [wɑ**h**andejo] ‘bone’ (Paul)

(107) [ka**h**a**h**ɔtʃ] ‘crow’ (Matthew)

(108) [ta**h**ən] ‘oars’ (Matthew)

(109) [ka**h**əmit] ‘to stand’ (Matthew)

First Consonant in Cluster

(110) [wɪɛkɛwɛju**h**tuwɪt] ‘he laughs at it’ (Paul)

(111) [abɑ**h**tugowe] ‘seabird’ (Matthew)

(112) [ko**h**wɑlək] ‘I grab it’ (Matthew)

Middle Consonant in Cluster

(113) [nəw**h**tagɪk^{h}] ‘one dollar’ (Matthew)

(114) [əp**h**wɑw] ‘tree bark’ (Matthew)

Last Consonant in Cluster

(115) [mət**h**əlnɪs] ‘wren’ (Matthew)

(116) [mɪs**h**unɑdɑdʒɪl̥] ‘he knocks him down’ (Matthew)

(117) [ən**h**unebisəŋ̊] ‘string’ (Matthew)

(118) [məɛ**h**unamu] ‘blue sky’ (Matthew)

Uvular Fricative [χ] Allophone Examples:

Word Initial

(119)	[χsine]	‘white owl’	(Matthew)
(120)	[χtəlnɑɣaŋ̥]	‘your shoulders’	(Matthew)
(121)	[χkluzu]	‘your sons-in-law’	(Matthew)

Word Final

(122)	[nenχadɔχ]	‘he stops it’	(Matthew)
(123)	[kadaχ]	‘eels’	(Matthew)
(124)	[kɛwnigaχ]	‘otters’	(Matthew)
(125)	[alugwijaχ]	‘it is cloudy’	(Matthew)

Intervocalic

(126)	[tabɑχəŋ̥]	‘slide’	(Matthew)
(127)	[aχɑlɑ nɛgəm owe]	‘one and the other’	(Matthew)
(128)	[adugwɑχɑŋ̥]	‘a story’	(Matthew)

First Consonant in Cluster

(129)	[tɛgwɑχt̥ʃit̥ʃkəl̥]	‘short sticks’	(Matthew)
(130)	[saχski]	‘board’	(Matthew)
(131)	[kəmɑχtɑm]	‘your brother-in-law’	(Matthew)
(132)	[maχtɛwɛ sɪzɪp]	‘black bird’	(Matthew)

Middle Consonant in Cluster

(133)	[lisχqɔŋ̥]	‘to sew it up’	(Matthew)
(134)	[əpχwɑw]	‘tree bark’	(Matthew)

Last Consonant in Cluster

(135)	[matχigən]	‘scissors (sg)’	(Matthew)
(136)	[apusχɑen]	‘you lock it’	(Matthew)

(137) [ənχɔzil] ‘my fingernails’ (Matthew)

(138) [wisχəkʰ] ‘bitter’ (Matthew)

Velar Fricative [ɣ] Allophone Examples:

Intervocalic

(139) [wəntɑɣɑjɪk] ‘he’s quieting down’ (Matthew)

(140) [pɪskadaɣɑn] ‘chain’ (Matthew)

(141) [saɣəwe] ‘old’ (Matthew)

(142) [nadɔɣɔwej] ‘anything’ (Matthew)

Glottal Plosive [ʔ] Allophone Examples:

Intervocalic

(143) [sismɔʔɔn̥] ‘sugar/sweet’ (Matthew)

(144) [kidaʔan̥] ‘sharpening stone’ (Matthew)

(145) [kənɑʔɑbɛm̥] ‘your workers (servants)’ (Matthew)

(146) [wəntaʔe] ‘it gets quiet’ (Matthew)

First Consonant in Cluster

(147) [madʒɔʔtuwigus] ‘September’ (Matthew)

(148) [ebidʒɔʔwɑdʒɪl̥] ‘he plugs him up’ (Matthew)

(149) [pɔʔtaba] ‘tide rising’ (Matthew)

(150) [ɔʔtegən̥] ‘trap’ (Matthew)

3.2.1.4 The Alveolar Fricative

The alveolar fricative in Mi'kmaq is underlyingly voiceless and becomes voiced most frequently in intervocalic positions (this is not always the case, see §3.2.2 for a detailed examination of voicing). This fricative can occur in all environments – word initially, medially, and finally – as well as at the beginning, middle, or end of a consonant cluster. In addition to becoming voiced intervocalically, [s] appears to be in free variation with the voiceless alveolo-palatal fricative [ɕ] and its voiced counterpart [ʑ]. This free variation does not occur often in Matthew's data – 43 times total – but is quite common in Paul's. In fact, the voiceless alveolo-palatal fricative [ɕ] surfaces twice as often in Paul's data than the alveolar fricative [s] does. This difference is an interesting example of interspeaker variation. Paul has a much higher tendency to use [ɕ] instead of [s] whereas Matthew barely uses [ɕ] in his speech. The following table shows examples of words in which [s] or [z] was replaced with [ɕ] or [ʑ] across multiple pronunciations of the same word. The speakers did not give any indication that they realized this change in their speech had occurred.

Table 13: Consonant Alternations [s]/[ɕ] [z]/[ʑ]

Alternation	**1st Pronunciation**	**2nd Pronunciation**	**Definition**	**Speaker**
[s]/[ɕ]	[kɛskuh]	[keɕku]	'to wait'	Paul
	[somwɑn̥]	[ɕomwɑn̥]	'water'	Matthew
	[nusabun]	[nuɕabun̥]	'my hair (sg.)'	Mathew
	[wɪndʒuksnən̥]	[windʒukɛnən̥]	'shoe'	Paul
	[tɛpkənusɪt]	[tɛpkənəɛɪt]	'moon'	Paul
[z]/[ʑ]	[tʃɔtʃɪməzi]	[totʃɛməʑi]	'cherry tree'	Matthew
	[kazigozi]	[kaʑigoʑi]	'you're crying'	Paul
	[adawɑzu]	[nadawɑʑu]	'trout'	Paul
	[pɑzalutʰ]	[pɑʑalut]	'he throws him over'	Paul
	[nemdʒazi]	[nɛmdʒaʑɪt]	'he raises him up'	Paul

Alveolar Fricative /s/ Examples:[23]

Word Initial

(151)	[**s**igogus]	‘April’	(Matthew)
(152)	[**s**un]	‘cranberry’	(Matthew)
(153)	[**s**enəmk^{h}]	‘Eastern Canada goose (brant)’	(Matthew)
(154)	[**s**ibɪt]	‘he stops it’	(Matthew)

Word Final

(155)	[wabu**s**]	‘arctic hare’	(Matthew)
(156)	[kəme**s**]	‘fish maggots’	(Matthew)
(157)	[punamwegu**s**]	‘January’	(Matthew)
(158)	[nɛləmu**s**]	‘my brother-in-law’	(Matthew)

Intervocalic [s]

(159)	[ləmiga**s**i]	‘a room’	(Matthew)
(160)	[megwe**s**a]	‘red ochre’	(Paul)
(161)	[wɑbi**s**igwɑh]	‘Atlantic common murre’	(Matthew)
(162)	[kɛ**s**adık]	‘bright day’	(Matthew)

Intervocalic [z]

(163)	[sı**z**ıp]	‘bird’	(Matthew)

23 Although the plural morpheme in Mi’kmaq is not an [-s] as it is in English, there were a couple instances in which both Matthew and Paul used [-s] as the plural morpheme consistently across multiple pronunciations of the same word. For example, when Paul was asked for the word ‘legs’ he took the singular form [mkadʒigən] and added an [s] to the end [mkadʒigəns]. He pronounced this word five times and each time the plural morpheme was an [s] (there was one pronunciation where it was a [z] and one where it was an [ɛ]). Matthew did the same with the word for ‘boys’. He pronounced the singular form as [əlbadu] and consistently pronounced the plural form with [s] at the end [əlbadus] three separate times. Based on the rarity of this occurrence in the data I hypothesize that these were moments of language mixing in which the Mi’kmaq plural morpheme was replaced with the English plural morpheme [-s].

(164)	[mqo**z**ik]	‘fingernails’	(Paul)
(165)	[pɛgɪ**z**idɔ]	‘he brought it’	(Matthew)

First Consonant in Cluster

(166)	[pu**s**kən]	‘chest’	(Matthew)
(167)	[sɪ**s**panigɪnəmə̥l̥]	‘his soap’	(Matthew)
(168)	[wi**s**hək^{h}]	‘bitter’	(Matthew)
(169)	[i**s**tugwɑn]	‘half an animal’	(Matthew)

Middle Consonant in Cluster

(170)	[saχ**s**ki]	‘board’	(Matthew)
(171)	[am**s**kwɪs]	‘begin’	(Matthew)
(172)	[ni nəmuk**s**n̥ʔk^{h}]	‘my shoes’	(Matthew)

Last Consonant in Cluster

(173)	[mudʒidʒmɪnaχ**s**i]	‘ash tree’	(Matthew)
(174)	[puktew**s**ɪt]	‘North American redstart’	(Matthew)
(175)	[alazədmɛl**s**ɛw]	‘he prays for it’	(Matthew)

3.2.1.5 The Affricate

The affricate [tʃ] occurs in all environments at least once. It surfaces word initially, medially, and finally, but is not common in the middle of consonant clusters. This consonant becomes voiced most often in intervocalic environments. Throughout the data there are moments when the affricate alternates with other consonants during multiple pronunciations of the same word, but these occurrences did not happen often enough to consider the affricate to be in free variation with these other consonants. The

following table shows some examples of consonants alternating with the affricate, both voiceless and voiced.

Table 14: Consonant Alternations with the Affricate [tʃ]/[dʒ]

Alternation	**1st Pronunciation**	**2nd Pronunciation**	**Definition**	**Speaker**
[tʃ] ~ [t]	[puwɑdʒidɛtʃkʰ]	[puwɑdʒidɛtkʰ]	‘he hates it’	Paul
[tʃ] ~ [ɛ]	[aptʃitʃmutʃ]	[əptʃitʃkəmuɛ]	‘duck’	Matthew
[tʃ] ~ [s]	[tʃibu]	[sibu]	‘river’	Matthew
[dʒ] ~ [j]	[abugonadʒɪt]	[abugonajɪt]	‘February’	Matthew
[dʒ] ~ [ʑ]	[wɪdʒɪgɪmpkʰ]	[wiʑigɪmpkʰ]	‘our brother’	Matthew
[dʒ] ~ [ʑ]	[mɪdʒigalət]	[mɛʑigabut]	‘he smears him up’	Paul
[dʒ] ~ [z]	[ɛdʒigawɛn]	[kɛzigawɛn̥]	‘you make a lot of noise’	Matthew
[dʒ] ~ [d]	[nadʒibuktanɪtʃ]	[nadibuktanɪtʃ]	‘bat (the animal)’	Matthew

Palato-Alveolar Affricate [tʃ] Examples:

Word Initial

(176) [**tʃ**ikwɑl̥] ‘you bring him’ (Matthew)

(177) [**tʃ**ibɨskʰ] ‘root’ (Matthew)

(178) [**tʃ**idun] ‘hold him up (so he won’t fall)’ (Matthew)

(179) [**tʃ**ajudi tʃajwɑli] ‘chewing tobacco’ (Matthew)

Word Final

(180) [kil əki**tʃ**] ‘your mother’ (Matthew)

(181) [mwinɪ**tʃ**] ‘young bear’ (Matthew)

(182) [mɛnadʒɪ**tʃ**] ‘thin ice’ (Matthew)

(183) [klogwɪ**tʃ**] ‘star’ (Matthew)

Intervocalic [tʃ]

(184) [widʒɔ**tʃ**ɛməzi] ‘cherry tree’ (Matthew)

(185) [ma**tʃ**ɔχtılıgın̥] ‘arrows’ (Matthew)

Intervocalic [dʒ]

(186) [pi**dʒ**ozədi] ‘button’ (Paul)

(187) [kləmwɛ**dʒ**uwɑsk^{h}] ‘coal’ (Paul)

(188) [kil wı**dʒ**ijo] ‘you go with him’ (Matthew)

(189) [abowɑ**dʒ**ıt] ‘woodpecker’ (Matthew)

First Consonant in Cluster

(190) [kı**tʃ**ka] ‘talk a little bit’ (Matthew)

(191) [tʃĩbudʒi**tʃ**k^{h}] ‘little rivers’ (Matthew)

(192) [məni**tʃ**kəl̥] ‘berries’ (Matthew)

Middle Consonant in Cluster

(193) [m**tʃ**kɛktʃəlˀkoj][24] ‘under your arms’ (Matthew)

Last Consonant in Cluster

(194) [ılık**tʃ**uwɑh] ‘a shortcut through the woods’ (Matthew)

(195) [nɛm**tʃ**azi] ‘he raises himself up’ (Paul)

(196) [əmˀkwɑn**tʃ**itʃ] ‘spoon’ (Matthew)

(197) [tʃĩp**tʃ**awetʃ] ‘robin’ (Matthew)

3.2.1.6 The Nasals

The nasals [n] and [m] and lateral alveolar approximant [l] in Newfoundland Mi’kmaq behave in a similar way. They occur in all environments – word initially, medially, and finally – and can surface in

24 This is the only occurrence of the affricate occurring in a C_C environment. This is also the only time the word for ‘under your arms’ is pronounced in the data. Due to the limits of the data it’s impossible to know if this C_C environment can occur more often or if this one pronunciation is not complete or ‘correct’

any position in a consonant cluster, although it should be noted that they rarely occur in C_C environments in Matthew's data and not at all in Paul's. These consonants have a tendency to become devoiced in word final positions as well as some word initial consonant clusters (to be discussed further in §3.2.2). They sometimes become syllabic due to syllable weight constraints[25], specifically when the preceding syllable is closed and there is no following vowel to take on the remaining consonants in the word. Additionally, when sonorant consonants occur word medially and are immediately followed by a plosive, this environment commonly triggers a glottal catch between the two consonants – written as [ˀ] (this is discussed in further detail in §3.2.3).

Alveolar Nasal [n] Examples:

Word Initial

(198)	[**n**ɪtʃku]	'eyebrow'	(Paul)
(199)	[**n**aʑado]	'he puts him/it on'	(Paul)
(200)	[**n**ɪbənɔʔən]	'hardwood'	(Matthew)
(201)	[**n**utkʰ]	'he hears it'	(Matthew)

Word Final

(202)	[mkadʒigə**n**]	'leg'	(Paul)
(203)	[wɪɕkɪma**n**]	'partridge berry'	(Paul)
(204)	[məlgɪ**n**]	'he holds onto him'	(Matthew)

Intervocalic

(205)	[u**n**udʒi]	'hand'	(Matthew)
(206)	[kɛgi**n**ɑmɑsɪt]	'he learns'	(Matthew)

25 According to Hewson (1986) the maximum weight of a syllable can be CVCC (or CVVC when the vowel is long). Therefore, if the preceding syllable already has its two coda consonants and there are no remaining vowels in the word, the nasals or lateral liquid will become syllabic in order to prevent extra heavy syllables from forming.

(207) [nu**n**ɪt] ‘he suckles’ (Matthew)

(208) [igɑ**n**ɑzɪt] ‘he’s going ahead’ (Matthew)

First Consonant in Cluster

(209) [mo**n**də] ‘bag’ (Paul)

(210) [mɪ**n**tʃazɪt] ‘he gets up’ (Matthew)

(211) [wi**n**pɔkʰ] ‘liquid’ (Paul)

(212) [pɛgisɪ**n**ʔkʰ] ‘he arrives’ (Matthew)

Middle Consonant in Cluster

(213) [udamɔs**n**kʰ] ‘let across (a lot of people)’ (Matthew)

(214) [newtedʒɪt **n**kwɪs][26] ‘one son’ (Matthew)

Last Consonant in Cluster

(215) [əl**n**u] ‘Mi’kmaq’ (Paul)

(216) [wɪndʒuks**n**ən̥] ‘shoe’ (Paul)

(217) [mugezigik**n**u] ‘not sharp’ (Matthew)

(218) [oqwɑt**n**] ‘northern’ (Matthew)

Syllabic

(219) [pid**n̩**] ‘hand’ (Matthew)

(220) [kilʔ kəmuks**n̩**ʔkʰ] ‘your shoes’ (Matthew)

(221) [kwid**n̩**] ‘canoe’ (Matthew)

Bilabial Nasal [m] Examples:

Word Initial

(222) [**m**ɪbido] ‘cheek’ (Paul)

26 This does create the C_C environment, but it’s across a word boundary.

(223)	[**m**ɛmɛlɛ]	‘kind of hungry’	(Matthew)
(224)	[**m**ɑtedʒuwe]	‘hammer’	(Paul)
(225)	[**m**ugɪdʒɪdu]	‘I don’t know’	(Matthew)
Word Final			
(226)	[wigwa**m**]	‘house’	(Matthew)
(227)	[nin pulodu**m**]	‘I ask for it’	(Matthew)
(228)	[nəmɑχtɑ**m**]	‘my brother-in-law’	(Matthew)
Intervocalic			
(229)	[wine**m**adʒə]	‘he curses at it’	(Paul)
(230)	[ala**m**ut]	‘he looks after it’	(Paul)
(231)	[a**m**udlɛwe]	‘watch’	(Paul)
(232)	[tɛ**m**agito]	‘he saws it’	(Paul)
First Consonant in Cluster			
(233)	[ɛgɪna**m**we]	‘he asks for it’	(Paul)
(234)	[mɪ**m**gwɑlɑdʒi]	‘he hides them’	(Matthew)
(235)	[ukɑ**m**lɑməm̥]	‘his heart’	(Matthew)
Last Consonant in Cluster			
(236)	[wɪg**m**ɑdʒɪl̥]	‘her husband’	(Matthew)
(237)	[wɛgud**m**aj]	‘I ask for it’	(Matthew)
(238)	[əlis**m**azi]	‘I lie down’	(Matthew)
Syllabic			
(239)	[aq**m̩**k^{h}]	‘snowshoes’	(Matthew)
(240)	[**m̩**shənamu]	‘blue sky’	(Matthew)

(241) [lm̥dʒazɪn][27] ‘if you get up’ (Matthew)

3.2.1.7 The Lateral Approximant

The lateral approximant behaves almost identically to the nasals with the exception that there are times when the lateral approximant becomes devoiced and fricativized [ɬ] (this voicing is examined in closer detail in §3.2.2.5). For example the word for ‘you make him slide’ was pronounced multiple times by Matthew, in one pronunciation the lateral became devoiced [nɛziowɑdə̥l̥] and in a second pronunciation the lateral became a voiceless fricative [nɛɛijowɑdɪɬ]. This fricative does not show up in the data often (less than 50 times in Matthew’s data and not at all in Paul’s), but appears to be in free variation with [l̥].

The lateral approximant is also used as a morpheme to indicate plurality on inanimate nouns. The following table compares singular and plural nouns that are pronounced with the inanimate plural morpheme suffix by Matthew and Paul. Once again, the animacy of each noun was gathered from the Mi’kmaq Online Dictionary (Haberlin, Williams & Ziegler 1997). There are three things to note about this morpheme. First, this morpheme has the potential to become voiceless because word final devoicing tends to occur on the nasals and lateral liquid, but this does not appear to happen often with this suffix. Second, when this morpheme attaches to a word that ends with a consonant it is possible that a vowel will be epenthesized to break up the consonant cluster, however, this doesn’t always appear to be the case for all words that end in consonants. This additional vowel in the morpheme can be seen below with the words for ‘root’, ‘house’, and ‘berry’, but does not occur in the words for ‘egg’ and ‘cranberry’ even though the root of the word ends in a consonant. Third, there are a few instances of words that are categorized by the online dictionary as being animate, but are pronounced with an inanimate plural morpheme in Newfoundland Mi’kmaq.

27 This word is pronounced a total of three times, twice with this pronunciation and once with additional vowels that break up the consonant cluster [əlɪmdʒazɪn]

Table 15: [-l] Inanimate Plural Morpheme

Definition	**Singular**	**Plural**	**Animacy (from Mi'kmaq Online Dictionary)**	**Speaker**
'berry'	[mənitʃkʰ]	[munitʃkəl]	Inanimate	Matthew
'egg'	[wɑw]	[wɑw̥l]	Inanimate	Matthew
'fingernail'	[ənχɔzi]	[ənχɔzil]	Animate	Matthew
'cranberry'	[sun]	[sunl]	Inanimate	Matthew
'tooth'	[nibit]	[nibidl̥]	Inanimate	Paul
'river'	[sibu]	[sibul]	Inanimate	Matthew
'root'	[tʃibɨskʰ]	[tʃibɨskəl]	Inanimate	Matthew
'house'	[wɪndʒigwɔm]	[wɪndʒigwɔməl̥]	Inanimate	Matthew
'shovel'	[halibudi]	[halibudil̥]	Inanimate	Matthew
'path'	[awti]	[awtil]	Inanimate	Matthew
'alder'	[təpsi]	[təpsil]	Animate	Matthew

One noun that is especially interesting is 'fingernail'. When pluralized, Matthew attaches the inanimate plural morpheme [-l] to this word while Paul attaches the animate plural morpheme [-kʰ]. If we look at the Mi'kmaq Online Dictionary, the noun is classified as animate and is pronounced with a final [l] in the singular form, meaning it is most likely part of the root of the word. This final [l] could have been reanalyzed by Matthew as the inanimate plural morpheme, which would explain why he pronounces the singular 'fingernail' as [ənhɔzi]. What's interesting is that Paul also drops the final consonant when he pronounces the word for 'fingernail', but when pluralized Paul adds the animate morpheme [mqozik]. This was the only noun in which Matthew and Paul disagreed on which plural morpheme to add.

Alveolar Lateral Approximant [l] Examples:

Word Initial

(242) [**l**ɛmtʃazɪt] ‘he get’s up’ (Matthew)

(243) [**l**əmudʒɪtʃ] ‘puppy’ (Matthew)

(244) [**l**abɪts][28] ‘rabbit’ (Matthew)

(245) [**l**amɛ] ‘under’ (Matthew)

Word Final

(246) [igadu**l**] ‘I bet you’ (Matthew)

(247) [tʃigwɑ**l**] ‘you bring him’ (Matthew)

(248) [mɛski**l**] ‘you’re big’ (Matthew)

(249) [wɪntʃigə**l̥**] ‘bad spots’ (Matthew)

Intervocalic

(250) [nɛgəm pɛgiʐu**l**ut] ‘he brings him’ (Matthew)

(251) [ɪmgwɑ**l**ɑdʒi] ‘he hides them’ (Matthew)

(252) [kɛzi gɛ**l**uzɪk] ‘it is very pretty’ (Matthew)

(253) [a**l**uk^{h}] ‘cloud’ (Matthew)

First Consonant in Cluster

(254) [ɛɕkəma**l**k^{h}] ‘he waits for him’ (Matthew)

(255) [məthə**l**nɪs] ‘thrushes’ (Matthew)

(256) [mə**l**kənɑdʒi] ‘he holds on to a lot of people’ (Matthew)

(257) [ulde] ‘in good shape’ (Matthew)

Middle Consonant in Cluster

(258) [ɛt**l**dugəli][29] ‘hunting grounds’ (Matthew)

28 In the recording the interviewer asks if this word is a loanword from English <rabbit>. Matthew agrees it’s a loanword, but he insists it’s from the French word <lapin>. In Listuguj Mi’kmaq the word for rabbit is pronounced [wabus]. The word [wɑbus] is used later by Matthew when asked to pronounce the word for ‘arctic hare’. There is no instance of Paul saying the word for rabbit.

29 This is the one and only example of [l] occurring in a C_C environment in Matthew’s data

Last Consonant in Cluster

(259)	[kiɛado t**l**əgwɛn̥]	‘he makes it work’	(Matthew)
(260)	[p**l**ɛku]	‘nail’	(Paul)
(261)	[mk**l**udɛw]	‘smoke rising’	(Matthew)
(262)	[kam**l**ami]	‘I breathe’	(Matthew)

Syllabic

(263)	[widʒewɑd**l̩**]	‘he goes with him’	(Matthew)
(264)	[ukt**l̩**mɑɣɑn]	‘his shoulders’	(Matthew)
(265)	[kigadʒiwɑd**l̩**]	‘he annoys him’	(Matthew)

3.2.1.8 The Glides

The glides /w/ and /j/ can occur in every environment except between consonants and /j/ specifically does not occur word initially[30]. There are also no occurrences of /w/ word finally or /j/ at the end of consonant clusters (C_V) in Paul’s data specifically.

Glide [w] Examples:

Word Initial

(266)	[**w**ojʑɪɛ]	‘animal’	(Paul)
(267)	[**w**inpɔk^{h}]	‘liquid’	(Paul)
(268)	[**w**igadigɪn̥]	‘book’	(Matthew)
(269)	[**w**ilnəgwɑn]	‘blade’	(Matthew)

Word Final

30 There are three instances total in which [j] occurs word initially, but based on multiple pronunciations of the same word it does not appear that the glide is meant to be there. For example, the word for ‘you’re doing good’ is pronounced [jaladuwɑdl̩] once while the two other times it’s pronounced [wɛlaladʒɪl] and [wɛlalawɑdʒɪl̥].

(270) [kade**w**] ‘eel’ (Matthew)

(271) [klide**w**] ‘raspberry’ (Matthew)

(272) [əpwɑ**w**] ‘tree bark’ (Matthew)

Intervocalic

(273) [wɪɛkɛ**w**ɛjuhtu**w**ɪt] ‘he laughs at it’ (Paul)

(274) [namudlɛ**w**e] ‘watch’ (Paul)

(275) [nadɔ**w**emɪdu**w**ɛh] ‘a bad thing’ (Matthew)

(276) [miktʃago**w**ɪtʃ] ‘bluejay’ (Matthew)

First Consonant in Cluster

(277) [tʃa**w**ma̰l̰] ‘boil’ (Paul)

(278) [mijo**w**tʃɪtʃ] ‘kitten’ (Matthew)

(279) [kɛ**w**nɪk] ‘otter’ (Matthew)

Last Consonant in Cluster

(280) [kaeɛk**w**ɪɛdɪɛ] ‘fall to pieces’ (Paul)

(281) [ɛgɪnam**w**e] ‘he asks for it’ (Paul)

(282) [wɛlmuz**w**ɑl̰] ‘(any) woman’s brother-in-law’ (Matthew)

(283) [əpk**w**iman] ‘blueberry’ (Matthew)

Glide [j] Examples:

Word Final

(284) [puda**j**] ‘bottle’ (Matthew)

(285) [kɪdəma**j**] ‘I smoke’ (Matthew)

(286) [negabigwɑ**j**] ‘I am blind’ (Matthew)

(287)	[kɪktʃəlko**j**]	‘under arms’	(Matthew)
Intervocalic			
(288)	[wɑhande**j**o]	‘bone’	(Paul)
(289)	[kati**j**e]	‘thigh/leg’	(Paul)
(290)	[podali**j**ɛwe]	‘basket’	(Matthew)
(291)	[ukle**j**awɪn̥]	‘you belong here’	(Matthew)
First Consonant in Cluster			
(292)	[nana**j**gəł]	‘five dollars’	(Matthew)
(293)	[sətkowə**j**nimidə]	‘he sees everything’	(Matthew)
(294)	[kɛda**j**wɪmpk^{h}]	‘you frighten me’	(Matthew)
Last Consonant in Cluster			
(295)	[k**j**utowɑzɪt][31]	‘he walks around’	(Matthew)

3.2.2 Voicing

Due to the diverse amount of topics surrounding consonant voicing in Newfoundland Mi’kmaq, this section has been further broken down into four subsections. The first (§3.2.2.1) takes a closer look at intervocalic voicing and how this type of voicing does not occur as often as originally thought. Second, §3.2.2.2 examines consonant voicing occurring outside of the intervocalic environment such as word initially, word finally, and among consonant clusters. The third section (§3.2.2.3) diverges slightly to discuss an additional underlying phoneme in the data, the labialized velar plosive /k^{w}/. Section §3.2.2.4 examines other possibilities for consonant voicing seen in the data. And finally in §3.2.2.5 the devoicing of the nasals and lateral liquid is examined and discussed.

31 This is the only consistent pronunciation in which [j] occurs in at the end of a consonant cluster.

3.2.2.1 Intervocalic Voicing

It is generally agreed that consonants in Mi'kmaq (Hewson 1980; Fidelholtz 1976), as well as other Algonquian languages (Drapeau 2014; Wolfart 1973), are underlyingly voiceless and become voiced in intervocalic positions, but based on my re-analysis of Newfoundland Mi'kmaq this generalization does not appear to hold true in actual speech. The most common environment voiced consonants surface in is intervocalic, but there was also a noticeable amount of voiceless consonants occurring in that same environment seemingly not affected by this voicing rule.

The following graph (Figure 10) shows the percentage of voiceless consonants appearing in intervocalic positions in the data[32]. With Matthew (blue) we can see that the plosives are pronounced without voicing approximately 8% of the time – [p] 8.3%, [t] 8.5%, and [k] 8.8%. This percentage reaches almost 30% (28.4%) with the voiceless fricative [s][33]. Finally, the lowest percent of voiceless consonants in intervocalic positions can be seen with the affricate [tʃ] surfacing less than 5% (4.6%) of the time.

The percentage of intervocalic voicelessness in Paul's data (orange), with the exception of [s], are more than double the percentages seen in Matthew's data. The bilabial and alveolar plosives in intervocalic environments remain voiceless around 20% of the time (20% and 21.9% respectively) while the velar plosive remains voiceless only 16% of the time. Interestingly, the average percent of [s] occurring in intervocalic environments in Paul's data is only one percent higher than Matthew's at

32 The plosive [q] was excluded from this graph due to the amount of allophonic variation occurring when it is in intervocalic position.

33 The voiceless fricative [s] is in free variation with the voiceless alveolar-palatal fricative [ɕ]. Therefore, the times [ɕ] was found in intervocalic position was also included in the totals. [ɕ] does not surface often in Matthew's data and does not have a huge effect on the percentage of [s] occurring in intervocalic positions. In fact, the percentage drops slightly from 28.8% to 28.4% when [ɕ] is included. When [ɕ] (or [ʑ] on the voiced counterpart) is removed the stats are as follows: 155 ([s] in intervocalic position), 383 ([z] in intervocalic position), 538 (total).

29.5%. Finally, the affricate remains voiceless roughly 20% (19.2%) of the time when it occurs in intervocalic environments.

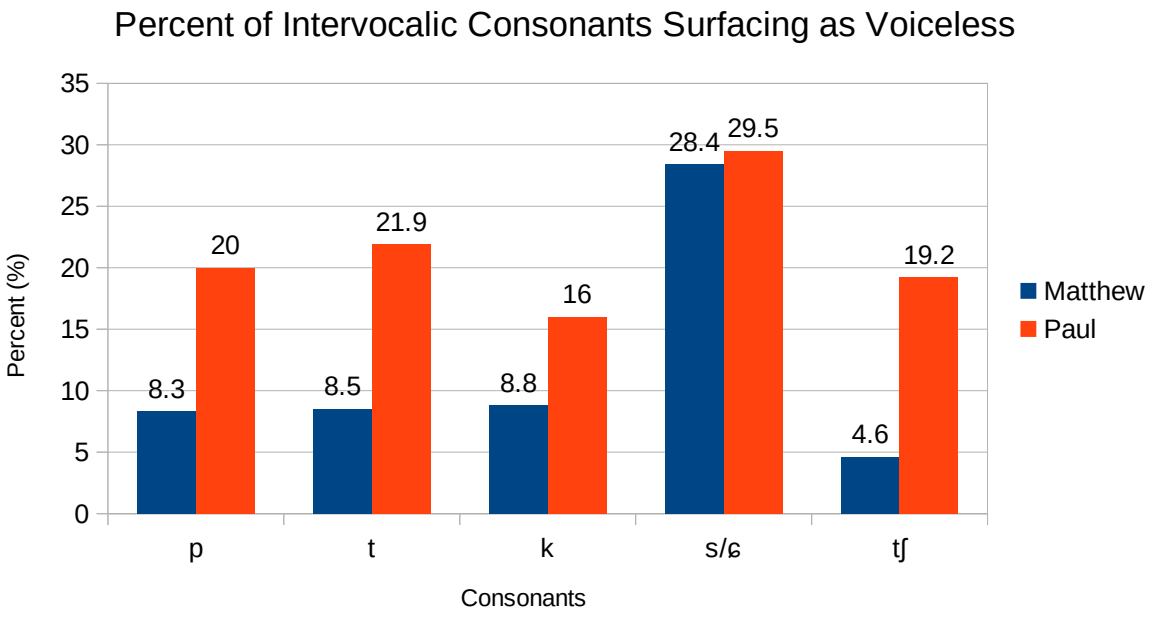

Figure 10: Percent of Intervocalic Consonants Surfacing as Voiceless

It is not surprising that out of all the voiceless consonants the alveolar fricative [s] has the highest percentage of voicelessness in intervocalic environments. When a plosive is pronounced its sound is instantaneous, but with fricatives the sound can be prolonged as long as the speaker has enough breath. The average duration of [s] and [z] were compared in both Matthew and Paul's data. For Matthew the average length of time the voiceless fricative [s] was pronounced was 140 milliseconds. This time is almost cut in half when it becomes voiced, the average being around 85 milliseconds for [z]. The shorter consonant duration doesn't allow the speaker much time to spread the glottis before it has to vibrate again for the next vowel. With Paul, on the other hand, the average

duration of these two fricatives are much closer to each other than Matthew's were. The duration of [s] was around 132 milliseconds while [z] was 111 milliseconds. If we include the averages for the alveolo-palatal fricatives[34] with [s] and [z] the numbers become slightly farther apart with the [s] average becoming 133 milliseconds and [z] becoming 104 milliseconds, but these averages are still much closer than Matthew's.

In terms of the percentage differences between Matthew and Paul's datasets, there are a couple possibilities to explore. Firstly, it is important to remember that Matthew's data was taken from nine different recordings which equal 8.73 hours of audio whereas Paul's data was taken from three separate recordings which equal 1.23 hours of audio. And although both men were asked to pronounce similar words such as nouns and small sentences – specifically short sentences containing a subject and object, for example 'I push it' compared with 'you push it' and 'he pushes it' – this does not mean their word lists were exactly the same. The differences in the words being asked will affect the number of intervocalic voiceless consonants surfacing in the data. In this case it's entirely possible that Paul was asked more often than Matthew in a shorter amount of time for words which contained VCV environments. This higher occurrence of VCV environments paired with a small data set could easily explain the higher percentages seen in Paul's table.

Another factor that could explain the difference in the averages between Paul and Matthew is inter-speaker variation. Although both men grew up in the same environment it is possible for there to be slight divergences in their speaking habits and patterns. The clearest example of divergence in Paul's speaking pattern is the high frequency of free variation occurring with his fricatives, so much so that the alveolo-palatal fricative [ɕ] is used more often in his speech than [s].

34 On their own the average duration of [ɕ] was 133 milliseconds and [ʑ] was 96 milliseconds

3.2.2.2 Voicing Outside of the Intervocalic Environment

Throughout the data, there were consonants that were becoming voiced in places that were not predicted by the original voicing generalization. This voicing was noticed by Bragg during his analysis of Newfoundland Mi'kmaq in 1976, but he stated that consonants that became voiced outside of intervocalic environments were "not frequent" and could be "explained by other phonetic factors" (Bragg 1976: 8). He provided four possible explanations for voicing outside of intervocalic environments: incontiguous assimilation, long vowels, long consonants (to be discussed further in §3.2.4), and borrowing. Additionally, he stated that in situations when multiple Mi'kmaq words were pronounced in a continuous stream of speech and the second word began with a consonant, that consonant could become voiced if the preceding word ended in a vowel and the sound immediately following the consonant was also a vowel. This would create the VCV environment that would trigger voicing in the consonant regardless of word boundaries.

Bragg used incontiguous assimilation, or long distance assimilation, to explain both word initial and word final consonant voicing occurrences in his data. He proposed that intervocalic consonants could spread their voicing to the beginning or end of the word, causing those consonants to become voiced as well. This can be seen in Bragg's transcription of the Mi'kmaq word for rabbit /papit/ which is pronounced [bɑbɪt]. There are several issues with this proposal. Firstly, why doesn't the final consonant in the word /papit/ become voiced as well? Bragg provides other examples showing long distance assimilation occurring word finally, for example the Mi'kmaq word for 'he sleeps' /nepat/ becoming [nebɑd], so why doesn't this rule apply to multiple voiceless consonants? In the end Bragg acknowledged that "assimilation of this kind must be viewed as a tendency [...] rather than a rule" (Bragg 1976: 9) due to exceptions he found in his data.

A second explanation provided by Bragg was that long vowels were able to influence the voicing of word final consonants. For example, the word for eel /ka:t/ becomes [kɑ:d]. Due to the focus of this thesis being primarily on the consonants, I was not able to confirm or deny whether or not long vowels were affecting the voicing of the plosives that immediately followed them.

The final reason Bragg provides for the voicing of consonants outside of intervocalic environments was due to word borrowing from other languages. He provided a single example for the word 'government' (borrowed from English[35]) being pronounced [gubəlnɔwəl][36] in Mi'kmaq. While this explanation is possible, there was not a lot of examples in the data to support this.

The following graph (Figure 11) shows the percentage of voiced consonants surfacing outside of intervocalic environments – for a more in depth examination of each environment there are two additional tables listed after the graph for each speaker (Tables 16 and 17). Interestingly, although Bragg said that voiced consonants occurring outside of intervocalic environments was not frequent, the percentages in these tables are even higher than the previous graph that examined voiceless consonants appearing in intervocalic environments (with the exception of the [z]/[ʑ] percentages being much lower than the percentages for [s]).

For Matthew (blue) the plosives occur outside of intervocalic environments at least 10% of the time with the lowest plosive [b] being 11% and the highest plosive [g] reaching 31.8% (this percentage is also the highest overall for Matthew). The percentage for [z] (data from the allophone [ʑ] are also included with this percentage) on the other hand is significantly lower than the others, only surfacing outside of intervocalic environments 3.3% of the time. Finally, the voiced affricate [dʒ] appears outside of intervocalic environments 11.4% of the time.

35 Based on the way this word is pronounced in Mi'kmaq it is more likely that this word is borrowed from the French word <gouverneur>.

36 I was able to review the pronunciation of 'government' in my re-analysis. This word was pronounced a total of two times, once with a voiceless velar plosive word initially and a second time with a voiced velar plosive word initially. The voicing for this word was not consistent across multiple pronunciations.

Once again, all of the percentages from Paul's data (orange) are higher than the percentages in Matthew's, but this time the numbers are closer together. As with Matthew's data, Paul's highest percent of voiced consonants occurring outside of the intervocalic environment is with the plosive [g] at 39.7% and his lowest plosive [b] at 15.7%. The voiced fricative [z/ʒ] remains the lowest percentage of all of Paul's data, but is still almost 10% higher than Matthew's at 13.7%. The voiced affricate surfaces outside of intervocalic environments 13.7% of the time.

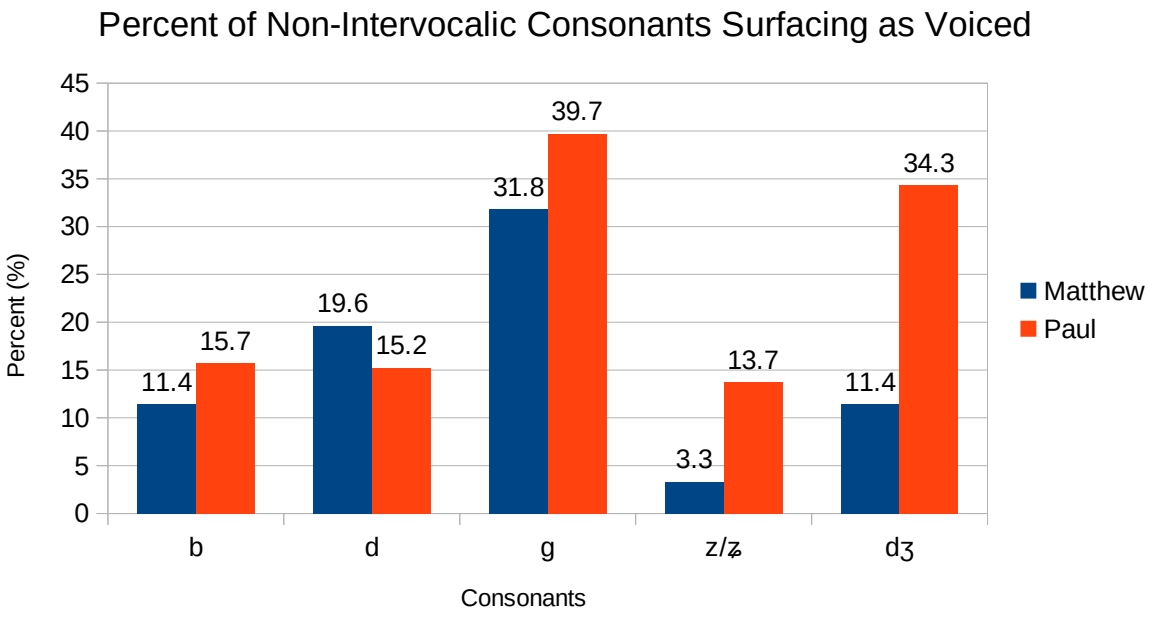

Figure 11: Percent of Non-Intervocalic Consonants Surfacing as Voiced

Table 16: Voiced Consonants Outside of Intervocalic Environments (Speaker: Matthew)

Consonants	#_	_#	C_C	C_V	V_C	Total (vcd C outside of V_V environments)	Total (vcd C in all environments)	Percent of vcd C outside of V_V environment
[b]	12	1	0	25	6	44	385	11.4%
[d]	7	10	1	58	89	165	839	19.6%
[g]	7	22	29	22	241	321	1008	31.8%
[z]/[ʑ]	1	1	0	5	7	14	421	3.3%
[dʒ]	15	6	0	27	10	58	507	11.4%

Table 17: Voiced Consonants Outside of Intervocalic Environments (Speaker: Paul)

Consonants	#_	_#	C_C	C_V	V_C	Total (vcd C outside of V_V environment)	Total (vcd C in all environments)	Percent of vcd C outside of V_V environments
[b]	2	0	0	3	4	9	57	15.7%
[d]	0	0	0	8	8	16	105	15.2%
[g]	1	1	0	0	29	31	78	39.7%
[z]/[ʑ]	0	1	0	7	0	8	58	13.7%
[dʒ]	0	0	0	11	0	11	32	34.3%

3.2.2.3 The Debate Surrounding [gw]

In the few papers that have been written discussing the consonant inventory of Mi'kmaq there is only one that proposes the possibility of the existence of a labialized velar plosive /kʷ/ in addition to the velar plosive /k/. This additional phoneme was first mentioned by Stephanie Inglis in her 1986 MA thesis about Mi'kmaq word formation, which focused on the Mi'kmaq spoken in Nova Scotia. Within that paper there was a brief mention of the consonant inventory. The plosives listed in the consonant inventory were exactly the same as Bragg's with two exceptions, Inglis stated that "the Mi'kmaq

phonological system also contains two lip-rounded obstruents, /kw/ and /qw/" and indicated that "these two phonemes contrast with /k + w/ and /q + w/" (Inglis 1986: 24). Unfortunately, she did not list any specific examples to demonstrate the difference between a word containing /kw/ versus a word containing a /k+w/.

Based on the results from Figure 11, the majority of the environments in which the underlying voiceless velar plosive /k/ becomes voiced [g] outside of an intervocalic position is when it is immediately followed by the glide [w]. If we removed all V_C environments in which the following consonant was the glide [w] the number of occurrences of non-intervocalic [g] in the data would drop drastically from 241 to 11 for Matthew and from 29 to 2 for Paul. This removal would severely affect the total percentage of voiced consonants occurring outside of the intervocalic environment for both men. Matthew's percentage would fall from 31.8% to 11.6% and Paul's would fall from 39.7% to 7.8%. The drastic changes in the percentages in combination with the claim made by Inglis strongly support the idea that there is an additional underlying phoneme in Newfoundland Mi'kmaq, the labialized velar plosive /k^{w}/ that becomes voiced in intervocalic environments.

In order to determine whether or not there was an additional labialized plosive in Newfoundland Mi'kmaq the number of voiced and voiceless consonants occurring immediately before the glide [w] were collected and compared. If consonants that surface before [w] are roughly evenly distributed in place of articulation, then it is more likely that the glides are underlyingly vowels[37], which would explain the voicing of the velar plosive. However, if the majority of the results favour the velar plosives before the glide then [g+w] is more likely to be a single underlying labialized plosive /k^{w}/. The following graph shows that the overwhelming majority of the time the glide [w] is preceded by a velar plosive and that 56.7% of the time the plosive will surface as voiced.

37 The theory that the glides /w/ and /j/ were underlyingly the vowels /u/ and /i/ was discussed by both Fidelholtz (1968) and Hewson (1985). This could explain the voicing of the velar plosive in V_w environments because underlyingly those environments would be intervocalic.

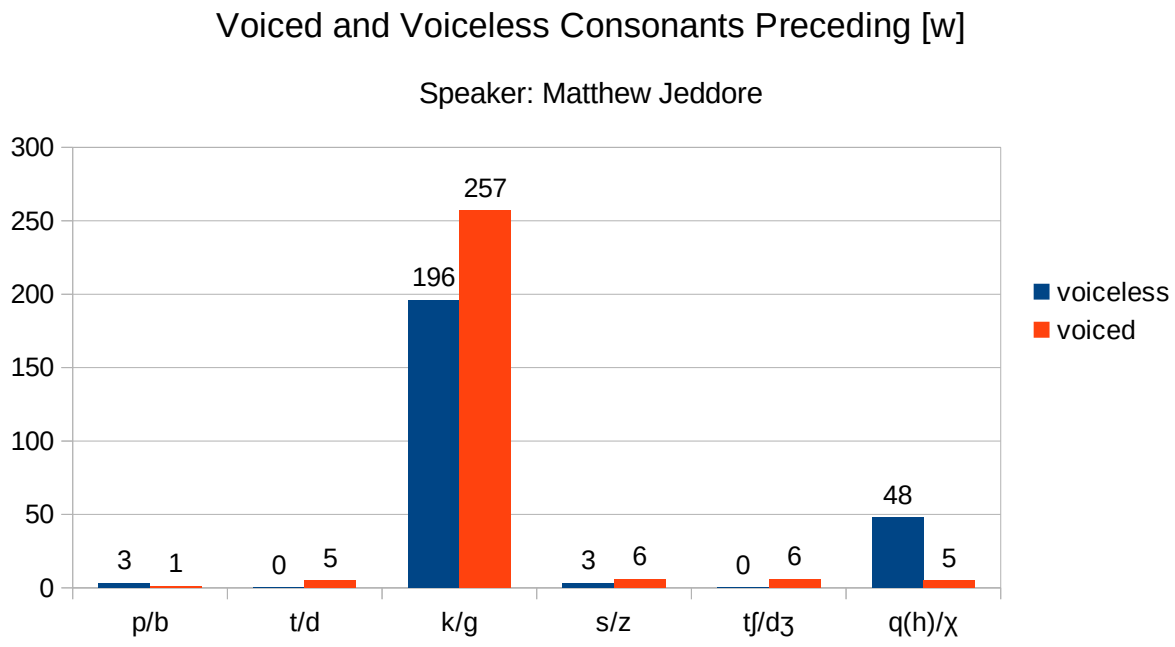

Figure 12: Voiced and Voiceless Consonants Preceding [w]

Although this graph strongly supports the idea that there is a labialized /kʷ/ in the phonological inventory of Newfoundland Mi'kmaq, it is still difficult to discern when a word is a labialized velar plosive /kʷ/ followed by a vowel or a velar plosive and glide /k + w/ followed by a vowel. Currently, the only indicator of an underlying labialized velar is when there is a voiced velar plosive preceding a glide-vowel sequence in the data, but what about words where this voicing doesn't occur? For example, the word for 'he brings him' is pronounced [wɪtʃkwɑlɑdə̥l]. It is consistently pronounced with a voiceless velar plosive followed by a glide (pronounced 3 times total). But the pronunciation of 'you bring him' is sometimes pronounced [tʃikwɑl̥] (3 times total) and other times pronounced [tʃigwɑl] (5 times total). If we only looked at the evidence from the pronunciation of 'he brings him' I would be inclined to say that it is underlyingly a velar plosive followed by a glide /k + w/, but when you include

the information from ‘you bring him’ I’m inclined to say that its underlyingly a labialized velar plosive /kʷ/. Because of this uncertainty I have not adjusted the words in my dataset to include [kʷ] or [gʷ] in my transcriptions, although I do recognize their existence in Newfoundland Mi’kmaq phonology. A closer examination of words containing the velar plosive and glide sequences is needed before any conclusions can be made about the phonemic transcriptions.

3.2.2.4 Other Voicing Explanations

Most of the consonant voicing seen in the data can be explained in various ways. One of the ways a consonant becomes voiced in word initial position is due to the fact that across multiple pronunciations of the same word, the initial syllable is dropped in one or more of the pronunciations, making a consonant that was in an intervocalic environment suddenly appear as if it is in a word initial environment. For example in Matthew’s first pronunciation of the word [abədʒazıt] meaning ‘it (animate) comes back’ the initial vowel is dropped and pronounced as [bədʒazıt], making it appear as if the initial consonant is becoming voiced for no reason – see examples (296) to (299).

There is a voicing phenomenon in Blackfoot, an Algonquian language spoken in southern Alberta and Montana, that may be able to shed light on the voicing occurring in Newfoundland Mi’kmaq. There is a tendency in Blackfoot for word final vowels to become devoiced, but the speaker’s vocal tract still articulates these ‘soundless’ vowels even though there is no audible pronunciation of them (Bliss & Gick 2009; Prins 2019). Although there is no way to outright confirm that something similar is occurring with these word initial vowels in Mi’kmaq, it is entirely possible that these vowels are still being articulated by the vocal tract and therefore phonologically influencing the voicing of the following plosive.

Speaker: Matthew Jeddore

(296)	[igadadinɪtʃ][38] vs [gadadinɪtʃ]	‘we bet each other’
(297)	[əbuktʃɪkʰ] vs [buktʃɪkʰ]	‘soon’
(298)	[ebɑzi] vs [basi]	‘I sit’
(299)	[izigwis] vs [zigwis]	‘grow(?)’

The voicing of word initial consonants could also occur across word boundaries, as noted by Bragg in his thesis. For example, when Matthew pronounces ‘it is very pretty’ [kɛzi gɛluzɪk] the initial consonant of the second word is in an intervocalic environment which triggers voicing. The interesting thing about voicing due to continuous speech was the fact that voicing could occur on the initial consonant of a Mi’kmaq word regardless if the immediate preceding word was in English or in Mi’kmaq. As long as the continuous speech ensured that the vocal folds continued vibrating, the initial consonant on the Mi’kmaq word would surface as voiced. This voicing due to continuous speech could also affect word final consonants in the same way. Additionally, if there was a false start at the beginning of the word and the speaker immediately repeated the complete word there was a possibility that the completed word would now have a voiced consonant at the beginning because the false start had the potential to generate a VCV environment. For example, when Matthew tried to pronounce the Mi’kmaq word for ‘I know it’ he began with a false start before saying [gɪdʒɪdo], but when listening to the false start the initial consonant is clearly pronounced as the voiceless velar plosive [k]. The false start created a VCV environment that allowed the initial voiceless plosive [k] to surface as voiced [g] in the complete pronunciation.

38 The pronunciation of this word with the initial vowel is not actually produced in Matthew’s data, but every other variation of in which the verb is ‘to bet’ (I bet you, you’re going to bet, etc) there is always an [i] at the beginning of the word. When the subjects of the verb change it is the ending morphology that changes, not the beginning of the word.

Another factor that explains some of the word medial consonant voicing seen in Matthew's data is the syllabification of [n], [m], and [l]. The syllabification of the sonorant consonants did not happen often, but when they did it usually, affected the voicing of consonants that were directly between the syllabic consonant and a vowel. The overwhelming majority of the time that the alveolar consonants [n] and [l][39] became syllabic was when they were preceded by another alveolar sound[40]. Rather than completely opening the mouth again to allow for the pronunciation of a vowel between the two alveolar sounds, the speaker simplified the pronunciation by making the second consonant syllabic. Although it is hard to determine whether or not a sound is syllabic by examining the spectrogram and waveform, it is easily identifiable when listening to the audio. The following is a small list of syllabic consonants affecting the voicing of surrounding consonants.

Speaker: Matthew Jeddore

(300)	[pɪdn̩]	'hand'
(301)	[kwɪdʒm̩k]	'outside'
(302)	[kwɛgudm̩]	'I ask for it'
(303)	[kadl̩]	'your feet'

There were quite a few words in which there was consonant voicing alternations across multiple pronunciations of the same word, which can be seen in Table 18. These alternations did not appear to have any outside factors affecting the voicing between pronunciations and the speakers themselves did not realize that they were pronouncing the words slightly differently. This lack of awareness only

39 Syllabic [m] occurred only 7 times in the data in instances where the syllable weight would have exceeded the maximum syllable weight (CVCC). This can be seen in example (301).

40 Syllabic [l] occurred 35 times in the data, 24 of those times it was preceded by the voiced alveolar stop [d] and 9 times it was preceded by the voiceless velar stop [t]. Syllabic [n] occurred 19 times in the data, 16 of those times it was preceded by the voiced alveolar plosive [d].

solidifies the idea that consonants in Mi'kmaq are underlyingly voiceless and become voiced (ideally) between vowels.

Table 18: Obstruent Consonant Alternations

Alternation	**1st Pronunciation**	**2nd Pronunciation**	**Definition**	**Speaker**
[p]/[b]	[ni**p**it]	[ni**b**it]	'tooth'	Paul
	[**p**ɑ**p**ɪt]	[**b**ɑ**b**ɪt]	'he has fun'	Matthew
	[**p**udaj]	[**b**udaj]	'bottle'	Matthew
[t]/[d]	[**t**ɛmtɛzɪnʔk]	[**d**ɛmtɛzɪnʔkʰ]	'it snapped off'	Matthew
	[nɪnu**t**əm̥]	[nɛnu**d**əm̥]	'taste'	Paul
	[igɑnɑzɪ**t**]	[igɑnɑzɪ**d**]	'he's going ahead'	Matthew
[k]/[g]	[**k**əbəlnol̥]	[**g**əbəlnol̥]	'government'	Matthew
	[məski**k**ʰ]	[məski**g**]	'it's big'	Matthew
	[**k**ɛsaʔegus]	[**g**ɛzajgus]	'August'	Matthew
[s]/[z]	[əli**s**mazi]	[ɛli**z**mazi]	'I lie down'	Matthew
	[megwe**s**a]	[megwe**z**a]	'red ochre'	Paul
	[a**s**əgəm̥]	[a**z**ɛgəm]	'six'	Matthew

While most of the voicing occurring outside of the intervocalic environment can be explained, there were a few words in which voiceless consonants were consistently pronounced as voiced even though they were occurring outside of the intervocalic environment. The following table shows this list of words as well as the number of times each word was pronounced.

Table 19: Words with Consistently Voiced Consonants Outside of Intervocalic Environments

Consonant & Place	Definition	Word	Number of Times Pronounced	Speaker
[b] word initial	'foam (on the water)'	[**b**ɛmitkʰ]	2	Matthew
[z] initial in cluster	'any woman's brother-in-law'	[wɛlmu**z**wɑl̥]	4	Matthew
[dʒ] word initial	'maggot'	[**dʒ**udʒitʃ]	2	Matthew
[dʒ] initial in cluster	'ash tree'	[mudʒi**dʒ**mɪnaχsi]	3	Matthew

3.2.2.5 Devoicing

Another observation made by Bragg during his phonological analysis was the devoicing of nasals word initially in consonant clusters – see examples (304) to (307). In my re-analysis it was clear that there was devoicing occurring in the data, but this devoicing was occurring most often word finally rather than word initially[41] and the lateral liquid could also become devoiced. This word final devoicing was more common in Matthew's data than in Paul's. Additionally, there were a few instances of nasals devoicing word medially, but this was rare.

Examples of Devoiced Nasals and Lateral Liquid (Bragg 1976: 24):

(304)	/mte:skəm/	[m̥ʔte:skəm]	'all, every'
(305)	/npukum/	[n̥ʔpugum]	'frankum, gum'
(306)	/nqun/	[n̥ʔqun]	'my heel'
(307)	/ntul/	[n̥ʔtul]	'my boat'

41 It is entirely possible that there was a larger occurrence of word initial devoiced nasals and lateral liquids in the data, but they were extremely hard for me to detect. In addition, when these consonants became devoiced word finally they were much easier to hear because you could hear the speaker moving his articulators to the position of the final consonant.

In order to obtain a clearer picture of the devoicing of final nasals let's examine the following two figures. These are two separate pronunciations of the Mi'kmaq word 'chain'. In the first pronunciation there are no outside factors influencing the voicing – or in this case devoicing – of any of the consonants. Following the second pronunciation, however, Matthew immediately began to speak in English. This caused his vocal folds to continue vibrating and the final nasal never became devoiced. Again, in the first pronunciation one can clearly hear that there is a final nasal in this word, but there is no voicing in the waveform to show it. This makes the second pronunciation incredibly important to have because it proves that there is a nasal at the end of this word that only becomes visible in the waveform due to continued speech. This demonstrates that, like Blackfoot, these speakers of Newfoundland Mi'kmaq will shape their vocal tract to articulate word final sonorant consonants even though there is little to no audible pronunciation of them.

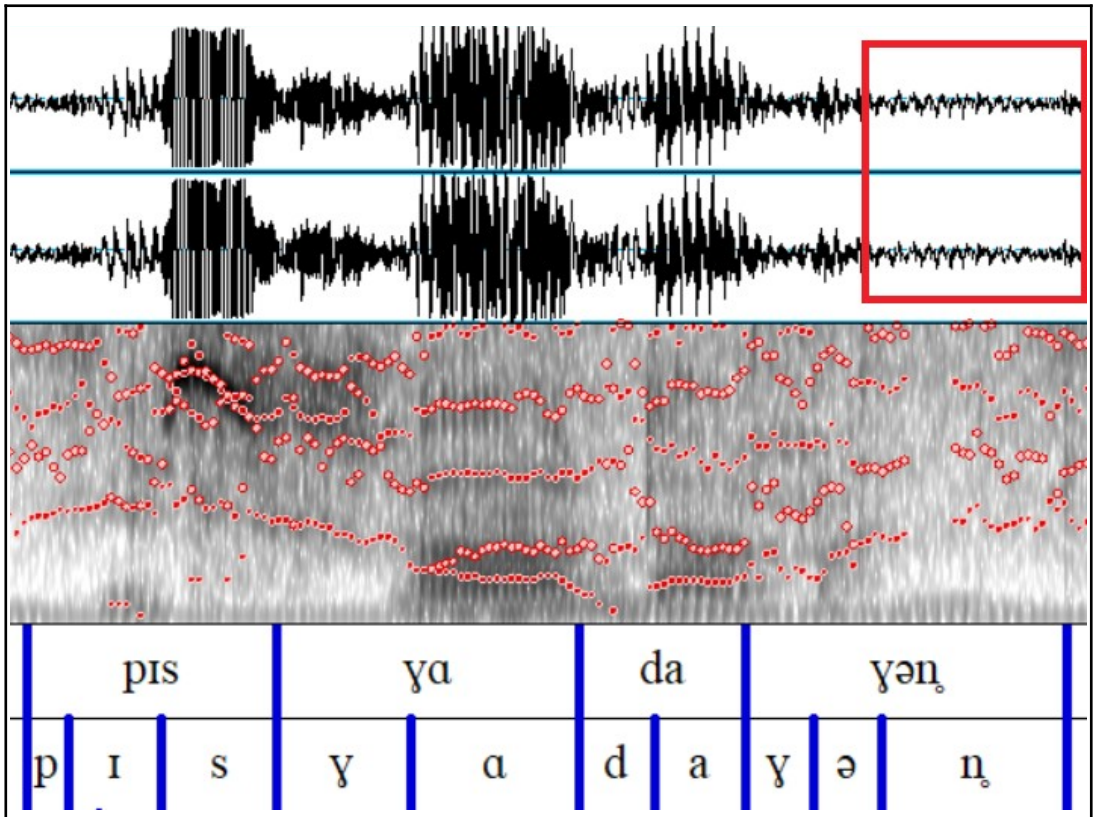

Figure 13: Pronunciation of 'chain' With No Outside Influences

(Speaker: Matthew)

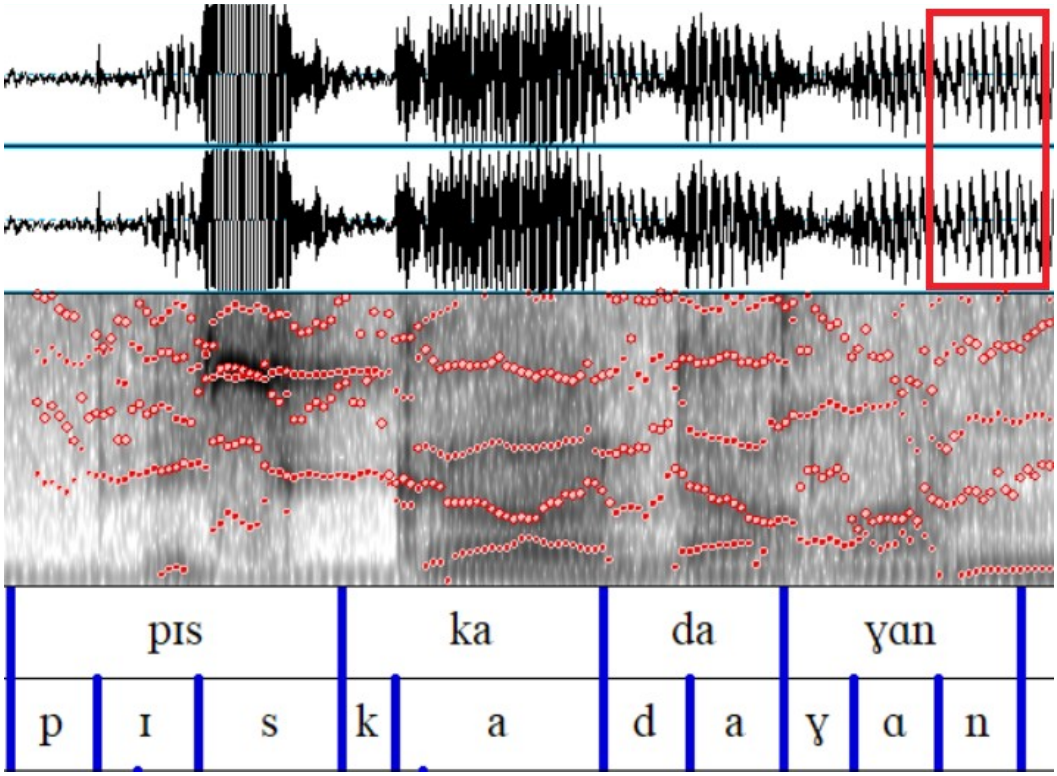

Figure 14: Pronunciation of 'chain' With Continued Speech in English (Speaker: Matthew)

The following list shows examples of devoiced nasal consonants in all positions, word initial, medial, and final from both Matthew and Paul. Any word with a percent symbol (%) beside it indicates that this word was not consistently pronounced with a voiceless nasal.

Devoiced Alveolar Nasal [n̥] Examples:

Word Initial

(308) %[n̥pisun̥] ‘medicine’ (Matthew)

(309) %[n̥qɔzil] ‘my fingernails’ (Matthew)

Word Medial

(310) %[kɛkun̥kʰ] ‘he has it’ (Matthew)

Word Final

(311) [kiɛado tləgwɛn̥] ‘he makes it work’ (Paul)

(312) [wɪndʒuksnən̥] ‘shoe’ (Paul)

(313) [sɑmwɑden pizun̥] ‘cough medicine’ (Matthew)

(314) [nɛgəm siduwɑɣən̥] ‘his ear’ (Matthew)

Devoiced Bilabial Nasal [m̥] Examples:

Word Initial

(315) %[m̥pɪdʒu] ‘codfish’ (Matthew)

(316) %[m̥ɛsχənɑdekʰ] ‘he knocked him down’ (Matthew)

Word Medial

(317) %[əm̥kumi][42] ‘ice’ (Matthew)

Word Final

(318) [nɛnudəm̥] ‘taste’ (Paul)

(319) [uknadaɑnəm̥] ‘your nostrils’ (Matthew)

(320) [windʒudijam̥] ‘male cow/moose’ (Matthew)

(321) %[wəndʒigəm̥] ‘European house’ (Matthew)

Throughout the data, the devoicing of word final nasals was straightforward due to the complete closure in the mouth during pronunciation. The lateral liquids on the other hand had several allophones when it came to devoicing due to the airflow being able to escape around the edges of the tongue. This

42 This word had a number of variations to its pronunciation: [kumi], [əmʔkumi], [mkumi], [m̥kumi], [əm̥ʔkumi]

resulted in devoiced lateral liquids [l̥], voiceless lateral fricatives [ɬ], and transitional liquid clusters such as [l͡l̥] and [l͡ɬ].

The following two figures compare the Mi'kmaq word for 'seaweed' in which there is a voiced and voiceless alternation across multiple pronunciations. Similar to the nasal devoicing/voicing seen in Figures 13 and 14, the final lateral liquid in the second iteration of the word is voiced due to continued speech in English when it is normally devoiced as in the first pronunciation.

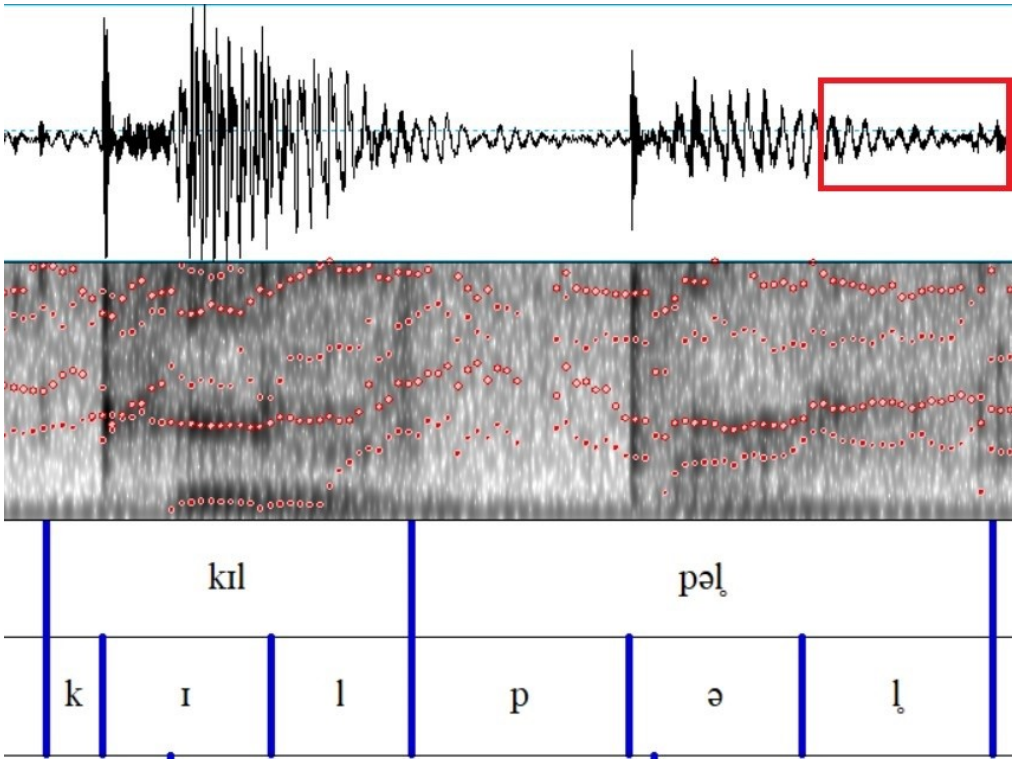

Figure 15: Pronunciation of 'seaweed' With No Outside Influence (Speaker: Matthew)

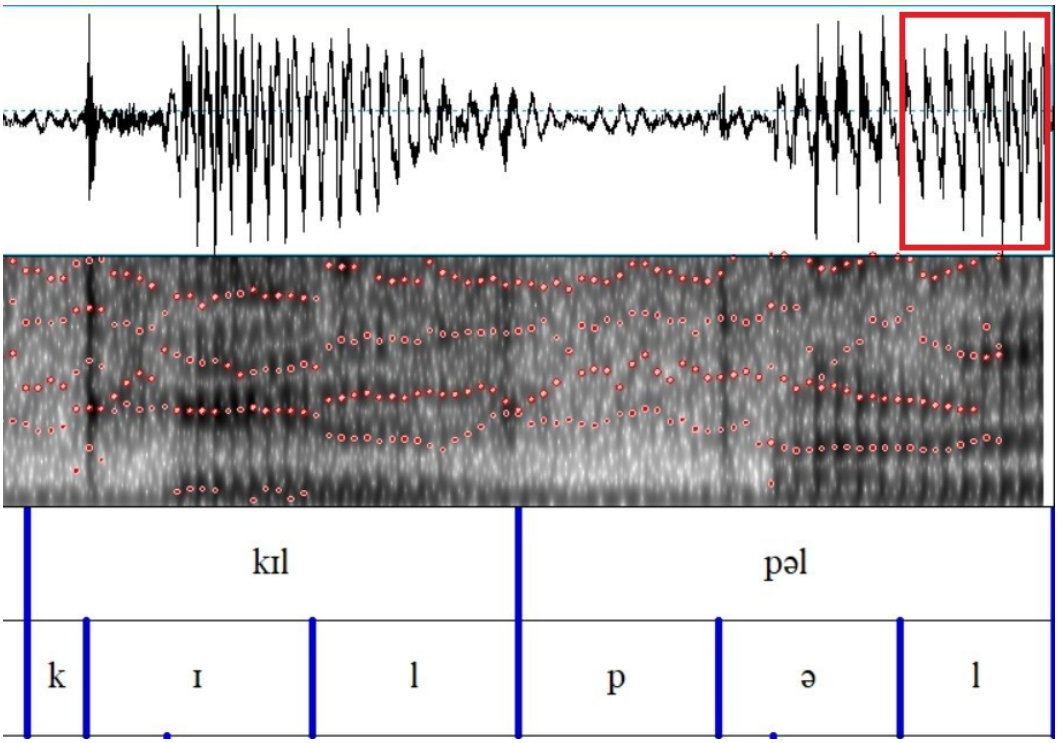

Figure 16: Pronunciation of 'seaweed' With Continued Speech in English (Speaker: Matthew)

When the lateral liquid becomes a voiceless lateral fricative it is easily identifiable in its sound as well as how the frication affects the appearance of both the waveform and the spectrogram. The turbulence created from the air trying to escape the mouth around the tongue causes the waveform's amplitude to be erratic and generates random frequencies in the spectrogram. The following two figures contain a voiceless lateral fricative. For comparison, in Figure 17 the spectrogram of the voiceless lateral fricative has a similar appearance to the alveolar fricative [s] in the first syllable of the same word.

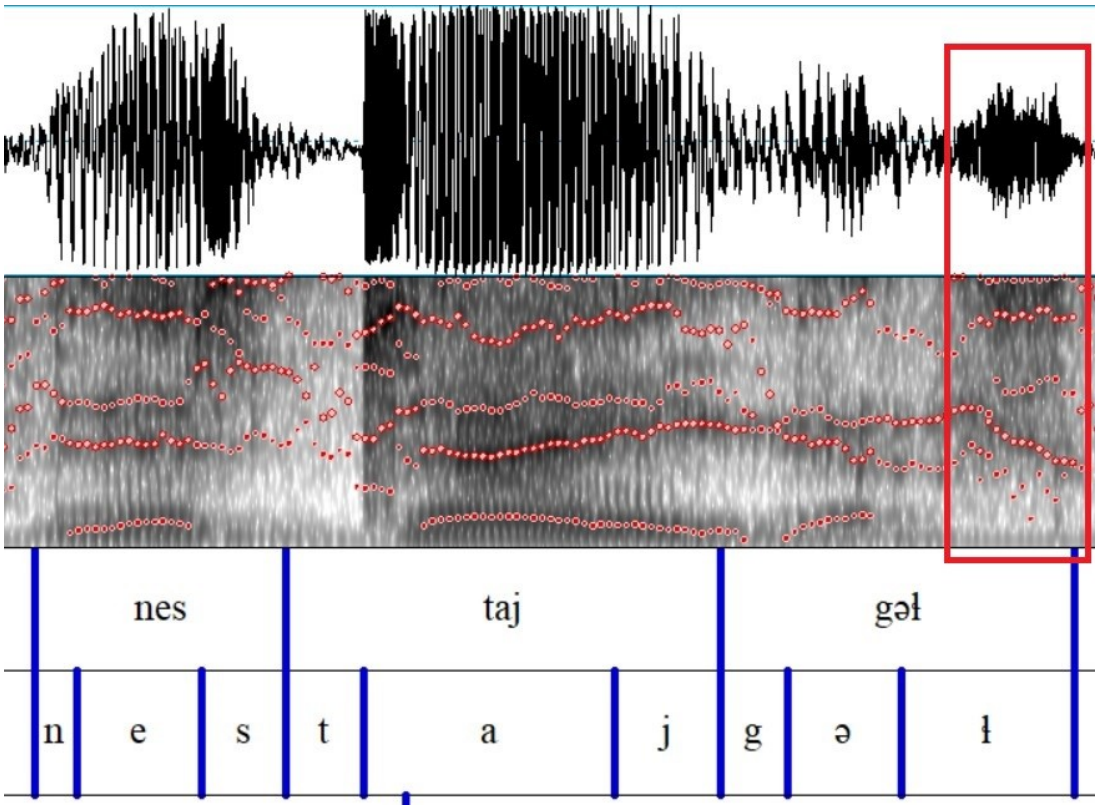

Figure 17: Pronunciation of 'three dollars'

(Speaker: Matthew)

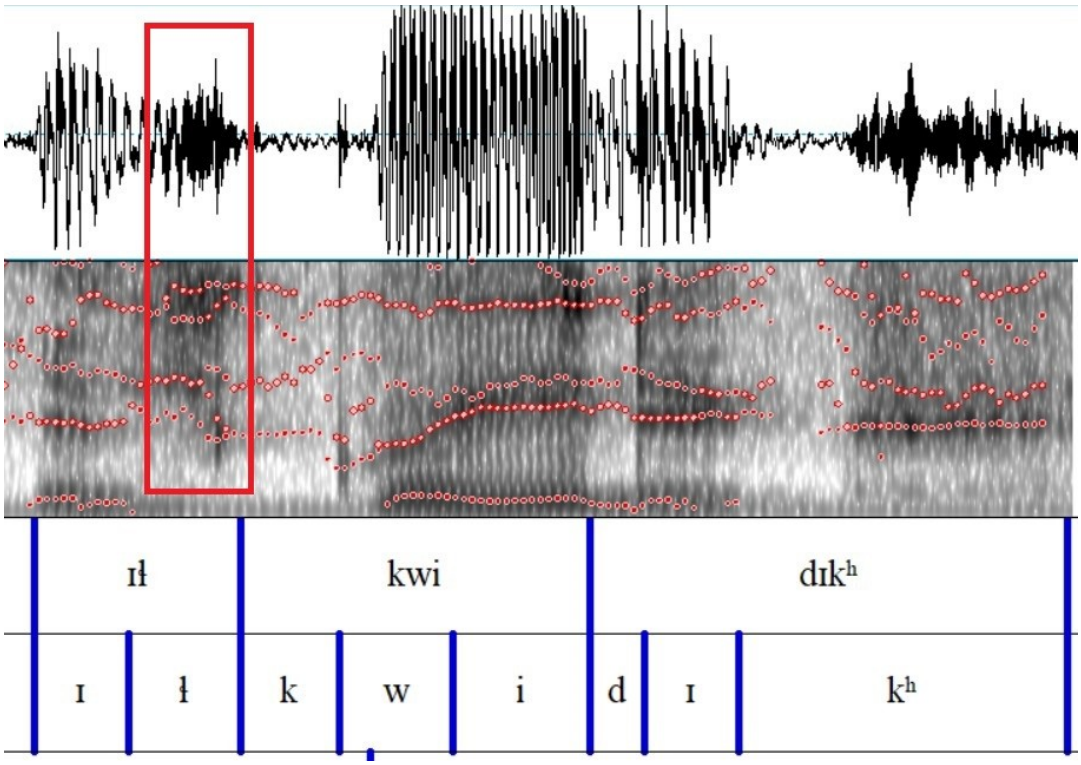

Figure 18: Pronunciation of 'to steer'

(Speaker: Matthew)

In addition to the lateral liquid becoming devoiced or becoming a lateral fricative, there were times when the lateral liquid was pronounced as the sound was transitioning into voicelessness, resulting in consonant clusters such as [l̥̆] and [l̆ɬ] where both the voiced and voiceless lateral liquid could be heard in the audio. Figure 19 and 20 depict [l̆ɬ] transition clusters and Figures 21 and 22 depict [l̆l̥̆] transition clusters.

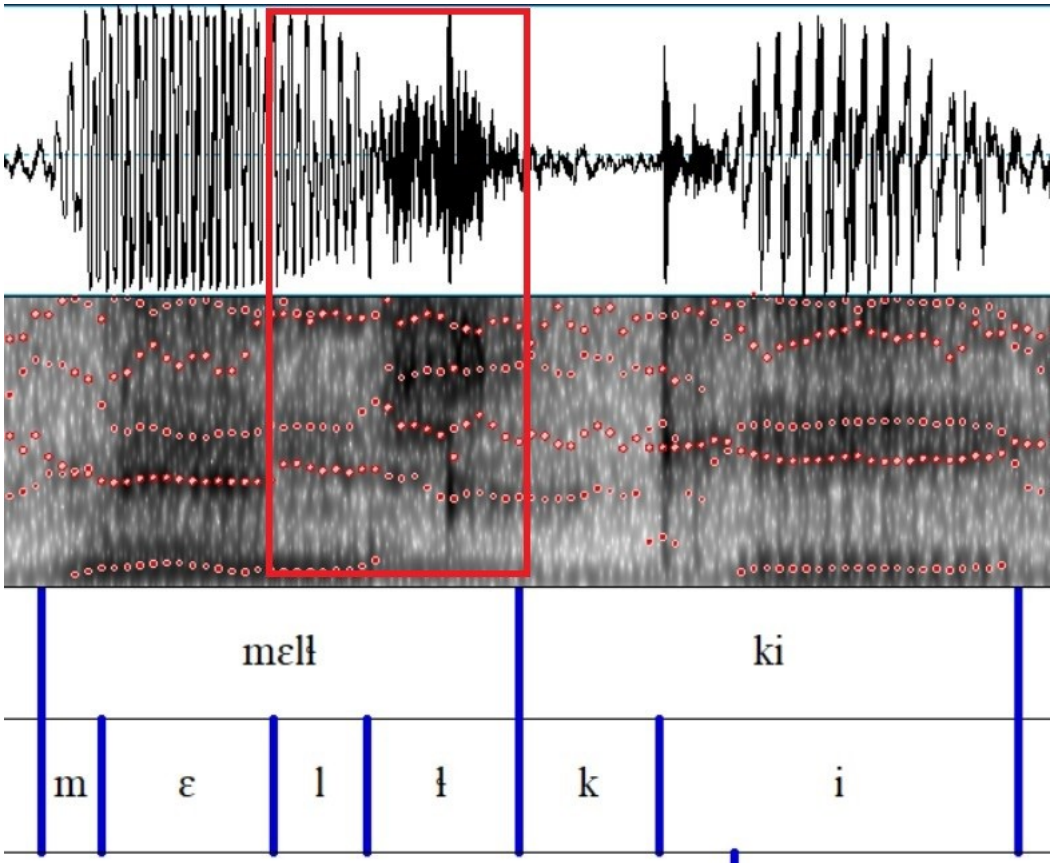

Figure 19: Pronunciation of 'hard'

(Speaker: Matthew)

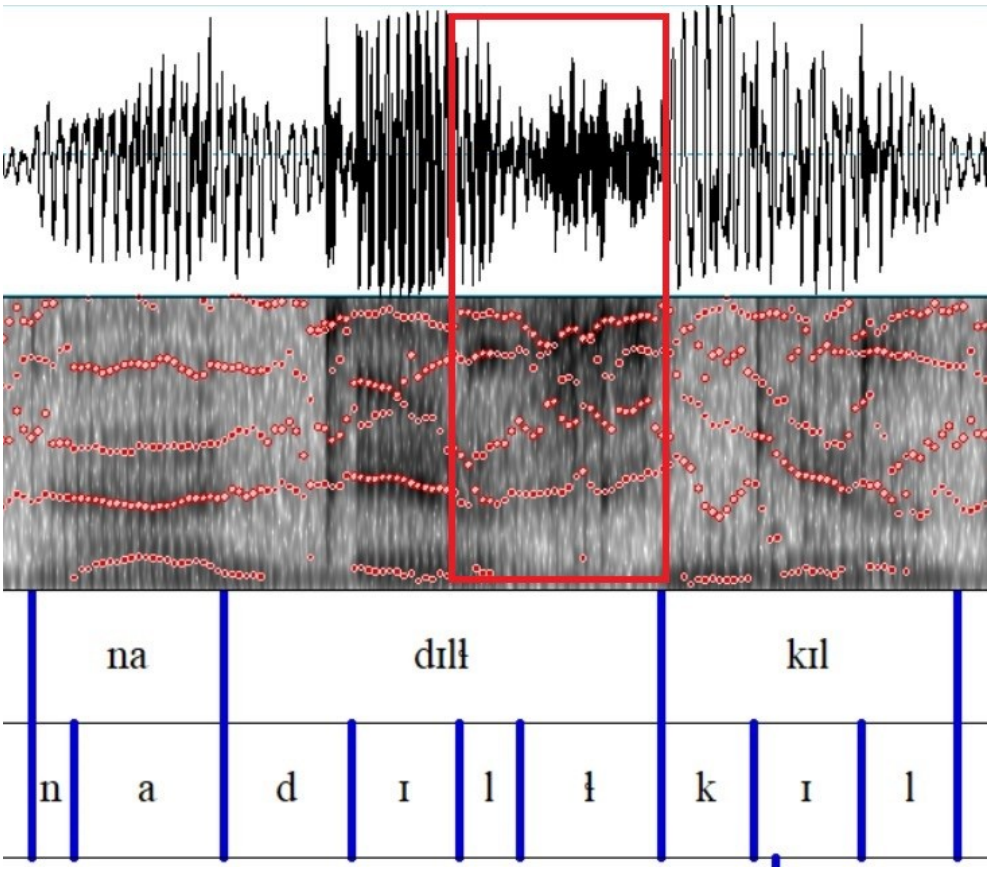

Figure 20: Pronunciation of 'I am that size'

(Speaker: Matthew)

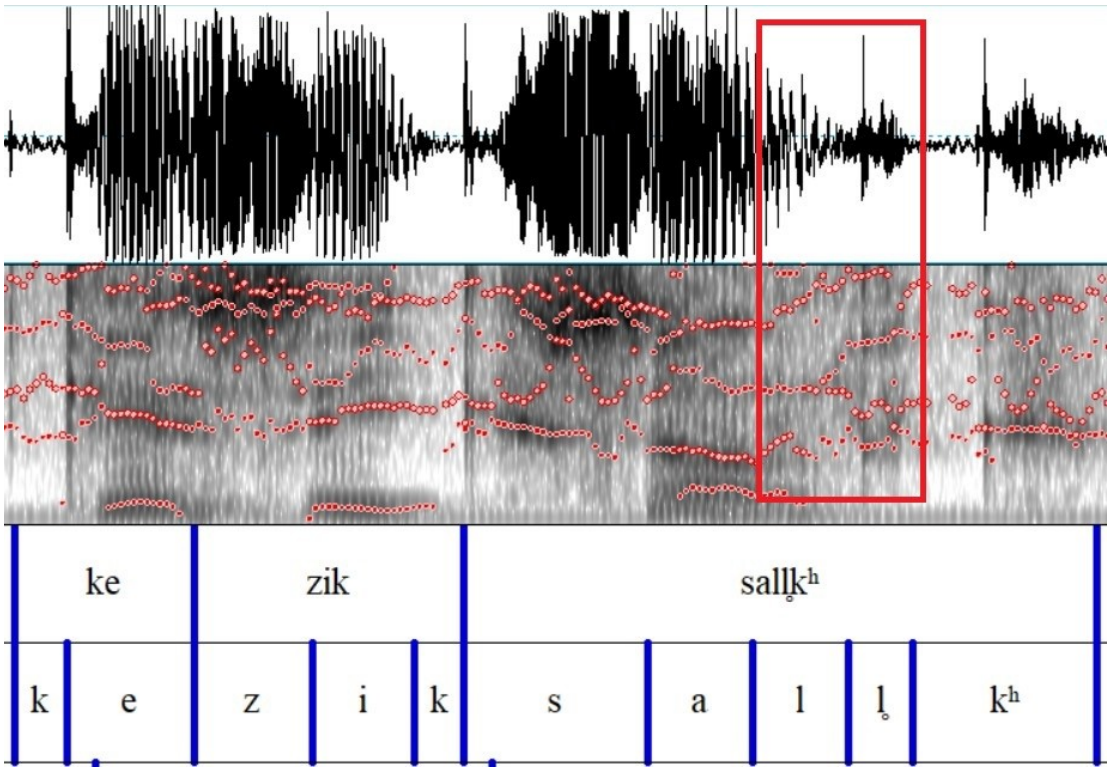

Figure 21: Pronunciation of 'I like him a lot'

(Speaker: Matthew)

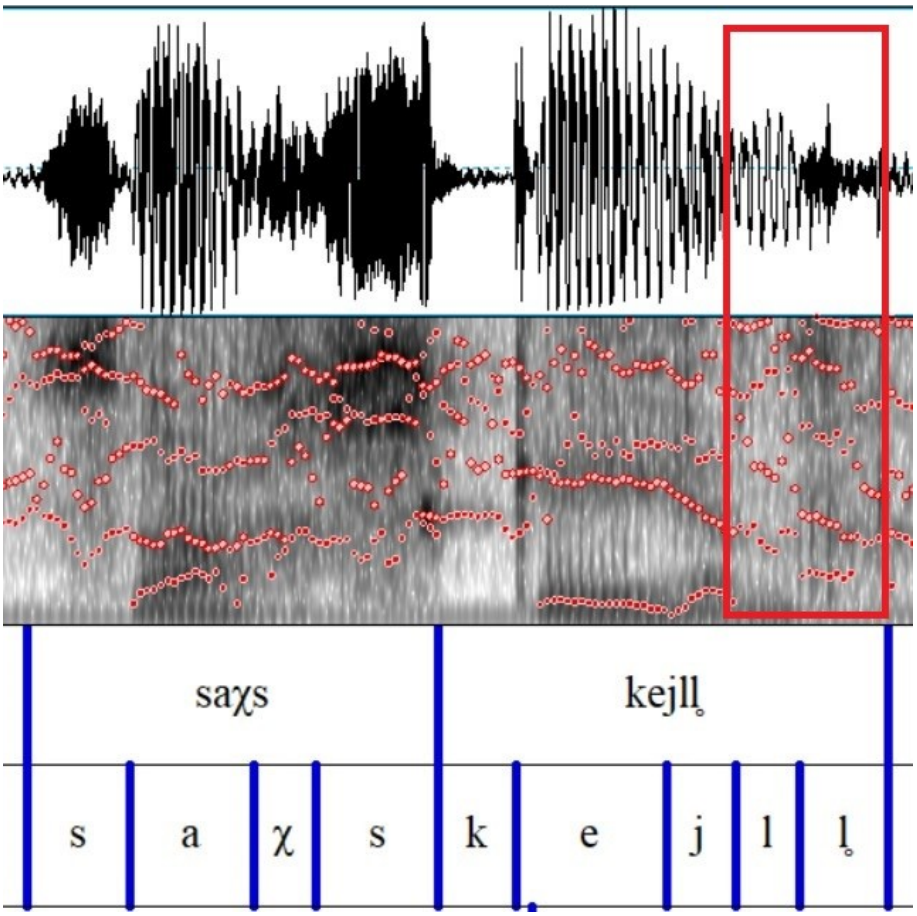

Figure 22: Pronunciation of 'boards'

(Speaker: Matthew)

The following list shows examples of devoiced lateral liquids in word medial and final positions[43] from both Matthew and Paul as well as the voiceless lateral fricative and the transitional clusters which were only observed in Matthew's data. The voiceless lateral fricative surfaces word finally or word medially when immediately followed by a plosive. The transitional lateral cluster [lɬ] only occurs word medially before the voiceless velar plosive [k] (with a single example of this cluster occurring before the affricate [tʃ]). The transitional lateral cluster [ll̥] only occurs word medially before a voiceless alveolar plosive or voiceless velar plosive (with a single example of this cluster occurring

43 There was no indication of [l] becoming devoiced word initially.

word finally after the glide [j]). Any word with a percent symbol (%) beside it indicates that this word was not consistently pronounced with a devoiced [l] or any of its alternates.

Devoiced Lateral Liquid [l̥] Examples:

Word Medial

(322)	%[asuzu**l̥**tidʒi]	‘government people’	(Matthew)
(323)	%[lami**l̥**tʃan̥]	‘inside of the hand’	(Matthew)
(324)	[pɛgizu**l̥**tɪmʔkʰ]	‘we all come’	(Matthew)

Word Final

(325)	[tʃawma**l̥**]	‘boil’	(Paul)
(326)	[wɪdʒigɪmɑdʒə**l̥**]	‘their brother’	(Matthew)
(327)	[kɛsku**l̥**]	‘I am heavy’	(Matthew)
(328)	[wɪtʃkwɑladə**l̥**]	‘he brings him’	(Matthew)

Voiceless Fricative [ɬ]

(329)	[nestajgə**ɬ**]	‘three dollars’	(Matthew)
(330)	[**ɬ**kwidək]	‘to steer’	(Matthew)
(331)	[mɑ**ɬ**hətkʰ]	‘he softens it up’	(Matthew)
(332)	%[nutkə**ɬ**]	‘he hears them’	(Matthew)

Transitional Cluster [l̥l̥]

(333)	[te**l̥l̥**ta]	‘like a sound’	(Matthew)
(334)	%[ka**l̥l̥**tiʲe]	‘quarter’	(Matthew)
(335)	[mɛ**l̥l̥**kekʰ]	‘it is hard’	(Matthew)
(336)	%[kɛzisa**l̥l̥**kʰ]	‘I like him a lot’	(Matthew)

Transitional Cluster [lɬ]

(337)	%[nadɛɬɬkɪl̥]	‘I am that size’	(Matthew)
(338)	[mɛɬɬkɪnʔkʰ][44]	‘I hold onto him’	(Matthew)
(339)	[kiɬɬ kɪdəman̥]	‘you smoke’	(Matthew)
(340)	%[mɛɬɬkigənat]	‘he is strong’	(Matthew)

3.2.3 The Glottal Catch

The glottal catch (sometimes described as a glottal plosive by Bragg) occurs when there is a consonant cluster consisting of a nasal or a lateral liquid followed by a plosive. The most common occurrence of a glottal catch between a sonorant consonant and a plosive is when the plosive is velar [k]. It should be noted that there were examples from Bragg’s data in which other consonants triggered the glottal catch in certain situations such as [s] at the end of a cluster or [w] at the beginning of a cluster, but these did not surface in my re-examination of the data.

Examples of the Glottal Catch (Bragg 1976: 23–24):

(341)	/anko:tk/	[anʔko:tk]	‘he looks after, cares for it’
(342)	/memkeyk/	[mɛmʔkeyk]	‘fields’
(343)	/milpek/	[mɪlʔpek]	‘lakes’
(344)	/mskiku:l/	[m̥ʔskɪgu:l]	‘grass’
(345)	/awti/	[awʔti]	‘path’

44 This is the only pronunciation of this word so it is unclear whether or not the [lɬ] was consistent pronunciation in this word or not.

These types of consonant clusters do not guarantee a glottal catch surfacing every time, but it does occur often in Matthew's data. With Paul's data, on the other hand, the glottal catch happens only a single time in a nasal-affricate environment even though there are several nasal-plosive and lateral-plosive environments in his data ([m]: 25, [n]: 25, [l]: 13). This lack of glottal catch appears to be another divergence among Matthew and Paul's speaking habits and gives one pause in determining whether or not the glottal catch is something that happens universally in Mi'kmaq, or specifically in Newfoundland Mi'kmaq, or is simply the speaking habits of a single Mi'kmaq speaker. More data with a wider variety of speakers would need to be collected in order to determine whether or not this glottal catch is used by a diverse amount of people.

The following three figures from Praat show glottal catches appearing between the nasals/lateral liquid and the velar plosive in the words for the 'Eastern Canada goose (brant)', 'he thinks about him', and 'bike'. It is also important to note that when analyzing waveforms a glottal catch can clearly be seen, but it is almost impossible to notice a glottal catch if you are only listening to the audio.

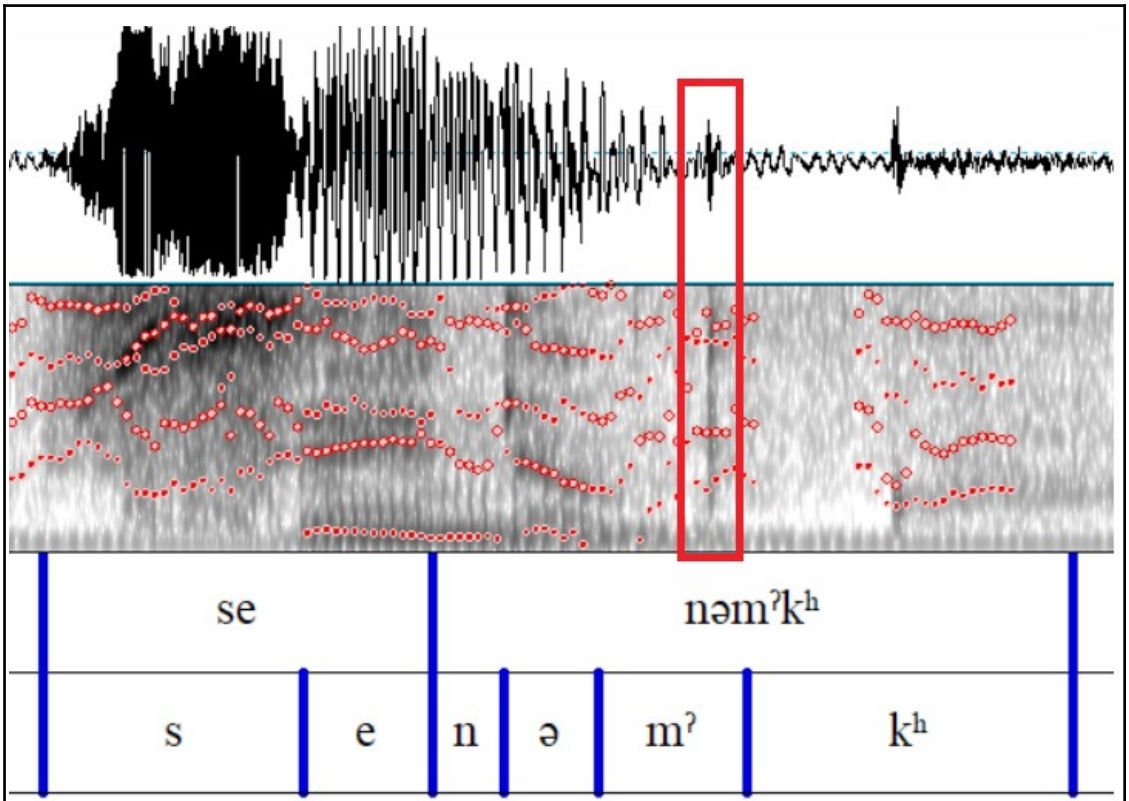

Figure 23: Pronunciation of 'Eastern Canada Goose (brant)' with Glottal Catch Between Nasal [m] and Plosive [kʰ]

(Speaker: Matthew)

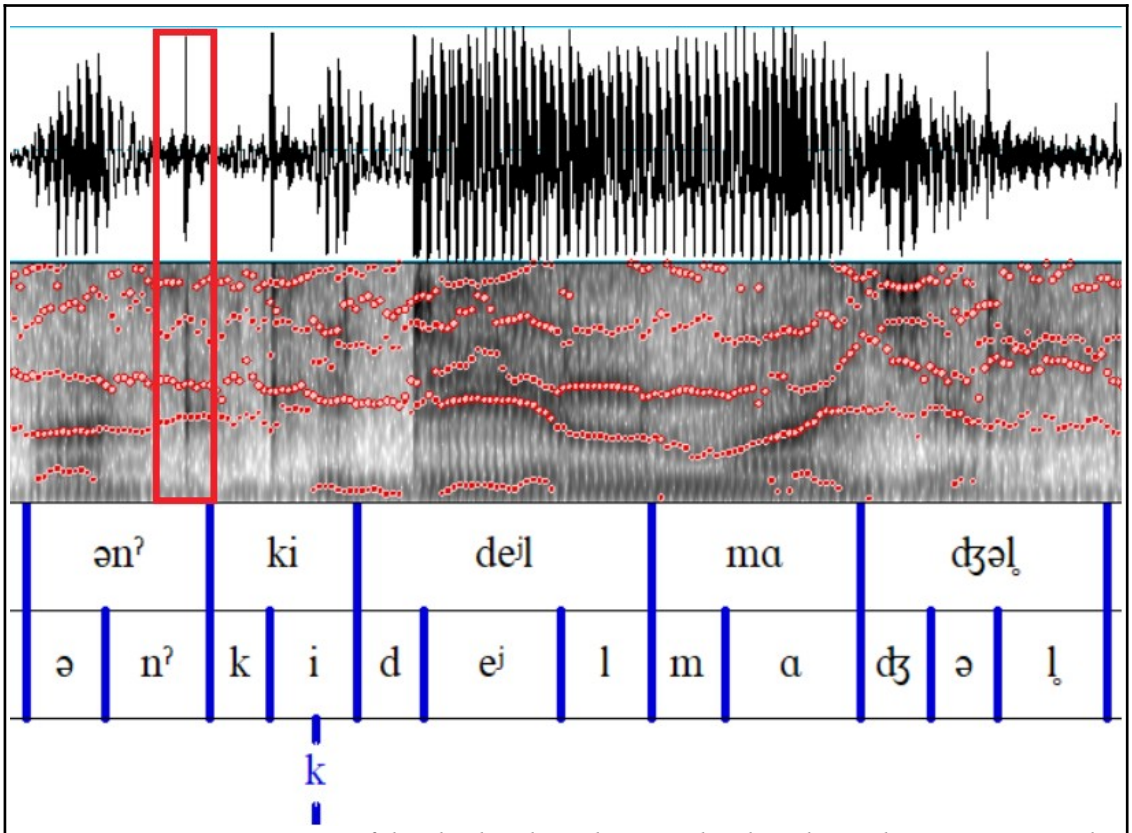

Figure 24: Pronunciation of 'he thinks about him' With Glottal Catch Between Nasal [n] and Plosive [k]

(Speaker: Matthew)

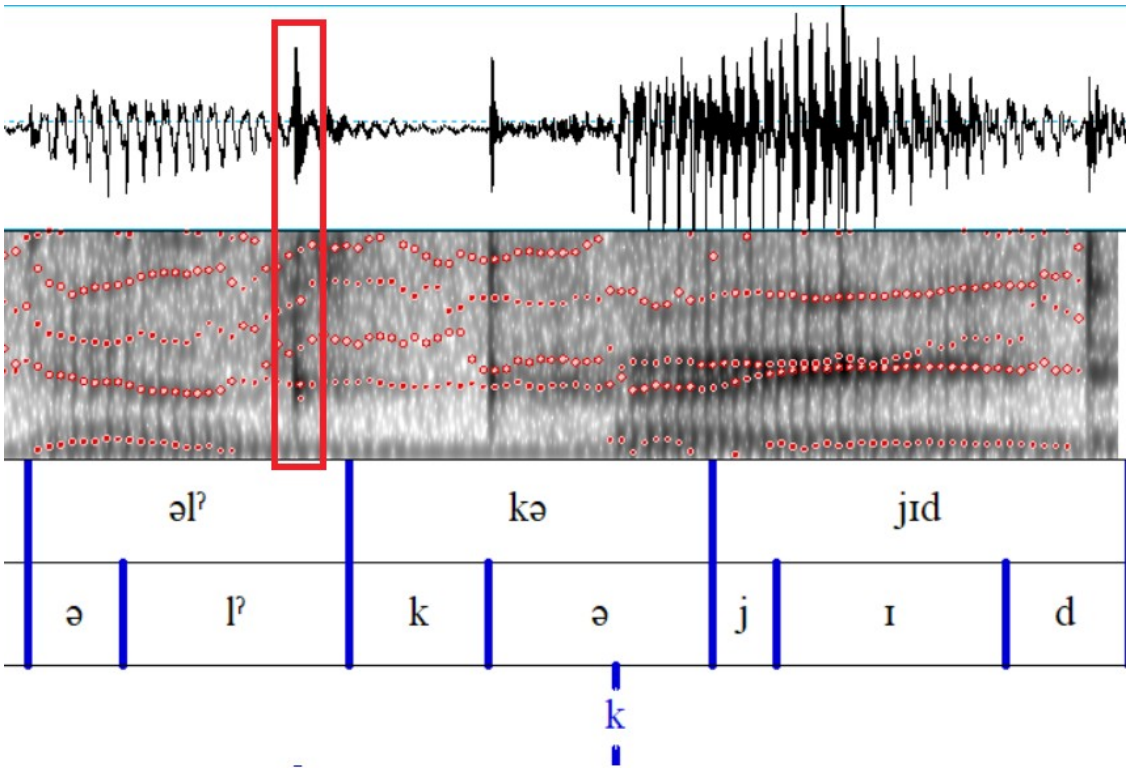

Figure 25: Pronunciation of 'bike' With Glottal Catch Between Lateral Liquid [l] and Plosive [k]

(Speaker: Matthew)

There are times when the glottal catch is pronounced as a fully realized a plosive when a word containing a glottal catch is pronounced strongly – although this doesn't happen very often in the data. Table 20 shows examples of a glottal catch becoming a plosive across multiple pronunciations of the same word.

Table 20: Alternations Between Plosives and the Glottal Catch (Speaker: Matthew)

Alternation	**1st Pronunciation**	**2nd Pronunciation**	**Definition**
[ˀ] ~ [t]	[nɛnˀhɑzi]	[nenthazi]	'I stop short'
	[ənˀkadʒigəˌn]	[əntkadʒigən]	'my leg'
[ˀ] ~ [p]	[ɪzigawɪmˀkʰ]	[kɪzigawɪmpkʰ]	'tell someone off'

3.2.4 Sonorant Consonant Length

In the first phonological examination of Newfoundland Mi'kmaq Bragg made a distinction between what he described as "long liquids" versus geminate liquids, but based on the analysis in the following section there lacks sufficient evidence to conclude that a distinction should be made between a regular consonant and a 'long liquid'. He transcribed his long liquids the way we would transcribe a long vowel, for example a long alveolar nasal would be written as [n:], and his geminate liquids were transcribed as the consonant written twice, for example [nn] – see examples (346) to (351) from Bragg's thesis for comparison. This distinction is examined more closely in the following two subsections.

Comparison of Short, Long, and Geminate Liquids (Bragg 1976: 24):

Short			
(346)	/ləntukw/	[lənˀtukw]	'deer'
(347)	/əlpa:/	[əlˀpɑ:]	'really'
Long			
(348)	/mən:tu/	[mən:du]	'devil'
(349)	/əl:pa:tu/	[əl:bɑ:du]	'boy'
Geminate			
(350)	/kwitənn/	[kwɪdənn]	'canoes'
(351)	/tallukwet/	[tɑllugwɛt]	'what is he doing?'

3.2.4.1 Long Liquids

In order to explain the voicing of plosives that immediately followed a nasal or lateral liquid consonant, Bragg suggested that the preceding consonant was long and its length triggered "the voicing of the immediately following plosive" (Bragg 1976: 24). Although this conclusion is intriguing, there are a lot of questions attached to it. Most importantly, was there any indication from the native speaker that they heard these consonants as long, but that this length was also distinct from a geminate consonant? Unfortunately, this is not an easy question to answer as these recordings are from the 1970s and there is little to no discussion or debate included in these tapes, but Bragg does state in his thesis that the "length in the liquid consonants has not been found to be phonemic" (Bragg 1976: 24).

Thankfully with the advancement of tools for linguistic analysis, especially in the accuracy of analysis through computer programs such as Praat and Phon, I was able to measure the overall average length of the nasals and lateral liquid as well as the average length of these consonants when they precede voiced and voiceless plosives. Figure 26 depicts these averages and demonstrates that when a nasal or lateral liquid is pronounced directly before a voiced plosive the average length of time the initial consonant is pronounced is higher than the overall average. For example, the average length of the alveolar nasal is 88 milliseconds, but when it precedes a voiced plosive that average becomes 121 milliseconds. The average length of the sonorant consonants was also measured before voiceless plosives to eliminate the possibility of the average length being above the overall average regardless of the voicing of the following plosive. Interestingly, while both the nasals have an average that is slightly higher than the overall average – the average of the alveolar nasal before a voiceless plosive is 93 milliseconds and the average of the bilabial nasal is 96 milliseconds – the average for the lateral liquid before a voiceless plosive is roughly 20 milliseconds less than its overall average (79 milliseconds).

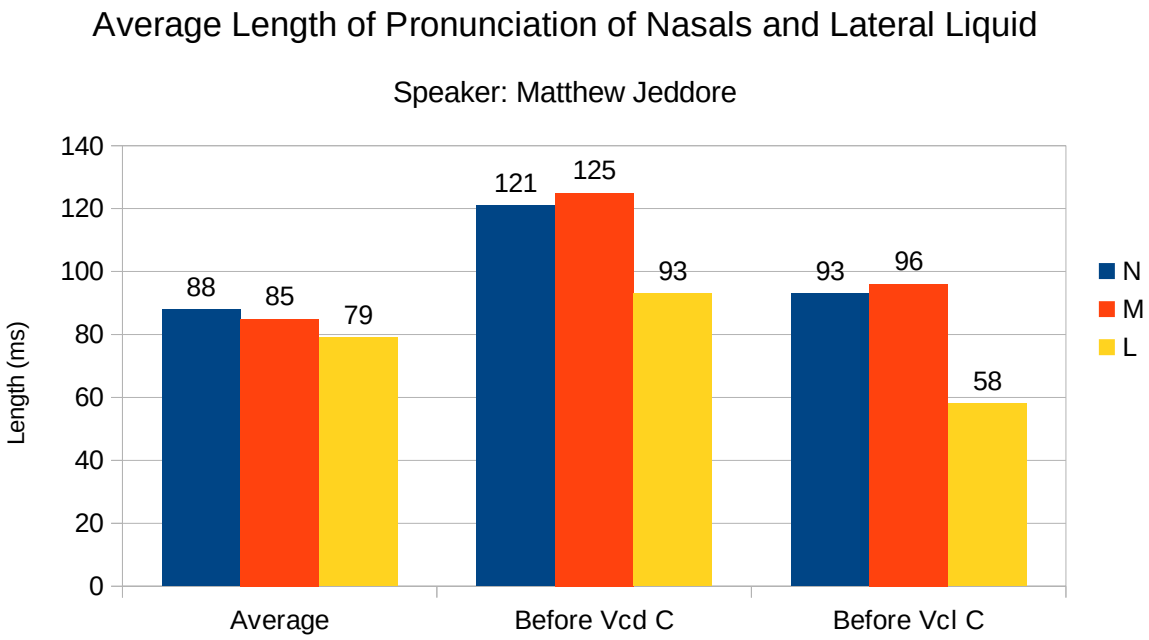

Figure 26: Average Length of Pronunciation of Nasals and Lateral Liquid (Speaker: Matthew)

The largest difference between the overall average of the nasals and lateral liquid and their averages before a voiced plosive was 40 milliseconds (bilabial nasal) and even less for the alveolar nasal (33 milliseconds) and lateral liquid (14 milliseconds). These averages are less than 35% longer than the overall average. To compare, geminate consonants can be up to three times as long as their singleton counterparts. This is true for languages such as Berber (Ridouane 2007) and Finnish (Aoyama 2002). But geminates can also have a shorter ratio of two to one, and sometimes even lower, in other languages such as Japanese (Aoyama 2002), Italian (Payne 2005), and Turkish (Lahiri & Hankamer 1988).

While there is no mention of 'long liquids' in other dialects of Mi'kmaq, there are instances of voiced consonants immediately following nasals or the lateral liquid. In the Mi'kmaq Online Dictionary, which contains recordings from three different Listuguj Mi'kmaq speakers, there are

several words in which this occurs. Examples of these words, as well as their pronunciations have been included in the following table. When listening to the audio recordings of these words provided by the dictionary the consonant does not appear to be any longer than other lateral liquid pronunciations, but a closer examination of these recording in Praat is needed before any conclusions can be made.

Table 21: Voiced Consonants Preceded by a Nasal or Lateral Liquid in Listuguj Mi'kmaq

Consonant Cluster	**Definition**	**Listuguj Orthographic Spelling**	**Pronunciation**
mb	‘s/he somersaults’	ja**mp**o’qiet	jam-**b**oo-hgi-et
	‘s/he is in the process of sitting down’	pe**mp**a’sit	bem-**b**aa-sit
md	‘s/he is running along’	pe**mt**ugwi’g	bem-**d**u-gwiig
	‘oyster’	t**mt**mu	dêm-**d**ê-mu
mg	‘it is too good’	wesa**mg**lu’lg	we-sam-**g**ê-luulk
	‘s/he piles them (planks)’	ela**mg**o’lajig	e-lam-**g**oo-la-jik
nb	‘leader’	niga**np**uguit	ni-gan-**b**u-gu-it
nd	‘s/he hunts eels in mud’	na**nt**uat	nan-**d**u-at
	‘s/he feels around blindly or in the dark’	na**nt**unewet	nan-**d**u-ne-wet
lb	s/he has...in his/her mouth’	a**lp**atl	all-**b**a-dêl
	‘it forms drifts’	e**lp**anigs’g	el-**b**a-nik-sêk
ld	‘s/he makes it’	e**lt**oq	ell-**d**ohk
	‘s/he runs toward’	e**lt**ugwi’g	ell-**d**u-gwiig
lg	‘hoe’	**lg**e’gn	êll-**g**ee-gên
	‘female animal’	**lg**wetug	êll-**g**we-duk

In Listuguj Mi’kmaq there is nothing specific that appears to be influencing the voicing of the consonants in these positions. In fact, more often than not, consonants that are preceded by a nasal or lateral liquid have a higher chance of being voiceless than voiced. Whether a consonant becomes voiced or remains voiceless in this position appears to be entirely arbitrary, but is consistently

pronounced either voiced or voiceless by all three native Listuguj speakers. Based on the similarities between Listuguj and Newfoundland Mi'kmaq when it comes to plosive voicing following a nasal or lateral liquid, I believe that the slight elongation of these preceding consonants is a form of free variation and is irrelevant to the voicing of the plosive; this voicing is simply a tendency to the native speakers.

3.2.4.2 Geminate Consonants

Geminate consonants[45] were not a common occurrence in the data, but did occur with the sonorant consonants /n/, /m/, and /l/ in Matthew's data. Initially these geminate consonants did not appear to have any effect on the words themselves, but upon closer inspection there was one type of consonant that became geminate due to pluralization. From time to time throughout the data there were instances of words that ended with an alveolar nasal becoming plural, but rather than adding the plural morphemes ([-k] for animate and [-l] for inanimate) the final nasal became a geminate. The length of time these geminates were pronounced was at least twice as long, but could be as much as three times longer than the original nasal. The following table shows examples of these words in singular and plural form as well as the length of time in milliseconds that these final nasals were pronounced. The animacy of these nouns was collected from the Mi'kmaq Online Dictionary (Haberlin, Williams & Ziegler 1997).

45 In this analysis consonants were classified as geminates if they were pronounced for 200 milliseconds or longer, making them at least twice as long as the average (from Figure 22: [n] 88 milliseconds, [m] 85 milliseconds, [l] 79 milliseconds)

Table 22: [-n] Plural Morpheme (Speaker: Matthew)

Definition	Singular	Plural	Animacy (Dictionary)
‘rib’	[pigaχan] (77ms)	[pigaʔənn] (272ms) [ənpigaχann] (229ms) [pigaɣann] (252ms) [pigagɑnn] (260ms)	Noun animate
‘hair’	[nusabən] (105ms) [nusabun] (86ms)	[nuzɑbunn] (257ms) [nuzɑbunn] (274ms)	Noun inanimate
‘heart’	[kəmlamun] (131ms) [kəmlɑmun] (97ms)	[kumlɑmunn] (297ms)	Noun animate
‘nose’	[sɪsqun] (183ms) [sɪsqun] (107ms)	[sɪsqunn] (289ms) [sɪsqunn] (289ms)	Noun inanimate
‘hook’	[kəgən] (199ms) [əmʔkəgən] (125ms)	[kəgənn] (260ms)	Noun inanimate
‘canoe’	[kwidn̩] (145ms) [kwidn̩] (131ms)	[kwidn̩n] (335ms) [kwidn̩n] (370ms)	Noun inanimate
‘trap’	[ɔʔtegən̩] (62ms) [lɔktegən] (81ms)	[lɔχtegənn] (288ms)	Noun inanimate

This observation is not exclusive to Newfoundland Mi’kmaq. In 2012, a paper was published that examined phonetic, phonological, and morphosyntactic variations among the Listuguj Mi’kmaq dialect compared to other Mi’kmaq dialects (Quinn 2012). Within this paper is the observation that Listuguj Mi’kmaq “exhibits a morphologically conditioned assimilation of the (lateral) liquid to an adjacent nasal. This is most commonly seen in the assimilation of inanimate plural and obviative singular endings, both homophonous as -l, to stems ending in /-n/” (Quinn 2012: 1). The following two examples, (352) and (353), were taken from that paper to demonstrate these types of assimilation. Interestingly, the word for ‘cranberry’ did appear in Matthew’s data, but the inanimate plural morpheme [-l] did not assimilate to create the geminate nasal seen in Listuguj Mi’kmaq.

(352) [su:n] ‘cranberry’ [su:n:] ‘cranberries’ (Quinn 2012: 1)

(353) [nmisinɛn]‘our older sister’ [nmisinɛn:] ‘our older sister (obv)’(Quinn 2012: 2)

There are other examples from Matthew’s data in which the final nasal is pronounced longer than normal, but it isn’t consistently pronounced this way. For example the word for ‘oars’ [tahən] is pronounced four times, but only twice is it pronounced with a long final nasal (105 milliseconds versus 250 milliseconds). Additionally, there were words pronounced with a long final nasal that had nothing to do with plurality. For example, the word meaning ‘his pipe’ [udəmɑhɑn] was pronounced more often than not with a long final nasal, reaching as much as 309 milliseconds in length. This word was pronounced eight separate times throughout the data, but only in five of these pronunciations is the final nasal long. Table 23 contains a list of additional words that were pronounced with a long nasal consonant, but the length was not consistent across multiple pronunciations of these words[46].

46 There are seven other words in which the nasals within them are longer than 200 milliseconds, but these words are only pronounced a single time and therefore have nothing to compare to in order to determine whether or not the nasal is consistently pronounced as a geminate. These words and the length of pronunciations have been included here:

‘he hears him’	[nnoduwɑdʒɪl]	297ms
‘to ride a bicycle’	[tagaʔənne]	224ms
‘he kills it’	[nnebɑdɔχ]	207ms
‘he suckles him’	[nnunɑlɑdʒɪl̥]	244ms
‘his elbow’	[uskənigɪnn]	203ms
‘inside of the hand’	[wɑnɑmɪlɬtʃaʔɑnn]	260ms
‘moccasin’	[kəsnn]	244ms

Table 23: Words Pronounced with Geminate Alveolar Nasal [nn] (Speaker: Matthew)

Definition	Word	Length of Geminate
‘northern’	[oqwɑnn]	274ms
‘slides’	[utabɑχɑnn]	327ms
‘my shoulders’	[tḷmaʔənn]	261ms
‘scissors (pl.)’	[təmətχaigənn]	219ms
‘my hand’	[npɪdn̩n]	296ms
‘his shoulders’	[uktḷmɑχann]	340ms
‘you arrive’	[pɛgizɪnn]	260ms
‘beads’	[kɪspizunn]	242ms

While the geminate alveolar nasal tended to occur almost exclusively word finally, the geminate bilabial nasal occurred more commonly word initially. There are less than ten occurrences of a geminate bilabial nasal in Matthew’s data. These geminates do not appear to be consistent across multiple pronunciations of the same word or the word itself is only pronounced a single time which, again, prevent us from knowing whether or not the long nasal would be consistent. The following table lists all words containing a geminate [m]. Words with a percent symbol (%) beside them indicate they were only pronounced a single time.

Table 24: Words Pronounced with a Geminate Alveolar Nasal [mm] (Speaker: Matthew)

Definition	Word	Length of Geminate
'twelve noon'	[mmʔkəntʃɪltaboadʒɪt][47]	274ms
'a room'	[əlemmikazi]	246ms
'school'	%[ɛginamogwɔmm]	296ms
'your nostrils'	[nadaɑnəmm̥]	237ms
'ash tree'	[mmudʒidʒmɪnaχsi] [mmudʒidʒmɪnaχsi]	282ms 238ms
'bad'	%[mmɛduwiʲɪk]	212ms
'he beats'	%[mmatejɪt]	221ms
'I'm big'	[mmɛskiln]	252ms

There are even less occurrences of a geminate lateral liquid within the data, occurring a total of six times across ten hours of audio. Similar to the bilabial nasal, the lateral liquid can become a geminate word initially, medially, or finally. The following table lists all the words in which a geminate lateral liquid was found. As with the bilabial nasal, the words in this list are not consistently pronounced with a geminate lateral liquid and any words with a percent symbol (%) following it indicates that this word was only pronounced a single time.

Table 25: Words Pronounced with a Geminate Lateral Liquid [ll] (Speaker: Matthew)

Definition	Word	Length of Geminate
'gull'	[kəllɔʔɔndiʲetʃ]	253ms
'go (a group goes)'	[llidah]	210ms
'he builds a house for him'	[ɛwigɛwɑjəll]	203ms
'sometimes'	%[tʃɪptuwegell]	218ms
'basket'	[pudallijɛwe]	215ms
'you are big'	[mɛskillŋ̊]	217ms

47 In other pronunciations of this word the initial [m] is completely dropped.

3.3 Vowels

This section provides a summary of the vowel inventory of Newfoundland Mi'kmaq. According to previous works, there are eleven vowels in the language consisting of six short vowels /i,e,u,o,a,ə/ and, with the exception of schwa, five corresponding long vowels. Due to time constraints, an in depth examination of the vowels was not possible, specifically vowel length and the formants were not able to be analyzed. While vowel length was not able to be measured during this re-examination, there was one instance of a minimal pair within the data that clearly showed vowel length to be distinctive.

Vowel Length Minimal Pair (Speaker: Matthew)

(354) [kɛluzɪt] 'he speaks'

(355) [kɛlu:zɪt] 'he is beautiful'

According to Bragg's original analysis he stated that "potential clusters [were] broken up by the glides /w/ and /y/ so that except for a few isolated and unresolved examples we do not find clusters of nonidentical vowels" (Bragg 1976: 27) – an exhaustive list of the words containing vowel clusters in Bragg's data can be seen following this paragraph. While it was more common to find glides breaking up potential vowel clusters during the re-examination of the data, there were still quite a few instances with each vowel in which it was either immediately preceded by or followed by a vowel[48]. Additionally, in both Bragg's analysis and my re-analysis it was observed that the vowels could be pronounced as either tense or lax. After examining the data I've determined that these alternations are

48 There were a few times in the data in which I could clearly hear the glide /j/ occurring between two vowels, but upon a closer inspection of the waveform and spectrogram in Praat there was no visible glide. It is possible that my ear was able to perceive a sound that was too subtle for Praat to pick up on. Nevertheless, I made a note of each of these occurrences by transcribing the first vowel with a superscript *j*, for example [a^{j}]. None of these examples have been included in this section, but will be available in the complete word list found in the appendix.

in free variation and that tenseness does not appear to be a phonemic feature in Mi'kmaq, even on an allophonic level.

Words Containing Vowel Clusters (Bragg 1976: 36):

(356)	/new/	[neu]	'four'
(357)	/neukunit/	[neugunɪt]	'fourth'
(358)	/euneyk/	[euneyk]	'foggy'
(359)	/euneykəl/	[euneygəl]	'foggy patches, areas'
(360)	/əukun/	[əugun]	'curtain'

3.3.1 High Front Unrounded Vowels

The high front tense and lax vowels occur word initially and word finally as well as between consonants and as the first or last vowel in a vowel cluster. The lax vowel [ɪ] does not surface as often in word final positions or as the first vowel in a vowel cluster. The high front vowels are in free variation with one another and I concur with Bragg that they are realizations of the same underlying phoneme /i/. The following table is a small list of of [i] and [ɪ] alternations found in both Matthew and Paul's data.

Table 26: Vowel Alternations [i]/[ɪ]

[i] Pronunciation	**[ɪ] Pronunciation**	**Definition**	**Speaker**
[nitʃku]	[nɪtʃku]	‘eyebrow’	Paul
[kizaχ]	[kɪza]	‘all ready’	Matthew
[windʒuksnən̥]	[wɪndʒuksnən̥]	‘shoe’	Paul
[wɛgajwitʰ]	[wɛgajwɪtʰ]	‘angry at someone’	Matthew
[piskwɑ]	[pɪskwɑ]	‘come in’	Matthew
[asuzul̥tidʒi]	[alsuzul̥tɪdʒɪ]	‘government people’	Matthew
[imgwɑlɑdʒi]	[ɪmgwɑlɑdʒi]	‘he hides them’	Matthew
[igadadinitʃ]	[igadadinɪtʃ]	‘I bet you ten dollars’	Matthew

High Front Tense Vowel /i/ Examples:

Word Initial

(361) [**i**bit] ‘woman’ (Matthew)

(362) [**i**gan] ‘you arrive’ (Matthew)

(363) [**i**gɪn̥] ‘sometimes’ (Matthew)

(364) [**i**skɑdʒijɪn̥] ‘you are ready’ (Matthew)

Word Final

(365) [hepɛuz**i**] ‘come warm yourself’ (Paul)

(366) [mɪdʒigadɔtobəd**i**] ‘he smears it up’ (Paul)

(367) [qənobad**i**] ‘well’ (Matthew)

(368) [əlismaz**i**] ‘I lie down’ (Matthew)

First Vowel in Cluster

(369) [sol**i**ewej] ‘a quarter’ (Matthew)

(370) [kumi nez**i**et] ‘sleet falling’ (Matthew)

(371) [ud**i**ulde] ‘good cheap’ (Matthew)

Last Vowel in Cluster

(372) [nasta**i**] ‘string’ (Paul)

(373) [kwilɛ**i**n] ‘to look for something’ (Matthew)

(374) [təmətχa**i**gən] ‘scissors (pl.)’ (Matthew)

Between Consonants

(375) [wɛgw**i**lat] ‘back’ (Paul)

(376) [puwɑdʒ**i**delmadʒə] ‘he hates him’ (Paul)

(377) [kw**i**dʒ**i**tʃ] ‘elder sister’ (Matthew)

(378) [w**i**gad**i**gɪn̥] ‘book’ (Matthew)

High Front Lax Vowel [ɪ] Examples:

Word Initial

(379) [**ɪ**lɪktʃuwɑh] ‘shortcut through the woods’ (Matthew)

(380) [**ɪ**mgwɑlɑdʒi] ‘he hides them’ (Matthew)

(381) [**ɪ**skat] ‘ashtray’ (Matthew)

(382) [**ɪ**zideweda] ‘he bellows’ (Matthew)

Word Final

(383) [mɛduwejəɛ kwidʒ**ɪ**] ‘bad person’ (Paul)

(384) [alsuzul̥tɪdʒ**ɪ**] ‘government people’ (Matthew)

First Vowel in Cluster

(385) [nɛgəm ukw**ɪ**utʃl̥] ‘his father’ (Matthew)

Last Vowel in Cluster

(386)	[wɑbeɪk]	‘white’	(Paul)
(387)	[wɛdemejaɪh]	‘I hinder him’	(Matthew)
(388)	[wəlɛɪmpkʰ]	‘I’m well’	(Matthew)
(389)	[mɪdʒigeɪχ]	‘dirty’	(Matthew)

Between Consonants

(390)	[kaeɛkwɪɛdɪɛ]	‘fall to pieces’	(Paul)
(391)	[abɪstanɛwtʃ]	‘wood cat’	(Matthew)
(392)	[mimadʒɪkʰ]	‘wood growing’	(Matthew)
(393)	[gɪdʒɪdo]	‘I know it’	(Matthew)

3.3.2 Mid Front Unrounded Vowels

The mid front tense and lax vowels occur word initially, word finally, between consonants, as the first vowel in a vowel cluster, and as the last vowel in a vowel cluster. These vowels are in free variation with one another with the tense vowel /e/ being the underlying phoneme. The following table is a small list of the tense and lax mid front vowels alternating with one another across multiple pronunciations of the same word.

Table 27: Vowel Alternations [e]/[ɛ]

[e] Pronunciation	**[ɛ] Pronunciation**	**Definition**	**Speaker**
[nabejo]	[nabɛjo]	‘rooster’	Matthew
[ewsami]	[ɛwsami]	‘too much for me’	Matthew
[lamek]	[lamɛkʰ]	‘under’	Matthew
[sɛwistem]	[sɛwistɛm]	‘you break it (window)’	Matthew
[kmes]	[kmɛs]	‘fish maggots’	Matthew
[pigwəlkelado]	[pigwəlkɛlado]	‘he carries a lot of something to it’	Paul

Mid Front Tense Vowel /e/ Examples:

Word Initial

(394) [**e**wsami] ‘too much for me’ (Matthew)

(395) [**e**legwɪt] ‘he works’ (Matthew)

(396) [**e**gɪn] ‘sometimes’ (Matthew)

Word Final

(397) [ɛaɛk**e**] ‘boil’ (Paul)

(398) [abɑhtugow**e**] ‘seabird’ (Matthew)

(399) [igɪnamw**e**] ‘he asks for it’ (Paul)

(400) [tʃaw**e**] ‘chewing tobacco’ (Matthew)

First Vowel in Cluster

(401) [ham**e**ɪkʰ] ‘on the other side of the lake’ (Paul)

(402) [wɪdʒ**e**okʰ] ‘I go with him’ (Matthew)

Last Vowel in Cluster

(403) [ka**e**ɛkwɪɛdɪɛ] ‘fall to pieces’ (Paul)

(404) [apusχɑ**e**n̥] ‘you lock it’ (Matthew)

(405) [kɪza**e**gus] ‘August’ (Matthew)

(406) [kumi nezi**e**t] ‘sleet faling’ (Matthew)

Between Consonants

(407) [k**e**zɪd**e**w**e**dah] ‘big noise’ (Matthew)

(408) [wɑhand**e**jo] ‘bone’ (Paul)

(409) [pɛs**e**k^{h}] ‘I smell him’ (Paul)

(410) [t**e**m**e**g**e**j] ‘I broke it off’ (Matthew)

Mid Front Lax Vowel [ɛ] Examples:

Word Initial

(411) [**ɛɛ**kəmalk^{h}] ‘he waits for him’ (Paul)

(412) [**ɛ**wɪpk^{h}] ‘nut’ (Matthew)

(413) [**ɛ**dulogwɛj] ‘I annoy him’ (Matthew)

(414) [**ɛ**ldu] ‘working at it’ (Matthew)

Word Final

(415) [lij**ɛ**] ‘ago’ (Matthew)

(416) [wapk**ɛ**] ‘daylight’ (Matthew)

(417) [lam**ɛ**] ‘under’ (Matthew)

First Vowel in Cluster

(418) [pis**ɛ**o] ‘froth’ (Matthew)

(419) [kund**ɛ**o] ‘stone’ (Matthew)

(420) [kwil**ɛ**in] ‘to look for something’ (Matthew)

Last Vowel in Cluster

(421) [lasiɛt] ‘plate’ (Matthew)

(422) [wɛliɛskɪtpu] ‘good morning’ (Matthew)

Between Consonants

(423) [amudlɛwe] ‘watch’ (Paul)

(424) [kɪzɪdɛwɛdah] ‘noise’ (Matthew)

(425) [pɛmadɛdʒibudo] ‘he makes it slide’ (Paul)

(426) [kɛdlɛwe] ‘also’ (Matthew)

3.3.3 Low Central and Back Vowels

The low central and back vowels occur in all positions, word initially, word finally, between consonants, as the first vowel in a vowel cluster, and as the last vowel in a vowel cluster; although the back vowel [ɑ] does not surface as often word initially or in vowel clusters. There are several occurrences of vowel alternations between the central and back vowels across multiple pronunciations of the same word with the central vowel being the underlying phoneme – see the following table for a small list of these alternations taken from Matthew’s data.

Table 28: Vowel Alternations [a]/[ɑ]

[a] Pronunciation	**[ɑ] Pronunciation**	**Definition**	**Speaker**
[kəmɑχtam]	[kəmɑχtɑm]	‘your brother-in-law’	Matthew
[kawɑtkʰ]	[kɑwɑtkʰ]	‘spruce tree’	Matthew
[abɑbi]	[ɑbɑbi]	‘rope’	Matthew
[padaduɛ]	[pɑdɑdutʃ]	‘left side’	Matthew
[poχtabaj]	[poχtabɑj]	‘I start to float’	Matthew
[negabigwaj]	[negabigwɑj]	‘I am blind’	Matthew

Low Central Vowel /a/ Examples:

Word Initial

(427)	[**a**bi]	‘bow (n.)’	(Paul)
(428)	[**a**buktʃĩtʃ]	‘rat’	(Matthew)
(429)	[**a**laptık]	‘he looks for it’	(Paul)
(430)	[**a**nkotk^{h}]	‘he looks after it’	(Paul)

Word Final

(431)	[megwez**a**]	‘red ochre’	(Paul)
(432)	[wıɛkɛwɛjukt**a**]	‘you laugh at me’	(Paul)
(433)	[pidʒij**a**]	‘it falls in a hole’	(Matthew)

First Vowel in Cluster

(434)	[matχ**a**igən]	‘scissors (pl.)’	(Matthew)
(435)	[wen**a**əje]	‘jump’	(Matthew)
(436)	[kɛs**a**egus]	‘August’	(Matthew)

Last Vowel in Cluster

(437)	[nɛmi**a**dʒɪl̥]	‘he sees him’	(Matthew)
(438)	[padʒidʒi**a**didʒık]	‘they fall over’	(Matthew)

Between Consonants

(439)	[pig**a**ʔ**a**n̥]	‘rib’	(Matthew)
(440)	[tʃ**a**wm**a**l̥]	‘boil’	(Paul)
(441)	[k**a**d**a**χ]	‘eels’	(Matthew)
(442)	[n**aɛa**do]	‘he puts it on’	(Paul)

Low Back Vowel [ɑ] Examples:

Word Initial

(443) [**ɑ**bɑbitʃ] ‘cotton’ (Matthew)

(444) [**ɑ**p] ‘do it again’ (Matthew)

Word Final

(445) [tʃugw**ɑ**] ‘bring’ (Paul)

(446) [pɪskw**ɑ**] ‘come in’ (Matthew)

(447) [ɛli wɪdʒw**ɑ**] ‘go the short way’ (Matthew)

(448) [tegw**ɑ**] ‘short stick’ (Matthew)

First Vowel in Cluster

(449) [apusχ**ɑ**en̥] ‘you lock it’ (Matthew)

Last Vowel in Cluster

(450) [sɪpta**ɑ**lɪkʰ] ‘I stretch him’ (Matthew)

(451) [uknada**ɑ**nəm̥] ‘your nostrils’ (Matthew)

Between Consonants

(452) [nəm**ɑ**χt**ɑ**m] ‘my brother-in-law’ (Matthew)

(453) [abow**ɑ**nəmw**ɑ**dʒə] ‘he helps him’ (Paul)

(454) [klumwɛdʒuw**ɑ**skʰ] ‘coal’ (Paul)

(455) [tʃ**ɑ**h**ɑ**m**ɑ**du] ‘bring something to a boil’ (Matthew)

3.3.4 High Back Rounded Vowels

The high back tense vowel [u] occurs in all positions, word initially, word finally, between consonants, as the first vowel in a vowel cluster, and as the last vowel in a vowel cluster. Its lax counterpart [ʊ] does not surface as often in the data and when it does surface it is only between consonants or in word

final position. It is possible that the lax vowel surfaces more often in the data, but that I was unable to discern the difference between the two sounds in some cases.

High Back Tense Vowel /u/ Examples:

Word Initial

(456)	[**u**klejawɪn]	‘you belong here’	(Matthew)
(457)	[**u**kwɑdʒigən̥]	‘his leg’	(Matthew)
(458)	[**u**la]	‘here’	(Matthew)
(459)	[**u**nudʒi]	‘hand’	(Matthew)

Word Final

(460)	[temad**u**]	‘to break’	(Paul)
(461)	[aptʃ**u**]	‘always’	(Matthew)
(462)	[qɑlib**u**]	‘deer’	(Paul)
(463)	[mushənam**u**]	‘blue’	(Matthew)

First Vowel in Cluster

(464)	[lɑmejg**u**ompk ejk^{h}]	‘inside’	(Matthew)
(465)	[wɑbek**u**o]	‘white pine’	(Matthew)

Last Vowel in Cluster

(466)	[udi**u**lde]	‘good cheap’	(Matthew)
(467)	[bemi**u**naɣaja]	‘it’s jumping along’	(Matthew)

Between Consonants

(468)	[pɛgiz̆**u**l**u**t]	‘he brings him’	(Paul)
(469)	[n**u**ɛɑb**u**n̥]	‘my hair (sg.)’	(Matthew)

(470)	[wɪɕkɛwɛj**u**k**u**wɪn]	‘you laugh at me’	(Paul)
(471)	[p**u**namweg**u**s]	‘January’	(Matthew)

High Back Lax Vowel [ʊ] Examples:

Word Final

(472)	[əpkwim**ʊ**]	‘loon’	(Matthew)
(473)	[əsq**ʊ**]	‘leech’	(Matthew)

Between Consonants

(474)	[p**ʊ**nlugwɛk^{h}]	‘it stops working’	(Matthew)
(475)	[ləmb**ʊ**kt]	‘bay’	(Matthew)
(476)	[teskəm**ʊ**k]	‘snakes’	(Matthew)
(477)	[tʃɨb**ʊ**skl̥]	‘roots’	(Matthew)

3.3.5 Mid Back Rounded Vowels

The mid back tense and lax vowels occur word initially, word finally, between consonants, and as the last vowel in a vowel cluster, although the lax vowel [ɔ] does not occur often as the final vowel in a cluster or word initially. There are several words in which the tense and lax vowels alternate across multiple pronunciations, but it is ultimately the tense vowel that surfaces most commonly in the data. These vowel alternations can be seen in the following table.

Table 29: Vowel Alternations [o]/[ɔ]

[o] Pronunciation	**[ɔ] Pronunciation**	**Definition**	**Speaker**
[pɛmadɛdʒibudo]	[pɛmadɛdʒibudɔ]	‘he makes it slide’	Paul
[wokʰ]	[wɔkʰ]	‘pots’	Matthew
[wɪtʃkwɑdo]	[wɪtʃkwɑdɔ]	‘he brings it’	Matthew
[kobɪt]	[kɔbit]	‘beaver’	Matthew
[kaqowɑdʒijah]	[kaqɔwɑdʒijɑh]	‘alright/okay’	Matthew

Mid Back Tense Vowel /o/ Examples:

Word Initial

(478) [**o**wɑdʒidɛlmɑdʒi] ‘they hate them’ (Matthew)

(479) [**o**qwɑn] ‘northern’ (Matthew)

Word Final

(480) [plam**o**] ‘salmon’ (Paul)

(481) [widʒ**o**] ‘blue fly’ (Matthew)

(482) [mɛbid**o**] ‘cheek’ (Paul)

(483) [kiltohwɑd**o**] ‘he rolls it’ (Matthew)

Last Vowel in Cluster

(484) [pisɛ**o**] ‘froth’ (Matthew)

(485) [wɑhɑsime**o**wtʃ] ‘wild cat’ (Matthew)

Between Consonants

(486) [ank**o**tkʰ] ‘he looks after it’ (Paul)

(487) [ab**o**wɑdʒɪt] ‘woodpecker’ (Matthew)

(488) [n**o**g**o**mah] ‘relatives’ (Matthew)

(489) [mezigowɪkʰ] ‘glitter’ (Matthew)

Mid Back Lax Vowel [ɔ] Examples:

Word Initial

(490)	[**ɔ**ktʃɪbɛn]	‘east’	(Matthew)

Word Final

(491)	[sɪptahɑd**ɔ**]	‘I stretch it’	(Matthew)
(492)	[uktɛgɪth**ɔ**]	‘last fall’	(Matthew)
(493)	[pɑʔɑd**ɔ**]	‘hardwood’	(Matthew)

Last Vowel in Cluster

(494)	[sətko**ɔ**jnimidɔχ]	‘sees everything’	(Matthew)

Between Consonants

(495)	[m**ɔ**nde]	‘bag’	(Paul)
(496)	[pɛgizid**ɔ**h]	‘he brings it’	(Paul)
(497)	[aw**ɔ**wɪdʒɪt]	‘spider’	(Matthew)
(498)	[nabɔɣɔn]	‘stick you hang a kettle on’	(Matthew)

3.3.6 Mid Central Vowel

The mid central vowel occurs in all positions, word initially, word finally, between consonants, as the first vowel in a vowel cluster, and as the last vowel in a vowel cluster; although its occurrence in vowel clusters is not common. Additionally, there are examples within the data of the schwa alternating with every tense and lax vowel in Mi’kmaq which can be seen in the following table.

Table 30: Vowel Alternations with Schwa

Alternations	**1st Pronunciation**	**2nd Pronunciation**	**Definition**	**Speaker**
[i]/[ə]	[tig**i**nɪbɪn]	[tigənibəŋ̩]	‘last summer’	Matthew
	[w**i**bɛmɪt]	[wəbɛmɪt]	‘he sleeps with it’	Paul
[ɪ]/[ə]	[l**ɪ**mdʒazi]	[ləmdʒazi]	‘you get up’	Matthew
	[ɪɬkwid**ɪ**k]	[ɪɬkwidək]	‘to steer’	Matthew
	[matχig**ɪ**n]	[maχtigən]	‘scissors (sg.)’	Matthew
[e]/[ə]	[t**e**madu]	[təmadu]	‘to break’	Paul
	[pukt**e**wsɪt]	[puktəwsɪt]	‘North American redstart’	Matthew
	[**e**lbɑdu]	[əlbadu]	‘boy’	Matthew
[ɛ]/[ə]	[**ɛ**skibɛdo]	[əskibɛdo]	‘you expect to see somebody/something’	Matthew
	[**ɛ**nadʒɪtʃ]	[ənadʒɪtʃ]	‘thin ice’	Matthew
	[n**ɛ**mɑχtɑm]	[nəmɑχtɑm]	‘my brother-in-law’	Matthew
[a]/[ə]	[peskəməŋ̩]	[peskəmən]	‘you shoot’	Matthew
	[klid**a**w]	[klidəw]	‘raspberry’	Matthew
	[saɣ**a**we]	[saɣəwe]	‘old’	Matthew
[ɑ]/[ə]	[kwɪləm**ɑ**n]	[kwɪləmən]	‘you look for them’	Matthew
	[pɪskadaɣ**ɑ**n]	[pɪsɣɑdaɣəŋ̩]	‘chain’	Matthew
[u]/[ə]	[tɛpkən**u**sɪt]	[tɛpkənəɛɪt]	‘moon’	Paul
	[kil **u**kitʃ]	[kil əkitʃ]	‘your mother’	Matthew
	[kl**u**mwɛdʒuwɑsk^{h}]	[kləmwɛdʒuwɑsk]	‘coal’	Paul
[ʊ]/[ə]	[halib**ʊ**li]	[halibəli]	‘snow shovel’	Matthew
	[ntʊp]	[ntəp]	‘my brain’	Matthew
[o]/[ə]	[neg**o**m pigaʔan]	[negəm upigaʔaŋ̩]	‘his rib’	Matthew
[ɔ]/[ə]	[tʃ**ɔ**hołsi]	[tʃəʔołsi]	‘kelp’	Matthew

Mid Central Vowel /ə/ Examples:

Word Initial

(499)	[ələnu]	‘Mi’kmaq’	(Paul)
(500)	[əpwɑw]	‘tree bark’	(Matthew)
(501)	[əχsine]	‘white owl’	(Matthew)
(502)	[ətkuk]	‘waves/swell’	(Matthew)
Word Final			
(503)	[nantkə]	‘two fives’	(Paul)
(504)	[winemadʒə]	‘he curses at him’	(Paul)
(505)	[talegɪskə]	‘kind day’	(Matthew)
First Vowel in Cluster			
(506)	[wɔhandəo]	‘bone’	(Matthew)
Last Vowel in Cluster			
(507)	[pimgwɑəmgwe]	‘to whistle’	(Matthew)
(508)	[skwɛə]	‘hen’	(Matthew)
Between Consonants			
(509)	[taɣəmək^{h}]	‘I strike him’	(Paul)
(510)	[pɪgwəlkə pidʒozᶎədi]	‘many buttons’	(Paul)
(511)	[nestəmən]	‘you understand’	(Matthew)
(512)	[məthəlnɪs]	‘wren’	(Matthew)

3.3.7 Possible Additional Vowel

During the analysis of the vowels there were times when a vowel was pronounced that fell between a high front vowel and a high back vowel. This high central vowel [ɨ][49] was only noticeable in Matthew’s

49 Not to be confused with the Francis Smith orthography spelling of schwa, which uses the same symbol.

data and occurred less than 30 times[50]. This vowel alternated quite frequently with other high vowels, back vowels, or the schwa when the same word was pronounced multiple times – see the following table. These alternations make it harder to determine whether or not this vowel is an underlying part of the vowel inventory or a potential allophone of another vowel.

Table 31: Vowel Alternations with [ɨ] (Speaker: Matthew)

Alternation	**1st Pronunciation**	**2nd Pronunciation**	**Definition**
ɨ ~ i	[wɪdʒɨwɑgwədijɛkʰ]	[wɛdʒiwɑgudijɛkʰ]	‘near kins’
ɨ ~ u	[tʃĭbɨskəl]	[tʃĭbuskə̯l]	‘roots’
	[kil ɨkpigaʔaŋ̯]	[kil ukpigaʔan]	‘your rib’
	[nɨdʒigenamwɛt]	[nudʒiginamwɛt]	‘teacher’
ɨ ~ ʊ	[pɨnləgwɛt]	[pʊnlugwɛt]	‘he stops working’
ɨ ~ o	[sɨmwɑŋ̯]	[somwɑŋ̯]	‘water’
ɨ ~ ɔ	[sɪptahadɨ]	[sɪptahɑdɔ]	‘I stretch it’
ɨ ~ ə	[tʃĭbɨskʰ]	[tʃĭbəskʰ]	‘root’

Because of the time constraints I was unable to measure the vowel formants in my data, which would have either confirmed or denied this possible additional vowel I was hearing. A closer analysis of the vowels of Newfoundland Mi’kmaq is needed before any conclusions can be made surrounding the central high vowel [ɨ].

3.3.8 Vowel Alternations

In addition to the tense and lax vowels alternating with one another and the schwa, there were occurrences of the high and mid front vowels alternating with one another as well as the high and mid back vowels alternating with one another, which can be seen in the following two tables.

50 Based on my observations are a native English speaker. It is entirely possible that this sound was occurring more commonly throughout the data but I wasn’t able to discern the difference between it and an [i] or [u]

Table 32: Front Vowel Alternations

Alternation	1st Pronunciation	2nd Pronunciation	Definition	Speaker
[i] ~ [e]	[wɑlni]	[wɑlne]	‘cove’	Matthew
	[papki]	[papke]	‘outside’	Matthew
	[midi]	[medi]	‘poplar tree’	Matthew
	[abi]	[abe]	‘bow (n.)’	Paul
[i] ~ [ɛ]	[sibu]	[sɛbu]	‘river’	Matthew
	[igɪnamwe]	[ɛgɪnamwe]	‘he asks for it’	Paul
[ɪ] ~ [ɛ]	[pɪdʒu]	[pɛdʒu]	‘fish’	Matthew
	[tɪbo]	[tɛbo]	‘handy’	Matthew
	[elegwɪt]	[elegwɛt]	‘he works’	Matthew
	[nadɪlɬkɪl]	[nadɛlɬkɪl̥]	‘I am that size’	Matthew

Table 33: Back Vowel Alternations

Alternation	1st Pronunciation	2nd Pronunciation	Definition	Speaker
u ~ o	[plɛku]	[plɛko]	‘nail’	Paul
	[plamu]	[plamo]	‘salmon (sg.)’	Matthew
	[mtʃiju]	[mtʃijo]	‘lip’	Paul
	[tɛmagitu]	[tɛmagito]	‘he saws it’	Paul
u ~ ɔ	[pudaj]	[pɔdaj]	‘bottle’	Matthew
	[pɑɣɑluk]	[pɑɣalɔχ]	‘bites him’	Matthew
	[ləmbukt]	[ləmbɔkt]	‘bay’	Matthew

I suspect the amount of alternation in Mi’kmaq is due to its small vowel inventory, which allows for a greater amount of variability during the pronunciation of a sound. This could explain why the vowels are alternating with schwa as well as other vowels with similar height and backness. Although this suspicion cannot be confirmed without a close acoustic analysis of the data, there is evidence from another indigenous language, Witsuwit’en, that supports this idea. Witsuwit’en is an

indigenous language spoken in the central interior of British Columbia and belongs to the Athabaskan language family. The underlying vowel inventory of Witsuwit'en is similar to Mi'kmaq with six underlying vowels /i, e, a, o, u, ə/. An acoustic analysis of the vowels was conducted by Sharon Hargus (2007) that revealed there was a large amount of overlap between the vowels for both the male and female speakers, with a lot more overlap of the vowels occurring specifically among the female Wistuwit'en speakers. The following two figures have been taken directly from Hargus's analysis (Hargus 2007: 185–186) and depict the first (F1) and second (F2) vowel formant averages based on each speaker with a total of nine participants. The figures are grouped by gender and demonstrate that there is an overlap in the pronunciation of the vowels in Witsuwit'en.

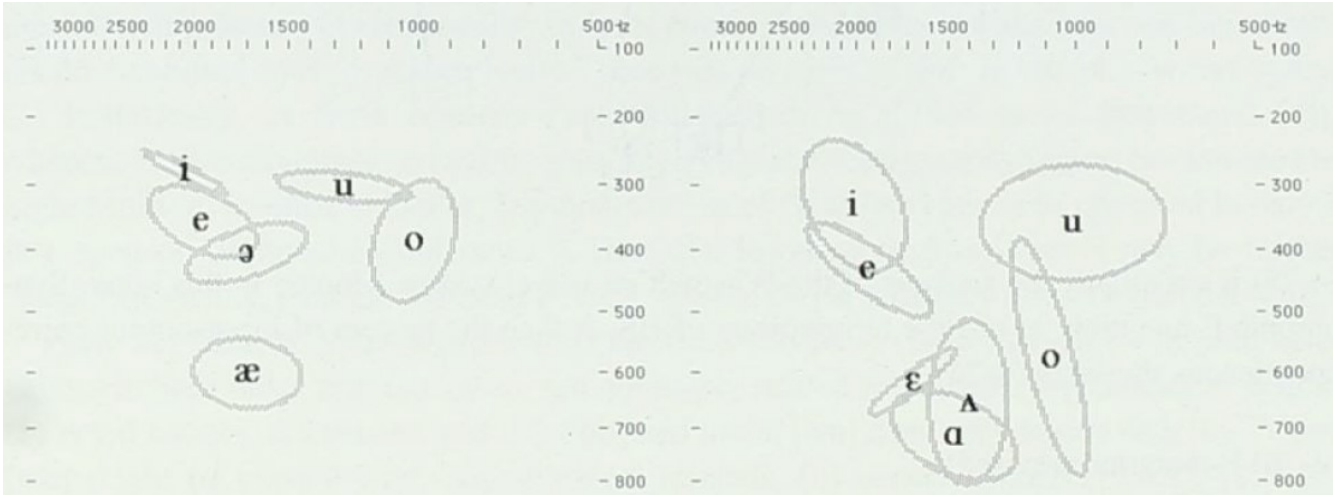

Figure 27: Witsuwit'en male speakers F1 by F2 plot of post-lenis (left) and post-fortis (right) vowel qualities

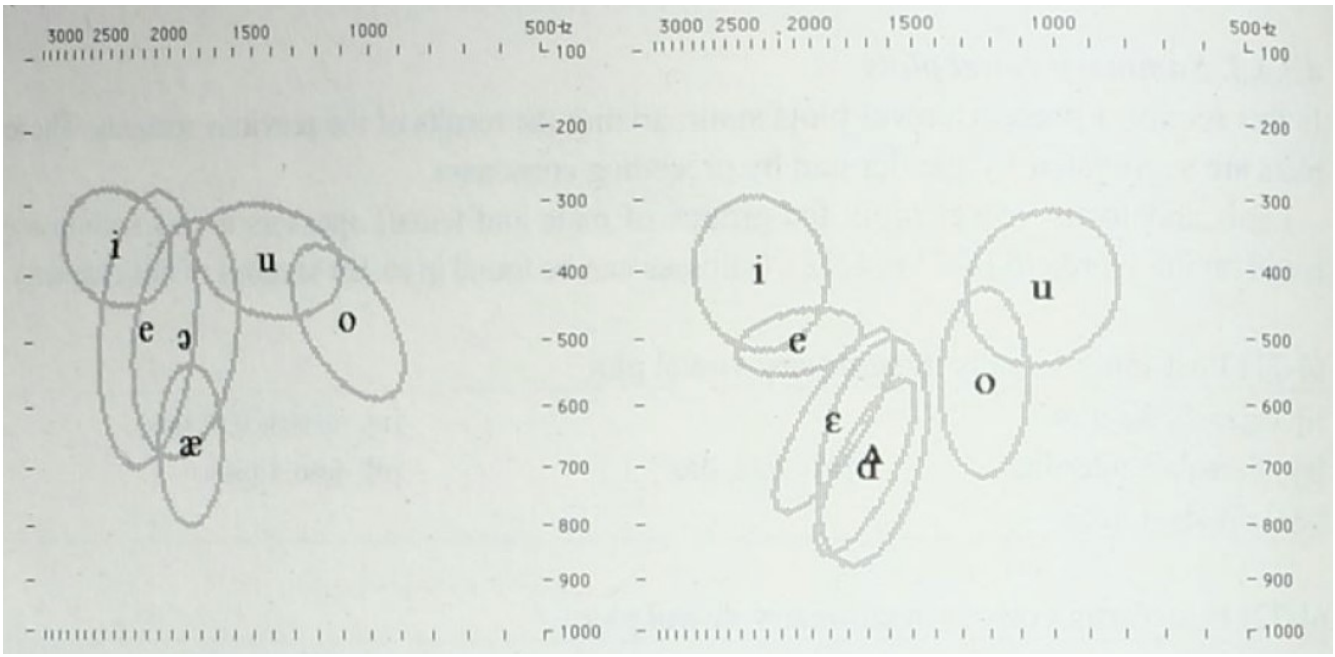

Figure 28: Witsuwit'en female speakers F1 by F2 plot of post-lenis (left) and post-fortis (right) vowel qualities

The idea that smaller phonological inventories can lead to a higher amount of variation aids in explaining the variation seen among some of the consonants in Newfoundland Mi'kmaq, specifically from the uvular plosive /q/, which can surface as the fricatives [ɣ], [h], or [χ] as well as the glottal stop [ʔ]. Because Mi'kmaq does not have any other underlying phonemes that far back in the mouth, the area that /q/ encompasses is able to be bigger, which results in a larger amount of variation. The same can be said about the fricative /s/, which is the only underlying fricative in the Mi'kmaq consonant inventory. This allows for variation between the alveolar fricative [s] and the alveolo-palatal fricative [ɕ] and their voiced allophones.

3.4 Summary

In addition to the underlying phonemes and allophones determined by Bragg in 1976 there is an additional underlying phoneme in Newfoundland Mi'kmaq, the labialized velar plosive /kʷ/, as well as additional allophones for the fricative /s/, the plosive /q/, and the lateral liquid /l/[51]. A summary of the underlying consonants and their surface representations is listed in the following table.

Table 34: Updated Consonant Inventory of Newfoundland Mi'kmaq

Underlying	Surface
/p/	[p] surfaces in all environments [b] surfaces most commonly between vowels, but can also surface as the first or last consonant in a cluster, word initially, or word finally
/t/	[t] surfaces in all environments [d] surfaces most commonly between vowels, but can surface in all environments
/k/	[k] surfaces in all environments [h] free variation (tends to occur word initially and finally) [kʰ] free variation word finally [g] surfaces most commonly between vowels, but can surface in all environments
/kʷ/	[kʷ] (a closer analysis is needed to determine where this consonant surfaces) [gʷ] (a closer analysis is needed to determine where this consonant surfaces)
/q/	[q] surfaces word initially, intervocalic, or as the first or last consonant in a cluster [h] surfaces in all environments, at times in free variation with [q] [χ] surfaces in all environments [ʔ] surfaces intervocalically [ɣ] surfaces intervocalically
/s/	[s] surfaces in all environments [z] surfaces most commonly between vowels, but can also surface as the first or last consonant in a cluster [ɕ] free variation with [s] [ʑ] free variation with [z]
/tʃ/	[tʃ] surfaces in all environments [dʒ] surfaces most commonly between vowels, but can surface in all environments
/n/	[n] surfaces in all environments

51 The final three allophones [ɬ], [l̥] and [lɬ], are narrower transcriptions of the devoiced [l].

	[n̥] surfaces most commonly word finally, but can also occur word initially and medially [n̩] surfaces when preceding or following syllables become too heavy [nˀ] surfaces when preceding a plosive
/m/	[m] surfaces in all environments [m̥] surfaces most commonly word finally, but can also occur word initially [m̩] surfaces when preceding or following syllables become too heavy [mˀ] surfaces when preceding a plosive
/l/	[l] surfaces in all environments [l̥] surfaces most commonly word finally, but can also occur word medially before a consonant [l̩] surfaces when preceding or following syllables become too heavy [lˀ] surfaces when preceding a plosive [ɬ] surfaces word finally or word medially before an obstruent [l͡l̥] surfaces word medially before plosives [l͡ɬ] surfaces word medially before plosives
/w/	[w] surfaces in all environments
/j/	[j] surfaces in all environments except word initially

The voicing and devoicing of consonants in Newfoundland Mi'kmaq was more varied than originally expected. Voiceless consonants could surface in intervocalic environments as well as voiced consonants surfacing where they should have theoretically remained voiceless, for example, as the first or last consonant in a consonant cluster. This goes against the previous claim that obstruents can only become voiced in intervocalic positions. Additionally, the nasals and lateral liquid showed a high rate of devoicing word finally. Upon closer observation through Praat it was determined that although the final nasals and lateral liquid could become devoiced, the Mi'kmaq speakers would still shape their vocal tract to articulate the word final sonorant consonants despite no audible pronunciation of them.

Through waveform and spectrogram analysis the existence of a glottal catch occurring between a sonorant consonant and a plosive – which was first mentioned by Bragg in his thesis – was confirmed

with Matthew's data, although these consonant clusters did not always guarantee a glottal catch would form.

Bragg originally proposed that the length of the sonorant consonants immediately before a voiced obstruent was the reason for the obstruent's voicing. Upon closer examination, the length of the sonorant consonants before voiced obstruents was less than 40 milliseconds longer than the overall average and the voicing of the obstruents appeared to be arbitrary. There was insufficient evidence in proving there should be a distinction between a 'long liquid' and a regular sonorant consonant.

Geminate consonants did not occur often in the data, but did occur with the sonorant consonants in Matthew's speech. Of particular interest were word final alveolar nasal geminates, which appeared when inanimate nouns were pronounced in their plural forms. When the inanimate plural morpheme [-l] attached to the word, the lateral liquid would assimilate to the preceding nasal consonant, creating the geminate nasal. This assimilation has been observed in other dialects of Mi'kmaq specifically Listuguj Mi'kmaq spoken in Restigouche, Quebec (Quinn 2012).

There are six short vowels in Newfoundland Mi'kmaq. With the exception of schwa, each short vowel can be pronounced as either tense or lax due to the small vowel inventory. Due to the limits of this analysis, vowel length was not able to be analyzed in any detail and therefore has been left out of this table, however there is strong evidence from other papers supporting the existence of long vowels, which are distinct from their short counterparts. A summary of the underlying vowels and their surface representations are listed in the following table.

Table 35: Vowel Inventory of Newfoundland Mi'kmaq

Underlying	Surface
/i/	[i] surfaces in all environments [ɪ] free variation
/e/	[e] surfaces in all environments [ɛ] free variation
/a/	[a] surfaces in all environments [ɑ] free variation
/u/	[u] surfaces in all environments [ʊ] surfaces between consonants or word finally
/o/	[o] surfaces between consonants, word finally, word initially, and as the last vowel in a vowel cluster [ɔ] free variation
/ə/	[ə] surfaces in all environments

Chapter 4: Conclusion and Future Studies

This re-analysis provided an updated phonological inventory of Newfoundland Mi'kmaq. It confirmed some of the original observations made by Bragg in 1976 and expanded upon others. The consonant system has been updated to contain 12 underlying consonants rather than 11, all of which have a voiced and voiceless realization. Specific consonants in this inventory contain additional allophonic variation such as the uvular plosive /q/, the fricative /s/, and the sonorant consonants /n,m,l/. My analysis of the vowel system remained relatively similar to Bragg's original analysis which observed six short vowels that could – with the exception of schwa – surface as either tense or lax depending on the surrounding environment. Additionally, there did not appear to be any form of predictability on when the vowel would surface as tense and when it would surface as lax.

This analysis also brought attention to intervocalic voicing and demonstrated that it is more complex than originally described. Most surprisingly, this thesis revealed that there are abundant examples of voiced consonants occurring outside of the intervocalic environment, voiceless consonants surfacing between vowels, and voicing variation across multiple pronunciations of the same word. This shows that voicing in Mi'kmaq is more complex than originally thought and that intervocalic voicing may not be obligatory.

While this re-analysis sheds new light on the phonetics of Newfoundland Mi'kmaq there is still much to be done. There is roughly 14 additional hours of audio recordings of Matthew Jeddore that could be re-transcribed in order to perform a closer examination of the labial velar plosive /k^{w}/ compared to the velar plosive followed by the glide /k + w/ as well as finding more examples of the long nasal consonant being used to indicate plurality rather than the inanimate plural morpheme [-l]. Based on the consonant voicing variation found in this thesis, I believe it's possible that this variation

may be found in other Algonquian languages, especially the ones that indicate that voicing only occurs in intervocalic environments. Additionally, a closer examination of the data used in this thesis is needed that focuses on the vowel formants and length in order to update the dataset and ensure that the transcriptions are as accurate as possible. This formant analysis has the potential to reveal a wider array of phonological variation among the vowels than originally thought and solidify the conclusions made concerning the vowels thus far. The data from this thesis could also be used to compare the Newfoundland Mi'kmaq dialect with Listuguj Mi'kmaq, Nova Scotia Mi'kmaq, and New Brunswick Mi'kmaq to see how their separation from the mainland potentially changed the pronunciation of words or if the Newfoundland Mi'kmaq people adopted completely new words for certain concepts while they remained the same in Quebec, Nova Scotia, and New Brunswick.

Outside of academic study, the transcriptions collected for this thesis could potentially be used as a starting point to create a Newfoundland Mi'kmaq dictionary similar to the Mi'kmaq Online Talking Dictionary that was created for Listuguj Mi'kmaq. Matthew and Paul's recordings would be important to any Mi'kmaq speaker who wanted to learn the pronunciation of Newfoundland Mi'kmaq words. It would be interesting to include recordings from Matthew and Paul to show how Newfoundland Mi'kmaq was spoken in the past as well as recordings of current Newfoundland Mi'kmaq speakers for comparison.

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Appendix A: Matthew Jeddore Word List

The following is a complete list of every word spoken by Matthew Jeddore that contributed to this analysis. This list includes every recorded variation in pronunciation of each word. Additionally, if a word was pronounced the same way more than once it is followed by the number of times it was spoken, for example the first word in the list was pronounced a total of four times, twice it was pronounced without a word final devoiced lateral liquid [wɛlmuzwɑ] and twice it was pronounced with one [wɛlmuzwɑl̥]. Both pronunciations have been included in this list and each are followed by the number two. It should be noted that throughout the data there are times when Matthew pronounces a word one way in one recording and a completely different way in another recording. I've kept both pronunciations in the list despite the clear differences as I am not able to discern which is truly the meaning of the word being asked. It is also possible that the word being asked has multiple meanings and therefore can be pronounced multiple ways in Mi'kmaq.

'(any) woman's brother-in-law'	[wɛlmuzwɑ] 2, [wɛlmuzwɑl̥] 2
'a bad thing'	[nadɔwemɪduwɛχ], [nadɔwemɪduwɛh]
'a bundle of switches'	[nɪbɪzɔɣɔn̥]
'a little while ago'	[mwəwsamizaχ], [mɔɛwsamizaχ]
'a long time ago'	[kisaχ], [isaχ]
'a lot'	[pigwell̥ki], [pigwɛlʔki] 2, [pigwɛlʔkik], [wedamoʑɪn], [pɔdamoɐən]
'a lot of people'	[skwid̻nu], [skwidʒinu]
'a lot of thin ice'	[mənadʒɪtʃkəl]
'a quarter dollar'	[kaltiʲe] 2, [kaltije]
'a room'	[lmigasi] 2, [əlemikazi], [ləmigasi]
'a shop'	[magatʃən̥], [magasɛn]
'a shortcut through the woods'	[ɪlɪktʃuwɑh] 2, [ɛlɪptʃuwɑh], [ɛlɪptʃuwɑχ], [ɛliktʃuwɑχ]

‘a store’	[malsənɔwgwɔm]
‘a story’	[adugwɑχɑn̥]
‘a swell’	[ətkuk] 2, [ətku]
‘after oar’	[sɛdamebi]
‘ago’	[lijɛ] 2, [liʲɛ]
‘agreement’	[kadu] 2, [kadah]
‘air’	[tʃusn], [ək͡tʃusn]
‘air you breathe’	[utabən̥], [məstamusabən], [muzabən]
‘alder’	[təpsi] 2
‘alders’	[tə͡psil]
‘all’	[msət] 3
‘all hands eat their breakfast’	[ɛskɪ͡tpɑdalə͡kɪdʒɪt], [skɪpɑdə̥ʔtidʒɪ]
‘all of it’	[msɪtowɛ]
‘all ready’	[kizaχ], [kiza]
‘almost’	[swɛlχ]
‘almost daylight’	[wɑ]
‘along’	[pidaχ]
‘alright/okay’	[aɣɔwɑdʒija], [aqɔwɑdʒijah], [kaqowɑdʒijah], [kaqɔwɑdʒijɑh], [kakɔkwɑdʒijaχ]
‘also’	[kɛdlɛwe] 3, [kɛdlɛwiʲiktukʰ]
‘always’	[aptʃu] 2
‘anchor’	[kulbisun], [kulbizun]
‘and you’	[aχ kil], [ah kil]
‘angry at someone’	[wɛgajwitʰ], [wɛgajwɪtʰ] 2
‘animal’	[wojzɪs] 2, [wojsɪs]
‘animals’	[wojsɪskʰ] 2, [wojzɪskʰ] 3
‘animal that’s good to eat’	[midʒɪptʃ] 3
‘animals that are good to eat’	[midʒɪptʃɪkʰ] 2
‘ankle’	[mʔkat] 4

‘ant’	[tʃədʒɪtʃkʰ], [dʒudʒɪtʃkʰ], [dʒudʒɪtʃk], [kɪligwɪdʒɪt], [tʃɪligwɪjɪt], [kɪlɪgwɪjɪt], [ɛlɛgwɪdʒɪt]
‘ants’	[kɪlɪgwɪdʒidʒɪkʰ], [kɪlɪgwɪdʒidʒɪt], [ɛlɛgwɪdʒidʒɪk]
‘any’	[tanpasɪkʰ], [tanpazi], [tanpazikʰ], [tanpazik]
‘anyone’	[naduwɪn̥], [tanpawɪn̥] 2, [tanpawɪn]
‘anyone at all’	[tanbawɪn]
‘anyone (you or I)’	[tanwɪn], [tanwɪn̥]
‘anyone’s brother-in-law’	[umɑhtamwɑl̥], [umɑktamwɑl] 2
‘anything’	[nadɔɣɔwej] 2, [nadɔɔwej]
‘anything breakable’	[ɛmʔtɛzɪn̥]
‘April’	[sigogus] 7, [sikogus], [sigowus]
‘arctic hare’	[wɑbus] 2, [wɑbəsk], [wɑbəskʰ]
‘arctic hares’	[wɑbuskʰ] 5
‘are you blind?’	[kil negabigwɑn̥] 2
‘arm’	[pɪd̄nogwɔm]
‘arms’	[pɪd̄nogomәł]
‘armpit’	[tl̥maan]
‘around the house’	[towɑzɪt]
‘arrow’	[mastʃɔχtɪlɪgɪn], [matʃɔχtɪlɪgɪn̥] 2, [matʃɔχtɪlɪgɪn], [matʃɔtelɪgən̥]
‘ash tree’	[mudʒidʒmɪnaχsi] 2, [əlmudʒidʒmɪnaχsi]
‘ashes’	[wɪskɪpt], [wɪskɪpkʰ] 2, [kwɪskɪpkʰ]
‘ashtray’	[ɪskat] 2, [kɪska]
‘Atlantic common murre’	[wɑbisigwɑh], [wɑbisigwa]
‘August’	[kɪzaʔegus] 2, [kɪsaajgus], [gɛzajgus], [kɛsaegus], [kɪzaegus]
‘autumn/fall’	[tɔhwɑχ], [toqawegus]
‘axe’	[tәmegɪn]
‘babies’	[pegwɛłkimidʒuwɑdʒɪtʃ]
‘baby’	[widʒiwɑdʒitʃ]

‘back/spine’	[pɑʔəm], [pɑχəm], [pɑɣəm]
‘bad’	[mɛduwiʲɪk]
‘bad day’	[mɛduwig ɪsku] 2
‘bad spot’	[wɪntʃɪkʰ]
‘bad spots’	[wɪntʃigəl̥] 3
‘bad weather’	[pɛduwigiskəkʰ], [ɛdugiskə], [mɛduwigiskək], [pɛduwigiskək]
‘bag’	[mundi]
‘barking kettle’	[wɔw], [wɔ]
‘barn’	[uskidʒinuwɪt], [wɪskidʒinuwɪ], [kɪdijamwɔgwɔm̥], [laklans], [lahlogwɔm̥], [laχlogwɔm], [laklans] 2, [tɪzibɔwɔgwɔm̥], [tezibɔwɔgwɔm]
‘barn (for animals)’	[windʒɪdijamwɔgwɔm] 2
‘barn (for hay)’	[skigwɔgwɔm] 2, [əmskigwɔgwɔm] 2
‘barn (for cows)’	[lakwɔgwɔm] 2
‘barrel’	[mɑlɪgiju]
‘baseball bat’	[tuwɑdidʒɪkʰ], [tuwɑdidʒi]
‘basket’	[podalijɛwe] 3, [pudalijɛwe]
‘bat’	[maltʃemadidʒɪχ], [maltʃemadidʒɪ]
‘bat (animal)’	[nadʒibuktanɪtʃ], [najibuktanɪtʃ], [nadibuktanɪtʃ]
‘bay’	[ləmbʊkt] 3, [ləmbɔkt] 2, [ləmbukt] 4, [ləmbɔ], [ləmbʊktʰ]
‘beads’	[kɪspɪzun], [kɪspizun], [kɪspɪzunkʰ]
‘bear’	[nabɛsk̄ mojn̥] 2, [muwin]
‘beat’	[mate] 3, [mataχ]
‘beats him’	[matɪkʰ], [mate]
‘beaver’	[kɔbit], [kobɪt]
‘because’	[tʃɪp̄tukʰ]
‘bed’	[powən̥], [ənpoχwən̥]
‘been (in the sense of you’ve been somewhere)’	[wɪdʒi] 2

‘beer’ [lapiʲɛlɛwe] 2

‘begin’ [amskwɪs] 2

‘belly’ [puskun nəmosti], [nəmʊsti]

‘belt’ [pispizun̥], [kispizun̥], [mkɪspɪzun̥], [ɪspɪzun̥], [ɪspɪzun], [kɪspizun̥]

‘bend’ [pɔχtʃiwɑdu]

‘berries’ [munitʃkəl], [mənitʃəl̥]

‘berry’ [mənitʃ] 2, [mənitʃkʰ]

‘big’ [mɑʔɔχsɪt], [mɑɣɔχsɪ], [mɛskiχ], [maχta] 3, [maχtaχ] 2

‘big noise’ [kezɪdewedah], [kezɪdeweda]

‘bike’ [elkajɪt], [əlʲkəjɪd]

‘birch’ [stɔʔun]

‘birch tree’ [maskwi]

‘bird’ [sɪzɪp] 3, [sɪzɪp̄], [sɪsɪp]

‘bite anything’ [pɑqɑdu]

‘bite him’ [pɑqɑl], [pɑχalh]

‘bites’ [pɑqɑlɔ]

‘bites him’ [pɑɣɑluk], pɑɣalɔχ]

‘bitter’ [wisχəχ], [wisχəkʰ] 3

‘black’ [aχtɛwijɪh]

‘black bird’ [maχtɛwɛ sɪzɪp], [maχtɛwɛj sɪzɪp], [maχtewek sizɪp]

‘black currents’ [mɛzɪmɪn], [mɛzɪmɪn]

‘blackboard’ [maχtɛwɛgɛ wigadigən̥], [mahtɛwɛ wigadigən̥], [wigigɪn], [aχtɛwɛ wigigɪn̥], [wigigɪn̥], [wigigən̥]

‘black board’ [maχtɛwɛ saχski], [matɛwɛ saχski], [tɛwɛ saχski]

‘bladder’ [wɪskwi] 2

‘blade’ [wilnəgwɑn] 3, [wilnəgwɑn̥]

‘blanket’ [plagɪt]

‘blind’ [nɛgabigwɛkʰ], [negabigwekʰ], [nɛgabigwək]

‘blood’ [maldɛjo]

‘blow’	[wɪdʒuʑəkʰ] 4, [wɪdʒuʑək], [wɪdʒuʑe]
‘blue’	[məɕχunamuh], [məɕhənamuχ], [məɕhunamuh], [muɕhunamuχ], [məɕhunamuχ], [mushənamu], [mushunamu]
‘blue blueberries’	[əshunamu upkwiman] 2
‘blue fly’	[widʒo] 2
‘blue sky’	[məɕhunamukʰ], [məɕhunamu], [m̥shənamu]
‘blueberry’	[əpkwiman] 2, [pkwiman], [mushunamuk̄sɪt] 2
‘blueberries’	[kwiman]
‘blue jay’	[emitʃagowɪtʃ], [miktʃagowɪtʃ] 2, [muɕhənaməχɐe mitʃagowɪtʃ]
‘blunt’	[mugɪspətnəkʰ]
‘board’	[saχski] 7, [sahski]
‘boards’	[saχskejl̥]
‘boat’	[podaməsəŋ̊], [apɔdamosəŋ̊], [uktu], [uktul]
‘boil it (kettle)’	[abɔwɑn], [nabɔɣɔn]
‘bone’	[wɑʔɑndeo], [wɔhɑndəo]
‘bone marrow’	[win]
‘book’	[wigadigɪŋ̊] 3, [wigadigɪn]
‘boss/skipper’	[skibul], [skibəl], [skibəl̥]
‘bottle’	[pɔdaj], [pudaj] 2, [budaj]
‘bow (n.)’	[abi] 2, [ɛbi]
‘boy’	[əlbadu], [elbɑdu]
‘boys’	[əpadus], [əlbadus] 2
‘boyfriend/husband’	[nidap]
‘brandy’	[sɑmwɑnigəŋ̊], [sɑmwɑnigɪn]
‘bread’	[pibənɑŋ̊], [pɪmnɑŋ̊]
‘break (by falling)’	[sɛwistɛzɪnʔk], [sɛwistɛstun], [temtestu], [sɛwistɛzɪnʔkʰ]
‘break the door (by slamming)’	[sɛwistɛziŋ̊], [sɛwistɛzi]
‘break the stick’	[tmɑdu]

‘breakfast’	[ekɪtpugowe], [ɛskitpugowe]
‘breath’	[kamlamudi]
‘bright day’	[kɛsadɪ] 2, [kɛsadɪk] 2
‘bright days/bright weather’	[kɛsade]
‘bright light’	[wɑzɔχwɛkʰ], [wɑzɔhwɛ]
‘bring’	[pɛgisulkʰ]
‘bring him on his back’	[wɪtʃkuwɑdə̥]
‘bring it’	[tʃigwɑdu], [wɪtʃkwɑdə]
‘bring something to a boil’	[tʃɑhɑmɑdu]
‘broad daylight’	[wɑpkɛ]
‘brook’	[tʃibudʒitʃ]
‘brother’	[nsɛs]
‘brushed it off’	[pɛzipɛgɛ]
‘brushed off’	[pɛsi͞kpɑdu]
‘bull’	[latola]
‘cabbage/leaf’	[nibi]
‘call for it’	[wɛkudəm], [wɛgodəm]
‘can’t sleep properly’	[ohwɑgizinpo]
‘canoe’	[kwidn̩] 5
‘canoes’	[kwidn̩] 2
‘cat’	[jowtʃ]
‘chain’	[pɪsɣɑdaɣən̥], [pɪskadaɣɑn], [ɪskadaɣɑn], [abɪskadaɣɑn̥], [abɪskadaɣɑn]
‘cherry tree’	[tʃɔdʒɪməzi], [tʃɔtʃɪməzi], [totʃɛməʑi], [widʒɔtʃɪməzi], [widʒɔtʃɛməzi]
‘chest’	[puskən] 4, [puskun] 4, [puskun̥], [ənpuskun̥]
‘chewing tobacco’	[tʃajudi tʃajwɑli] 2, [tʃawudi], [tʃajudi], [tʃawe]
‘child’	[dʒuwɑdʒɪtʃkʰ]
‘claw’	[oχɔsil]
‘clean’	[wɑqmek]

‘clean clothes’ [wɑχɑme uχtapsun] 2

‘clear sky’ [muɕhun], [muɕhuk], [məɕho]

‘clearing land’ [maɕigadɔχ], [muzigadɔ]

‘clock’ [adʒɪ]

‘clothes’ [tapsune], [kɛp̄satık], [kɛp̄sahte], [asun], [azun]

‘cloud’ [alukʰ] 2

‘clouding over’ [pɛmaləgwija]

‘clouds’ [lameʲiχ], [aləgwəl̥]

‘codfish’ [m̥pɪdʒu], [nəmez̥]

‘cold’ [tegi], [tegikʰ], [tegɪt], [tɛgɪkʰ]

‘come here’ [dʒɪgujɛ]

‘come in’ [piskwɑ], [pɪskwɑ]

‘cormorant’ [təmani], [dəmɑχɑni], [temɑɣɑnija], [temɑɣɑni]

‘corner’ [tɑmu], [kədaɑmukʰ]

‘cotton’ [abɑbitʃ], [ɑbɑbitʃ], [ɑbɑbidʒ]

‘cough’ [sɑmwɑden̥]

‘cough medicine’ [sɑmwɑden pizun̥] 2

‘coughing’ [noʔəm̥]

‘cove’ [wɑlne], [wɑlni]

‘coves’ [wɑlneʲl̥]

‘cows’ [windʒudijamuɛ]

‘cranberry’ [sun]

‘cranberries’ [sunl]

‘crook on the hook’ [kləkwɛwɛ]

‘crooked’ [paχtʃuwikʰ] 3, [aχtʃuwikʰ]

‘crooked girl’ [hebɪt]

‘crooks on the hook’ [klukwɛwɛl̥]

‘crow’ [haχaqɔtʃ], [kahahɔtʃ]

‘crow blackbird’ [wetmaχtewekʰ]

‘crying’ [pɛmɪmtɪk], [pɛmɪmtɛ]

‘cut his head off’ [tɛmkwɪdadʒɪl], [tɪmkwɪdadʒɪɬ]

‘day’ [kɪskuk], [kɪskə]

‘daylight’ [wɑpkʰ], [wɑpkɛ]

‘devil’ [məndu]

‘dirty’ [mɪdʒigeɪχ], [mɛdʒige]

‘do it again’ [ɑp] 2

‘do something properly’ [mɪnɑadʒɛwɑzi] 2, [mɪnɑɣadʒɛwɑdun̥]

‘dog barks’ [wɛgwilat]

‘dogs’ [lemudʒɪkʰ]

‘doing good’ [ladowɑdl̥], [wɛlasuwɑdl̥], [wɑlaladʒɪl]

‘don’t do that’ [mukladu] 2, [muktladu]

‘dream’ [puwɑdu]

‘duck’ [əp͡tʃɪtʃm̥tʃʰ], [əptʃɪtʃkəmuɛ], [ap͡tʃɪtʃkəmuɛ]

‘early fall’ [naχsɪtkwɑh]

‘east’ [awtʃɪbɛn̥] 2, [wtʃɪbɛn], [tʃɪbɪn], [ɔktɪbɛn]

‘Eastern Canada goose (brant)’ [senɔwkʰ], [senəmkʰ] 2, [senəmʔkʰ]

‘eel’ [kadew] 2

‘eels’ [kada], [kadaχ] 3

‘egg’ [wɑw] 2, [wɑk], [wɑkʰ]

‘eggs’ [wɑwl̥], [wɑgul]

‘elder sister’ [kwidʒitʃ]

‘European house’ [wəndʒigəm], [wəndʒigəm̥], [wɪndʒigəm]

‘evening’ [wɛlakʰ], [wɛlaχ] 2

‘everyone’s mother’ [əkidʒewo]

‘fall down/fall over’ [padʒidʒi], [padʒidʒɪt]

‘farm’ [igadaɣɑn̥], [uk͡tigadaɣɑn̥], [uk͡tigadahɑn̥]

‘father-in-law’ [tʃɪltʃʰ]

‘feather’ [pigun] 3

‘February’	[abugonajɪt], [abugonadʒɪt] 2, [abunadʒɪt], [abugonadʒi]
‘female beaver’	[nabuṃskʰ]
‘female dog’	[skwɑzɪm]
‘fine evening’	[wɛliwula]
‘finish growing’	[kizigwɛt], [ɪsigwɪt]
‘finished sleeping’	[kɪskuzi], [ɪskuzi]
‘fire’	[puktəw]
‘fish (sg.)’	[pɪdʒu], [pɛdʒu], [nəmetʃ]
‘fish (pl.)’	[pɪdʒukʰ], [nəmejdʒɪkʰ]
‘fish hook’	[kəgən], [əmkəgən]
‘fish maggots’	[kmɛs], [kmes], [kəmes] 3
‘five dollars’	[nanajgəɬ]
‘flies (insects)’	[wudʒɪkʰ], [udʒɪk]
‘fly (insect)’	[utʃ], [udʒ], [wutʃ]
‘flying along’	[pɛmɑχsinʔk]
‘foam (on the water)’	[bɛmitkʰ] 2
‘four dollars’	[newajgəɬ]
‘four quarters’	[kaltije nəwtagɪkʰ]
‘fox’	[ukwis]
‘Frenchmen shoe’	[wenutʃ]
‘from your heart’	[nkamlaməɗi]
‘froth’	[pisɛo] 2
‘frown’	[wɛdadʒigwe]
‘fruit’	[jɪzimɑnɪkʰ], [ɪzimɑnɪk]
‘frying pan’	[lɑpuwɛɬ]
‘full’	[wɑdʒuja] 2, [wɑdʒujaχ]
‘full of water’	[wɑdʒube]
‘geese’	[sinəmkʰ], [senəmkwa], [senəmkwɑh], [sɛnəmkwɑh]
‘giant’	[dʒɪnu]

‘glitter’	[esigowɪkʰ], [mesigɔwɪkʰ], [msikʰ] 2, [mezigowɪkʰ], [mesigɔwɪkʰ], [kobɪtʃ] 2, [ɛsigowɪkʰ]
‘go’	[lije]
‘go (a group goes)’	[lidah], [lida]
‘go out’	[tɛwiʲɛt] 2, [tɛwiʲɪt]
‘go the short way’	[wɪdʒiwɑχ], [ɛliwɪdʒwɑ], [liwɪdʒɪwɑ], [ɛlɪktʃuwɑh]
‘Godfather’	[kɛkənɪt], [kɛkunɪt]
‘good cheap’	[udiulde], [udiulte]
‘good ice’	[kɛlu mkumi]
‘good looking’	[wɛlamuχsɪn], [wɛlamuk̄sɪn̥]
‘good morning’	[wɛliɛskɪtpu]
‘goose’	[sinu], [sɛnəmkʰ], [sɛnəmʔkʰ]
‘gooseberries’	[ləbɑχtɪtʃkə], [ləbɑχtɪtʃkl]
‘gooseberry’	[ləbɑtɪtʃkʰ]
‘government’	[gəbəlnol̥], [kəbəlnol̥]
‘government people’	[asuzul̥tidʒi], [alsuzul̥tɪdʒɪ], [asuzull̥tɪdʒɪ]
‘government road’	[elegewɪd awti] 2
‘grandchild’	[nudʒitʃ]
‘grass’	[skigu] 3
‘grass (pl.)’	[skigul̥] 2
‘grease’	[mɛmɛʲ]
‘grove of poplar trees’	[medijamigekʰ], [midijamə], [medijamege]
‘grow’	[zigwis], [izigwis]
‘gull’	[kləhəndɪtʃ], [kələʔəndiʲetʃ], [kləhəndiʲɪtʃ], [kləʔənditʃ], [kloɣonditʃ]
‘gulls’	[kləʔəndɪtʃkʰ]
‘gun’	[pɛskəwe], [pɛskɛwɛ]
‘half a dollar’	[adajɪgnəwhtagɪkʰ]
‘half an animal’	[istugwɑn] 3, [istugwɑn̥] 2
‘hammer’	[mɑtedʒuwe]

‘hammers’ [mɑtedʒuwɛl]

‘hand’ [pɪdn̩], [unudʒi] 4, [lɑmɪɬtʃaʔɑn]

‘handy’ [tɛbo], [tɪbo]

‘harbour’ [wɑlni] 2

‘harbours’ [ləmbuk̄tə̬l̩]

‘hard’ [mɛlɬki]

‘hard/difficult/bad’ [meduwejɪh], [eduwe]

‘hardwood’ [nɪbənɔʔɔn], [nɪbənɔʔɔn̰]

‘hare’ [abəligəmwɪtʃ], [abligmutʃ] 2

‘have some tea’ [ɛwadu pədewe] 2

‘he annoys him’ [kigadʒiwɑdl̩] 2

‘he approaches’ [wɪdʒɔwɪtʃkujɛt], [tɛbawɪtʃkujɛt] 2

‘he argues’ [kigadʒazɪtʰ], [kigadʒazɪ]

‘he arrives’ [pɛgisɪnʔk], [pɛgizɪnʔkʰ], [nejm pɛgisɪntkʰ] 2

‘he asks for it’ [nəgəm gulutkʰ] 2

‘he barks’ [wɛgwilat] 4

‘he barks at him’ [wɛgwiladʒɪl]

‘he beats’ [matejɪt]

‘he beats him’ [matadʒɪl] 2, [matadʒɪl̩]

‘he beats me’ [maχtet]

‘he beats/hits it’ [nuktek]

‘he bellows’ [kɪzigawɪχ], [ɪzideweda] 2

‘he belongs here’ [uklejawɪt], [klejawɪt], [klejawɪn̰]

‘he bites him’ [pɔhɔladʒɪl̩], [pɑɣɑladʒɪl̩] 2, [pɑɣaladʒil]

‘he breaks him’ [temɑlɑdʒɪl]

‘he breathes’ [kamlamɪt]

‘he brings him’ [wɪtʃkwɑladl̩] 4, [wɪtʃkwɑlɑdl̩], [wɪtʃkwɑladə̬l̩] 2, [wɪtʃkwɑlɑdə̬l̩], [negəm wɪtʃkwɑladə̬l̩] 4, [wɪtʃkwɑlɑl]

‘he brings him (dead)’ [wɪtʃkwɑdo]

‘he brings it’ [wɪtʃkwɑdo], [tʃĩgwɑdu]

‘he brings it (dead)’ [wɪtʃkwɑdo], [wɪtʃkwɑdɔ]

‘he broke his neck’ [tempwɑdɛzɪnʔk]

‘he broke it off’ [telegɪtʃ], [temegɪtʃ] 2

‘he brought him’ [pɛgɪsulut]

‘he brought it’ [pɛgizidɔ], [pɛgɪzidɔ], [pɛgɪzido]

‘he builds’ [nɛgəm ɛwigat] 2

‘he builds a house for him’ [ɛwigɛwɑdʒəl̥], [ɛwigɛwɑdʒəɬ], [ɛwigɛwɑdʒəl] 2, [ɛlduwɑdʒɪl], [ɛwigɛwɑjəl],

‘he builds him a house’ [wig ɛlduwɑdʒəl̥] 3, [ɛwig ɛwɑdʒəl̥]

‘he comes handy’ [kutʃazɪt], [tʃazɪt], [kiktʃazɪt] 2, [kik̄tʃazɪt]

‘he coughs’ [nɛgəm noɣɔmit]

‘he eats’ [nɛgəm midʒəsɪt]

‘he flies along’ [pɪmɑdidʒazɪt]

‘he flies toward us’ [ɛlaχsɪnʔtk], [ɛlaχsɪntkʰ], [ɛlahsɪntkʰ], [wɪtʃkwɑχsintkʰ] 2

‘he folds’ [mɑwɑdɔ] 2, [mɑwɑdɔχ] 2

‘he gets up’ [ləmtʃazɪt], [lɛmtʃazɪtʰ], [ləmdʒazɪt], [nɛmtʃazɪt], [mɛtʃazɪt], [mɪntʃazɪt] 2, [mɪntʃazɪ] 2,

‘he gets quiet’ [wəntahazɪtʰ], [əntɑχazi], [wəntɑhɑzɪt]

‘he gives him a rest’ [atlasmuladʒɪl̥]

‘he gives it a rest’ [adlasmudɔh]

‘he goes out’ [tɛwjɛ]

‘he goes with him’ [widʒewɑdl̩] 2

‘he grabs him’ [kohwɑladʒɪl̥], [ohwɑladʒɪl̥]

‘he grabs it’ [qɔqwɑdɔχ]

‘he grabs that’ [kohwɑdɔ]

‘he grows’ [kezigwɪtʃ]

‘he has a bald head’ [ɛgwɑdat̄pɑt], [mɛgwɑdat̄pat], [ɛgwɑdat̄pat], [ɛgwɑdatpat]

‘he has a big head’ [mɑɕatpat], [mɑɣatpɑd], [mɑɣatpɑt]

‘he has a broken neck’ [temkwek]

‘he has fun’	[pɑbɪt] 4, [bɑbɪt]
‘he has him’	[kɛkunɑdʒəl]
‘he has it’	[kɛkunʔkʰ] 2, [kɛkuŋ̊ʔkʰ], [kɛkuŋ̊ʔkʰ] 2, [kɛkuŋ̊kʰ], [nɛgəm kɛkuŋ̊ʔkʰ] 2
‘he has them’	[kɛkunɑdʒi], [kɛkunʔkəl̥]
‘he hates him’	[pɔwɑdʒideləmɑdʒɪl̥] 2
‘he hates it’	[pɔhwɑdʒidɛs]
‘he hates them’	[pɔhwɑdʒideləmɑdʒi]
‘he hates those (inaniamte)’	[pɔwɑdʒidɛtkəl̥]
‘he hears a lot of noise’	[nutkə]
‘he hears him’	[noduwɑdʒɪl]
‘he hears it’	[nutkʰ] 3, [nɛgəm nutkʰ] 2
‘he hears them’	[nutkəɬ], [nutkəl̥], [nuduwɑdʒi]
‘he helps them’	[abɔnəmwɑdʒɪl̥], [abɔnəmwɑdʒi]
‘he hides him’	[ɪmgwɑlɑdʒɪl̥]
‘he hides it’	[ɪmgwɑdɔ], [mɪmgwɑdɔ]
‘he hides them’	[mɪmgwɑlɑdʒi], [ɪmgwɑlɑdʒi] 2, [imgwɑlɑdʒi]
‘he hinders him’	[wɪdəmejwɑdʒəl̥]
‘he hits him’	[tɑʔmɑdʒɪl̥]
‘he holds him’	[kɛlnɪkʰ]
‘he holds it’	[kɪlnɪkʰ]
‘he holds on tight’	[məlɬkɑptʃɪtʃ]
‘he holds on tight to a lot of people’	[mɛll̥ʔkamɑdʒi]
‘he holds on tight to someone’	[mɛlɬkamɑdʒɪl̥] 2
‘he holds onto a lot of people’	[məlkənadʒi]
‘he holds onto him’	[kɔqwɑladʒɪl̥], [məlgɪn] 2, [məlgən]
‘he holds onto it’	[kɔkwɑdɔ]
‘he holds onto them’	[məll̥ʔkənadʒi], [mɛlɬkənadʒi]
‘he hunts’	[kɛdantɛgɪt]
‘he hunts for him’	[kɛdanadʒɪl̥]

‘he hunts for it (inanimate)’	[kɛdantɔ]
‘he hurries up’	[wɪnpasɪt]
‘he hurts him’	[kɛzidadʒɪl]
‘he is beautiful’	[kɛlu:zɪt]
‘he is big’	[mɛskil̥kʰ], [mɛskil̥l̥kʰ]
‘he is blind’	[negabigwɑt] 2, [egabigwɑd]
‘he is from there’	[widʒɪt] 2
‘he is good’	[kɛluzɪt] 2
‘he is growing’	[mɪmadʒɪtʰ], [mimadʒɪtʰ]
‘he is heavy’	[ɛskulkʰ], [kɪskul̥ˀkʰ]
‘he is hungry’	[kɛwizɪnkʰ]
‘he is in the room’	[ejkəlmigazɪk]
‘he is inside’	[azɛgɛkʰ], [azɛgekʰ], [azɛgek]
‘he is old’	[nɛgəm kɪzigu] 2
‘he is ready’	[kɪskɑdʒɪkʰ] 2
‘he is ready to leave’	[ɪskɑdʒɪkʰ]
‘he is red’	[mɛgwɛjɪkʰ], [nɛgəm mɛgwe] 2
‘he is short’	[tɛgwɑχtʃɪdʒɪt] 2
‘he is sick’	[ɛsinugwɑt]
‘he is small’	[aptʃɪdʒi], [aptʃɪʲʲit], [aptʃɪdʒɪt]
‘he is strong’	[mɛll̥kigɛnat], [mɛlɬkigənat]
‘he is well furred’	[wɛdawɛluwɑt], [wəlawɛluwɑt]
‘he itches’	[kɛzɪbijɛt], [kɛzibijɪt]
‘he jumps’	[wɪnahɑjɛt]
‘he keeps a hold of it’	[kɪlnəkʰ]
‘he killed it’	[nebɑdʒl̥]
‘he kills him’	[nebɑdʒɪl], [nejbɑdʒɪl̥]
‘he kills it’	[nebɑdɔχ]
‘he kisses’	[wɪskɑləmɑdʒɪl̥]

‘he kisses them’ [wɪskɑhɑlɭ̥tɪgəl̥]

‘he knocked him down (with his hands)’ [m̥ɛsχənɑdekʰ], [əsχənɑdekʰ]

‘he knocks him down’ [mɪshunɑdɑjɪl̥], [mɪshunɑdɑdʒɪl̥], [mɛsχənɑdɑdʒɪl̥]

‘he knocks it down’ [kɛjwɑdɔχ], [nɛgum kɛjwɑdɔχ]

‘he knows him’ [kɛƶijadəl̥]

‘he learns’ [kɛginɑmɑsɪt], [hɛginɑmɑsɪt], [kɛginɑmɑzɪt]

‘he licks it’ [məskwɑtk]

‘he lives handy’ [tɛbo wigɪtʃ] 2

‘he locks it’ [apəsχɑχ], [apusχɑχ]

‘he looks for him’ [kwiləwɑdʒɪl̥]

‘he looks for it’ [kwiɬkʰ]

‘he looks for them (inanimate)’ [kwɪlɭ̥kəl̥]

‘he makes a lot of noise’ [kɛzidɛwɛdɔχsɪt]

‘he makes him slide down’ [nɪsijohwɑdɪl]

‘he makes it’ [ɛwigatkʰ]

‘he makes it sit down’ [ɛbadɔ]

‘he makes noise’ [kɛzigawɛd], [kɛzigawɛt] 2

‘he moves’ [mɑdʒazɪt]

‘he names it’ [nɛgəm widɪkʰ] 2

‘he names him’ [wizunʔkəwɑdʒəl̥] 2, [wizunkɛwɑdʒəl̥]

‘he plays’ [ɛlɑzɪt]

‘he plugs him up’ [ebidʒɔʔwɑdʒɪl̥]

‘he plugs it up’ [kɛbidʒɔh] 2

‘he points’ [ɛlugwɑt], [ɛlugwɑtk], [ɛlugwɑtkʰ]

‘he prays’ [lɑzud̻mat]

‘he prays for it’ [alazədmɛlsɛw], [alazumɛlsɛw]

‘he puts him in the river’ [ɛgwidʒaladl̥]

‘he puts him in the water’ [samwɑniktukʰ]

‘he puts it on’ [nɑzɑladʒɪl̥], [nɑsɑlɑdʒɪl]

‘he puts it (a boat) in the water’ [egwidʒadɔ]

‘he quarters it’ [kəlḷ̥tidadʒɪḷ̥]

‘he rests’ [atlasmɪt]

‘he rolls it’ [kiltowado], [kjutowado], [kiltohwɑdo]

‘he rouses him’ [tugwɑladʒɪḷ̥]

‘he rubs it’ [panugwɑtkʰ]

‘he rubs it by hand’ [panəgwɑlwɑl], [panəgwɑladʒəḷ̥], [pawnəgwɑladʒɪḷ̥]

‘he saws him’ [ɛlagɪbuladʒɪḷ̥]

‘he saws it’ [əlagɪtɛgɪtʃ] 2, [əlagɪtɔχ]

‘he saws it down’ [tɛmagɪbuladʒɪḷ̥], [tɛmagɪtɔχ], [tɛmagɪtɔh]

‘he saws it off’ [tɛmagɪtɔχ] 2

‘he saws wood’ [ɛlagɪtɔɬʟ], [pəhɛugul ɛlagɪtɔɬɬ̥] 2

‘he says’ [tɛləwɪt] 2

‘he scoops’ [naʔanigɪt], [naɣanigɪtʰ]

‘he scoops him’ [naanigaladʒɪḷ̥]

‘he scoops it’ [nahənigatkʰ], [ənigat]

‘he scrapes him’ [tʃ͡ʃigadʒəlwih], [nasigwɑdʒəḷ̥]

‘he sees’ [nɛmidat̄], [nɛmidɛt]

‘he sees everything’ [sətkowɔjnimidɔ], [msətkowɔjnɪmido]

‘he sees him’ [nɛmiadʒɪḷ̥]

‘he sees it’ [nɛmidɔχ], [nɛmidɔ]

‘he shoots’ [pɛskɨk] 2, [peskə]

‘he shoots him’ [peskadʒɪl] 2, [peskadʒɪɬ]

‘he shoots it’ [peskadḷ̥], [peskəkʰ] 2

‘he sings’ [kɛdabɛgiʲɛt], [abɛgijɛt]

‘he sings it’ [ɛdabɛgijatikʰ]

‘he sits’ [ɛbasɪt]

‘he sits him down’ [hɛbaladʒɪḷ̥]

‘he sleeps with her’ [wɪbɛmadʒɪl]

‘he slides down’	[nɪzijohwɑt]
‘he slides him along’	[pɛmadidʒaladəɬ]
‘he slings him over’	[ɛɛkidʒegɪdʒəl], [wɪskidʒɛgɪdʒəl̥]
‘he slings it over’	[wɪɛkidʒegɪtʃ] 2
‘he slows him down/he stops him’	[nɛnthaladʒɪl̥]
‘he smashes it up’	[ɛwɪsteh], [ɛwɪstek]
‘he smears him up’	[mɪdʒigaladʒəl̥]
‘he smells him’	[pɛsadʒɪl̥]
‘he smells it’	[nɛəm pɛsɛdo] 2
‘he smells something’	[pɛse]
‘he smokes’	[nɛgəm kɪdəmat] 2, [kwɪdəmat]
‘he softens it up’	[mɑɬhətkʰ], [mɑɬqətkʰ]
‘he speaks’	[kɛluzɪt] 2
‘he stands’	[kɑɣɑmit], [tɑʔɑmit]
‘he stands in front of you’	[kɑhəmit], [kɑʔəmit]
‘he stands up’	[qɑɣəmɑzɪt]
‘he steals’	[negəm kemud̻nɛt] 2, [kemud̻nɛt], [kemudnɛt], [kɛmud̻nɪt]
‘he steals him’	[kɛmudnatʃkʰ]
‘he steals it’	[kemudnatkʰ], [nenthazɪt]
‘he stops’	[nenthazɪt], [nthasitʰ]
‘he stops him’	[əntχaladʒəɬ], [ɪnthladʒɪl̥]
‘he stops him from talking’	[ənχamwɑdʒɪl̥], [nhamwɑdʒɪl̥], [nɛnthamwɑdʒɪl̥]
‘he stops it’	[nenthadɔχ], [nenχadɔχ], [ɪnthɑdɔχ]
‘he stops talking’	[munɛwɪstɔ]
‘he stops working’	[pɨnləgwɛt], [pʊnlugwɛt]
‘he stretches’	[sɨbɪt] 3
‘he strikes him’	[pɪtadʒɪl̥], [nɛgəm pɛtadʒɪl̥], [tɑɑmɑdʒɪl̥] 2
‘he strikes him unexpectedly’	[taɣəmɑdʒɪl̥]
‘he strikes it’	[tɑχtɪkʰ]

‘he struck it’ [taχtɛg]

‘he suckles’ [nunɪt]

‘he suckles him’ [nunɑlɑdʒɪl̥]

‘he suckles it’ [nunɪt]

‘he takes a shortcut’ [wɛzwɑdɔ tɛgwɑtʃɪtʃ] 2, [weswadɔχ tɛgwɑχtʃɪtʃ]

‘he teaches him’ [negɨm keginamwadʒəɬ] 2

‘he tells a story’ [adugwɪt] 4, [adugwɛ]

‘he tells him’ [təlimadʒɪl̥]

‘he tells it’ [tɛlud], [tɛlək]

‘he tells lies’ [uskabɛwɪtʰ]

‘he tells me off’ [kɛzigawmɪtʰ], [ɪzigawmit]

‘he tells stories’ [adugudidʒɪkʰ] 2

‘he tells two stories’ [aduwɪdʒɪkʰ]

‘he thinks about him’ [ənʔkideʲlmɑdʒəl̥]

‘he thinks about it’ [ənʔkidɛtkʰ]

‘he thinks of it’ [wiʲanʔkidɛtkʰ]

‘he understands him’ [nɛstuwadʒəl̥]

‘he understands me’ [nestuwɪt] 2

‘he unties him’ [apkwɑladʒəɬ]

‘he wakes up’ [togwiʲɛt], [towiʲɛtʰ], [tugwiʲɛd], [tugwiʲɛt]

‘he walks around (the house)’ [kjutowɑzɪt] 3, [kuktowɑzɪt], [utowɑzɪt]

‘he whistles’ [mgwɑzɨmʔgwɛt], [pɪmʔgwɑzɨmgwɛ]

‘he works’ [əlugwɪt], [elegwɪt], [elegwɛt]

‘he’s alive’ [imɑdʒɪtʰ], [nɛgəm imɑdʒɪtʰ] 2

‘he’s approaching’ [wɪtʃkujɪt], [wɪtʃkujɪtʰ]

‘he’s arguing’ [kigadʒazi]

‘he’s asleep’ [nɛbat], [nɛgəm nɛbat] 2

‘he’s been somewhere’ [wedʒiʲe]

‘he’s big’ [mɛskɪl̥kʰ]

‘he’s bringing his pack’ [wɪtʃkwɑlɛt], [wɪtʃkwɑlɛ]

‘he’s building a house’ [ɛlduwɑdʒ]

‘he’s building a house for me’ [wig ɛlduwɑtʃ] 4

‘he’s building his house’ [wig ɛldəwɑtʃ], [wig ɛlduwɑtʃ] 2, [wiɛlduwɑɛ]

‘he’s come toward us’ [wɪɛkwɑsiŋ̊]

‘he’s finished sleeping’ [kɪskuzɪt] 2

‘he’s getting nearer’ [wɪtʃkujɛt]

‘he’s going ahead’ [nigan], [igɑnɑzɪtʰ], [igɑnɑzɪt], [igɑnɑzɪd]

‘he’s going to boil it’ [wɪdʒɑwmɑdɔ]

‘he’s gone astray altogether’ [kɪskada], [kɪskadaχ]

‘he’s got it’ [kɛkunkʰ], [kɛkunʔk]

‘he’s hunting for it’ [kɛdanadʒɪl], [kɛtanadʒɪl]

‘he’s hunting for them (pl.)’ [kɛdanadʒi] 2

‘he’s in good health’ [wɛlɛjɪkʰ], [tadʒɪgɛg]

‘he’s inside’ [pisɪt]

‘he’s kind of hungry’ [mimɛlɪt]

‘he’s kind to him’ [gəsɑlɑdʒɪl], [əsɑlɑdʒəl̥]

‘he’s licking him’ [muɛkomɑdʒəl̥]

‘he’s locked in’ [pɪsi], [pɪsɪt] 2

‘he’s looking for it’ [kwɪll̥kʰ]

‘he’s outside’ [kwɪdʒɪmu wɪkʰ] 2

‘he’s pretty’ [ɛluzitʃinəm]

‘he’s quieting down’ [wəntɑɣɑjɪk] 3, [wəntɑɣɑjɪ], [wəntɑɣɑji]

‘he’s short’ [tegwɑχtʃiʑɪt], [tegwɑtʃiʑɪt], [tegwɑtʃiʑit]

‘he’s straying’ [kɪskad]

‘he’s talking’ [ɛdlɛwɪsto]

‘he’s the skipper’ [skiblewɪt] 2

‘he’s vexed’ [wɛgajɪkʰ] 2

‘he’s well’ [wɛlɛk], [wəlɛkʰ]

‘head boss (on a boat)’ [unudʒɪt] 5

‘heart’ [kamlaməŋ̊] 2, [ənkamlaməŋ̊], [kɔmlɑmun] 2, [kumlɑmun]

‘hearts’ [kumlɑmun]

‘heat’ [kɛdabɑdu]

‘heaven’ [wɑsok]

‘heavy’ [kesku], [keskuk]

‘heel’ [qɔn], [nχun], [nhuŋ̊], [mhɔn], [ənˀχun]

‘heels’ [ntqɔntkʰ]

‘hen’ [kigliwɪtʃ], [skwɛə]

‘her brother’ [wɛləmusəl̥]

‘her brother-in-law’ [nɛləmus]

‘her husband’ [wɪgmɑdʒɪl̥] 2

‘her husbands’ [nigəmatʃkʰ]

‘here’ [ula] 4

‘herring’ [alɛntʃ]

‘herrings’ [alɑntʃɪkʰ]

‘hiding’ [imgwɑ]

‘him’ [nɛgəm]

‘his beard’ [ukidul̥]

‘his belt’ [ukɪspɪzun]

‘his breath’ [ukamlamidɪŋ̊]

‘his brother’ [wɛdʒɪgədidɪdl̥], [wɪdʒɪgədidɪdəl̥] 2

‘his brother-in-law’ [umɑχtaməl̥], [umɑk̄taŋ̊], [mɑktaməl̥]

‘his cabin’ [nɛgəm wikʰ] 2

‘his ear’ [nɛgəm siduwɑɣəŋ̊]

‘his elbow’ [uskənigɪn]

‘his father’ [nɛgəm ukwɪutʃl̥] 2

‘his foot’ [ukwɑt]

‘his forehead’ [uk̄togwɛjəŋ̊], [nɛgəm uhtogwɪdʒəŋ̊] 2

‘his godfather’ [nɛgəm kɛkunidʒəl̥]

‘his godson’ [ukɛkwɪntʃɪl̥], [ukɛkwɪntʃəl̥]

‘his hand’ [upɪdn̥]

‘his head’ [unədʒi] 2

‘his heart’ [ukɑmlɑməŋ̊]

‘his home’ [wigɪtʃ] 2

‘his house’ [ogwəm]

‘his joints’ [ənʔkɪskaj] 4

‘his leg’ [kwɑdʒigəŋ̊], [ukwɑdʒigəŋ̊] 2

‘his mother’ [ukwiʑɪl̥], [ukwidʒəl̥]

‘his mouth’ [nɛgəm uk̄tun] 2

‘his nose’ [uχsɪshun]

‘his older sister’ [umɪs]

‘his older sisters’ [umɪsl̥], [umisl]

‘his pipe’ [udəmɑhɑn], [udəmɑʔɑn] 4, [udəmɑɣɑn], [udəmɑɑn], [nɛgəm udəmɑʔɑŋ̊]

‘his pipes’ [udəmɑʔɑnʔkʰ] 2

‘his rib’ [negom pigaʔan], [negəm upigaʔaŋ̊]

‘his ribs’ [upigaʔɑn]

‘his shoes’ [umuksn̥ʔkʰ]

‘his shoulders’ [uktl̥mɑɣan], [əχtl̥mɑʔan]

‘his skin’ [umegenəm], [uməgegɪŋ̊], [uməgegenəm]

‘his slide’ [utabɑɣɑn]

‘his slides’ [tabɑɣɑnəməl̥], [uktabɑɣɑnəməɬ]

‘his soap’ [sɪspanigɪnəməl̥], [uχsɪspanigɪnəməl̥]

‘his son’ [kwisl], [kwɪs], [əkwɪskʰ]

‘his son-in-law’ [kluʑugul], [klusgwəl̥]

‘his sons’ [ukwɪskʰ]

‘his sons-in-law’ [ukluzəkʰ]

‘hoe’ [əlgɛgɪŋ̊] 2

‘hold him up’	[tʃĭdun] 3
‘holding on tight’	[məlˀgən], [məlgən̥]
‘hook’	[kəgən], [əmˀkəgən]
‘hooks’	[kəgən]
‘horse’	[tɛzɪbo]
‘horses’	[tɛzɪbɔkʰ]
‘horse house’	[tezibɔwɔgwɔm]
‘house’	[wɪndʒidɔm], [wɪndʒigwɑm], [wɪndʒigwɔm̥], [wɪndʒigwɔm], [wigwɑm], [wigwam]
‘houses’	[wɪndʒigwɔməl̥]
‘how’	[talegɪs] 2, [talegɪsk]
‘how’s the tide?’	[talpa], [talpah], [tadutəkʰ], [dadutek]
‘hungry’	[kɛwizɪn̥]
‘hunting grounds’	[ɛtldugəlidik], [ɛtldugəli]
‘husband’	[nigəmɑtʃ]
‘hut’	[hɛptɛ]
‘I am big’	[mɛskiləm̥], [mɛskɪlkʰ]
‘I am blind’	[negabigwɑj] 2, [negabigwaj]
‘I am good’	[kɛlul̥], [ɛluk], [ɪlɬkaluzɪn], [il̥kɛluzɪn̥]
‘I am heavy’	[kɛskul̥] 2
‘I am here’	[tɛklejawi], [klejawi]
‘I am hungry’	[nint kɛwizɪn] 2
‘I am ready’	[iskɑdʒiʲi]
‘I am red’	[mɛgwiʲi]
‘I am short’	[tɛgwɑχtʃĭje]
‘I am small’	[aptʃĭdʒi]
‘I am that size’	[nadɛl̥ˀkɪl̥], [nadɪlɬkɪl], [nadɛlɬkɪl̥]
‘I annoy him’	[ɛdulogwɛj] 2, [kɛdulogwɛj], [kɛdulogwej]
‘I arrive/come’	[nin pɛgisɪn] 2, [pegisɪn], [pɛgisɪn], [pɛgizin], [pɛgisɪn̥], [pɛgisɪnˀkʰ], [ɛgisɪn̥]

‘I ask for it’	[nin pulodum] 2, [wɛgutma], [wigudmaχ], [kwɛgudm̥]
‘I ask for it for him’	[wɛgudəmaχ]
‘I ask for it myself’	[wɛgudmaj] 2
‘I beat him’	[matejɪkʰ], [maχteg], [matejɪk]
‘I beat/hit it’	[nukteen] 3, [nuk̄teen], [nuktehen]
‘I belong here’	[kle] 3, [klejawe]
‘I bet you’	[igadu], [igadul] 2, [igadul̥], [igadəl]
‘I bet you ten dollars’	[igadadinɪtʃ] 2, [igadadinitʃ]
‘I bite it’	[pɑʔɑdɔ], [pɑqɑdɔ]
‘I break it (by dropping it)’	[tɛmtɛskʰ], [tɛmtɛsk], [tɛmtɛs]
‘I breathe’	[kamlami] 3, [əntkamlami]
‘I bring him’	[nin wɪtʃkwɑləkʰ] 2, [wɪtʃkwɑlɪkʰ], [wɪtʃkwɑlɛ], [wɪtʃkwɑlə]
‘I bring it’	[tʃigwɑdə]
‘I broke it off’	[temegej] 2, [temege] 2, [nin temege] 2
‘I brought it’	[pɛgisʊlkʰ]
‘I build a house’	[ɛwigal], [ɛwigan], [ɛldu], [wig ɛldu] 2, [wig ɛldah] 4, [ɛldah], [wig ɛlda] 2
‘I build a house for him’	[ɛldu], [nin ɛldah] 2, [nin ɛldaχ]
‘I build a house for someone’	[ɛlduwɑtʃ], [wig ɛlduwətʃ] 2
‘I call for it’	[wigudəm̥]
‘I can see the boat’	[nɛmidu]
‘I carry it’	[wɪtʃkwɑdu]
‘I come’	[pegisɪn̥]
‘I come in’	[nin piskwa] 2, [nin piskwɔj] 2
‘I come too’	[wɪdʒɛdikʰ]
‘I cough’	[noʔɔmi] 2
‘I cover up’	[ənˀqənozi]
‘I cut his head off’	[tɪmkwɪdɛg]
‘I don’t know’	[mugɪdʒɪdu] 2

‘I eat’	[midʒəzi], [nin midʒəsi] 2
‘I finished sleeping’	[kɪskuzi]
‘I get into a boat’	[tɛbɑsi]
‘I get up’	[mdʒazi], [nɪmtʃazi]
‘I go inside’	[nin pɪdʒazi] 2, [pidʒazi]
‘I go out’	[tujej], [tɛwjeʲ]
‘I go with him’	[wɪdʒeokʰ]
‘I got it’	[kɛkunəm̥], [kɛkunə], [kɛkunəm]
‘I grab it’	[kohwɑlukʰ], [kohwɑlək]
‘I grow up’	[kɪzɪgwɛj]
‘I had my rest’	[kisiʲadlasmɪ] 2
‘I have a big head’	[mɑɕa͡tpaj], [mɑɕɑtpɑj], [mɑɣɑtpaj]
‘I have a small head’	[aptʃitʃnunədʒi], [ni aptʃitʃnunədʒi] 2, [aptʃitʃunudʒi]
‘I have breakfast’	[ki͡tpugɛwe], [ɛski͡tpugəwe]
‘I have fun’	[pɑbi]
‘I have it’	[kɛkunəm], [nin kɛkunəm̥] 2, [nudəmɑh]
‘I hear something’	[nudəm̥], [nadəwe nudəm̥] 2
‘I hinder him’	[wɛdemejaɪh]
‘I hit him’	[tɑʔɑməkʰ]
‘I hit it’	[taχtəm]
‘I hold him up’	[tʃidunʔkʰ]
‘I hold onto him’	[mɛlɬkɪnʔkʰ], [məlɬkənkʰ]
‘I hold you’	[kɛlnul̥]
‘I hunt’	[kɛdantɛgɛ] 2, [tanʔtegɛ]
‘I hurry up’	[wɪnpazi], [nin wɪnpazi] 2
‘I hurt it (inanimate)’	[atʃkɛno]
‘I hurt them’	[atʃikɛnətkəl̥]
‘I itch’	[kɛzɪbije]
‘I jump’	[wɛnaɣɑje], [naʔɑje]

‘I jump out at someone’	[kwədajah], [kwədajaχ]
‘I keep hold of anything’	[kɛlnəm], [kəlnəm]
‘I kick it’	[tɪk͡tɪskəm]
‘I kill him’	[nejbɑ]
‘I kill it’	[nebɑdu], [ebɑdʒə̥l]
‘I killed him’	[nebɑdɑχ], [nebɑdɑ]
‘I kiss’	[wɪskahələmpkʰ]
‘I knock it down’	[kuwɑdu]
‘I know’	[kedʒik], [kedʒɪ], [ɪdʒɪdo], [kɛdʒidu]
‘I know him’	[kɛdʒi]
‘I know it’	[gɪdʒɪdo]
‘I know you’	[kɛdʒik]
‘I learn’	[kinɑmɑzi], [ɛginɑmɑzi]
‘I lie down’	[əlismazi] 2, [ɛlizmazi]
‘I like him’	[kesalˀkik]
‘I like him a lot’	[kɛzisal̥kʰ] 2, [keziksalˀk] 2
‘I lock it’	[apəsχɑm̥]
‘I made it’	[kɪzɪdu] 2, [ɛwigadəm]
‘I make it slide’	[isadidʒado]
‘I make noise’	[kɛzigawe] 2
‘I name him’	[widɪkʰ]
‘I name it’	[widəm̥] 2
‘I play’	[mɛlazi], [mɛlasi]
‘I plug it up’	[kɛbidʒɔʔəm]
‘I pray’	[alazudɛmɑj]
‘I put it on’	[nɑzɑdu]
‘I put those under there’	[pɪdɪkəl]
‘I rest’	[alasmi]
‘I return’	[abadʒasi]

‘I scoop’ [nanigeʲh], [naʔanige]

‘I scrape him’ [nalsugutkʰ], [nasigukʰ]

‘I scrape it’ [nasigudəm̥]

‘I see’ [nɛmidaj]

‘I see the boat’ [nɛmidu]

‘I see the house’ [nɛmidu wɪndʒigwɔm] 2

‘I shoot’ [peskəm̥] 2

‘I sink myself’ [kɛdabɑzi]

‘I sit’ [ebɑzi], [basi]

‘I sleep’ [nɛbaj] 2

‘I slide down’ [nɛsiɪlijohwɑj], [nɪʑɪjohwɑj]

‘I slide him along’ [pɛmadidʒalɨk]

‘I sling it over’ [wɪɛkidʒegeʲih]

‘I slow him down/stop him’ [nɛntχalɪkʰ]

‘I smash it up’ [sɛwitem]

‘I smell it’ [nin pɛzɛdu] 2

‘I smoke’ [kɪdəmaj] 3

‘I start’ [nahej] 3

‘I start to float’ [pohtabaj], [poχtabɑj], [poχtabaj]

‘I steal him’ [kɛmudnɑlɬkʰ]

‘I steal it’ [kemud̄nadəm]

‘I steal it (animate)’ [kɛmudnɑl̥ʔk]

‘I stop’ [ninthazi], [ɪnʔhɑzi]

‘I stop him’ [ənχɑlɪkʰ]

‘I stop it’ [əntχadu]

‘I stop short’ [nenthazi], [nɛnʔhɑzi], [nɪnʔɑazi]

‘I stop work’ [punləgwej]

‘I stretch’ [sɪp̄tawazi]

‘I stretch him’ [nsɪp̄taɣalɪkʰ], [sɪp̄tahadɨ]

‘I strike him’	[pɛtej], [pɪdekʰ], [pɪte], [pɛtɛk], [tɑɑməkʰ]
‘I strike it’	[tɑqtəm], [tɑhtəm], [tɑq̄təm]
‘I suckle’	[nunej]
‘I take it all’	[səduɛuwɑdu], [əmsəduɛuwɑdu]
‘I teach’	[keginamwej] 2, [keginamwi]
‘I teach him’	[keginamaχ], [nin keginamaχ]
‘I tell him’	[tɛlɛmʔkʰ], [tɛləmʔkʰ], [nin tɛlɛmʔkʰ] 2
‘I tell you lies’	[əluɛkabɛwɪn]
‘I understand’	[ni nestə] 2, [nestə]
‘I understand him’	[nestah], [nesta]
‘I untie it’	[apkwɑdu], [nin apkwɑdu] 2
‘I wake up’	[tugwi], [tugwiχ], [tugweja], [tugweʲe]
‘I watch it’	[əntkampkʰ] 2, [əntkam̥]
‘I work’	[elegwej]
‘I make it slide’	[nɪsədijado]
‘I’m angry’	[wɛgajikʰ], [wɛgaji] 3
‘I’m asleep’	[nɛbaj] 3, [nebaʲ]
‘I’m big’	[mɛskiln]
‘I’m chasing him’	[pezugwɑdah] 2
‘I’m doing the same thing you’re doing’	[nəχtedɛladɛgekʰ], [nəktedɛladɛgekʰ]
‘I’m from’	[nin awɪdʒi] 2
‘I’m getting hungry’	[kɛwiɛɪn]
‘I’m going to bet you’	[igadu]
‘I’m grabbing it’	[kohwɑlɪk]
‘I’m hungry’	[kɛwɪzɪn̥]
‘I’m kind of hungry’	[mimɛlɛ]
‘I’m ready’	[kɪskɑdʒiʲi]
‘I’m under it’	[pɪsi], [bɪsi]
‘I’m well’	[wɛligəm], [wəlɛɪmpkʰ], [wɛlɛji]

‘I’ve put on a bad face’	[winegwɛt]
‘ice’	[kumi], [mkumi], [m̥kumi], [əmʔkumi], [əmʔkumi], [əm̥ʔkumi]
‘if you get up’	[lmdʒazın] 2, [əlımdʒazın]
‘in good shape’	[ulde]4, [ulte]
‘in the middle of something’	[megwajık^{h}]
‘in the name of the Father’ (making the cross across the body)	[tanteluwizi], [tantelewizıt], [antelewizıt]
‘in the spring’	[sıgunək^{h}]
‘Indigenous person’	[əlnu] 2
‘Indian paddle’	[əlnuwibi] 2
‘Indigenous people’	[əluk^{h}]
‘Indigenous woman’	[lnus], [lnusk], [əlnusk^{h}]
‘Indigenous girl’	[lnuskwıtʃ]
‘inside’	[lɑmejguompk ejk^{h}], [lɑmeguomk ejk^{h}] 2, [lɑmigəmp]
‘inside of the hand’	[lamiɬtʃe], [lamil̥tʃan̥], [wɑnɑmılɬtʃaʔɑn]
‘iron’	[hɑzɛwo], [qɑzɛwɔχ]
‘is that your brother?’	[kil wıdʒıgədijɔ] 2
‘island’	[mɑnigu]
‘islands’	[mɑnıgul̥] 2
‘it (animate) smells’	[ızəlɛt]
‘it is short’	[tɛgwɑχtʃitʃk^{h}] 3
‘it approaches’	[wıtʃkuja]
‘it barks’	[wɛgwila]
‘it (inanimate) is under it’	[pidık] 2, [pisıt]
‘it (inanimate) smells’	[kɛslɛk]
‘it (long object) snapped’ (context: drop a pencil and it breaks)	[tɛmtɛsın̥]
‘it breaks’	[pɛsipɑzıt]
‘it breaks’	[sɛwistogwıt]

(context: boat on the rocks)

‘it broke off’	[tɛmazigɪkʰ] 2
‘it comes back’	[abədʒazɪt], [bədʒazɪt], [abədʒazɪkʰ]
‘it comes inside’	[bɪdʒipɪdɪkʰ], [pɛdʒibidɛ]
‘it falls down’	[tɛzɪnˀkaχ]
‘it falls in a hole’	[pidʒija] 2
‘it gets quiet’	[wəntaʔəge], [wəntaʔe] 2, [wəntahɑiŋ̊], [ənˀtahɑjiŋ̊]
‘it grows’	[mimadʒi]
‘it is big’	[mɛskɪlɭ̊kʰ]
‘it is cloudy’	[alugwijaχ] 2
‘it is hard’	[mɛlɭ̊kekʰ], [mɛlɭ̊ke]
‘it is heavy’	[kɛskuk], [kɛskukʰ], [kɪskukʰ]
‘it is hot’	[ɛptɪkʰ], [əptɪk]
‘it is inside’	[pidɪkʰ]
‘it is itchy’	[kɛzɪbijɑh]
‘it is pretty’	[kɛzikəlulkʰ]
‘it (the landscape) is pretty’	[kɛluzɪk], [kɛzigelulkʰ]
‘it is sharp’	[kikʰ] 2
‘it is small’	[aptʃɪtʃ], [aptʃɪdʒiʲɪt], [aptʃɪdʒɪtʃkʰ]
‘it is stormy’	[ɛdunaχ]
‘it is that size’	[nadɛlɬkikʰ]
‘it is there’	[nadel ɪdɪk] 2
‘it is too much’	[asamijah], [nesamija], [ɛwsamija], [wesamija]
‘it is under it’	[pɪdɛk], [pidɪkʰ] 2
‘it is very pretty’	[kɛzi gɛluzɪk] 2
‘it makes me itchy’	[kɛzɪp̄kwɪkʰ]
‘it sleeps’	[nɛbatʰ], [nɛgəm nɛbat] 2
‘it smells’	[kɪslɛpɛzuŋ̊]
‘it smokes’	[kludah] 2

‘it snapped off’	[dɛmtɛzɪnʔk], [temtezɪn], [tɛmtɛzɪnʔkʰ], [temtesɪn̥], [temptesɪn̥]
‘it stops’	[ɪnthasikʰ]
‘it (the machine) stops working’	[pɨnəgwɛkʰ], [nhazikʰ], [nhazik]
‘it stops working’	[pənlugwɛg], [pʊnlugwɛkʰ], [pʊnləgwɛkʰ], [pʊnləgwɛ]
‘it suckles’	[nunɪt]
‘it sucks’	[nunɪk], [nunɪkʰ] 3
‘it takes a rest’	[adlasmɪkʰ]
‘it’s alive’	[mimadʒɪt]
‘it’s in the bag’	[pɪdʒalɪkʰ]
‘it’s big’	[məskikʰ], [məskig], [mɛskig], [mɛskik] 2
‘it’s getting bigger’	[pəmkik]
‘it’s good’	[kɛlulkʰ]
‘it’s growing’	[mɪmadʒɪkʰ]
‘it’s heavy’	[kɛsku] 2
‘it’s hooked on’	[nastɪk], [nastɛ]
‘it’s jumping along’	[unaɣaja], [bemiunaɣaja]
‘it’s locked in’	[pɪdɛ]
‘it’s the same’	[təlijah], [telia]
‘jacket’	[nɑzɑdɔ]
‘Jack pine’	[kuwo], [kwo]
‘January’	[punamwegus] 3, [punamwɛgus] 2, [punamwejgus]
‘July’	[sɪtanewɪmpkʰ]
‘jump’	[wenaʔɑjɪt], [wenaqajet], [wenaəje]
‘jump at anything’	[wenaɣəjetkʰ]
‘June’	[nɪbənigus]
‘kelp’	[kilpəl], [tʃəʔołsi], [tʃəhołsi], [dʒoholsi]
‘kettle’	[wɪzut̄nɪt], [wiz̨ud̄nɪt] 2, [wisud̄nɪt]
‘kettle boiled’	[wɪdʒaɣɔmijɪt]
‘kettles’	[wɪzunidʒɪkʰ]

‘kick it’	[tɪk͡tɪskah]
‘kill’	[nebɑh], [nebɑχ]
‘killed them’	[nebah]
‘kind day’	[talegɪskə] 2
‘kind of hungry’	[mɛmɛlɛ] 4, [mɪmɛlɛ]
‘king’	[lɛgwɪt]
‘king’s highway’	[ɛlegwidɛw ɑwti] 2, [ɛlegewɪdɛw ɑwti] 2
‘kingdom’	[ɛlɛgewɑgi] 2
‘kiss’	[sɛgaɣɑləm], [usɛgaʔɛləm]
‘kitten’	[mejowtʃɪtʃ], [mijowtʃɪtʃ]
‘knife’	[wɑqɑn] 2
‘lands to the east’	[əmtkəsn]
‘last fall’	[tɪgɪthɔχ], [əktɪgɪthɔ], [tɛgɪthɔ], [əktɛgɪthɔ] 2, [uktɛgɪthɔ], [tɛgɪthɔχ], [əktɛgɪthɔh]
‘last spring’	[tɪgisɪguŋ̊]
‘last summer’	[tiginɪbɪn], [tiginɪbəŋ̊], [uktɪgɪnibɛŋ̊], [tigənibəŋ̊]
‘leaf’	[nibi] 2
‘learn itself’	[kɛinud͡mɑdi], [kɛginudəmɑzi], [ɛginudəmɑzi]
‘leech’	[əsχuχ], [əsqʊ] 2
‘leeches’	[skukʰ] 3
‘left side’	[padaduɛ], [pɑdɑdutʃ] 2
‘let across (one person)’	[udamuzə]
‘let across (multiple people)’	[udamɔsnkʰ]
‘lice’	[wɑgukʰ]
‘like a sound’	[tel̥tah], [tel̥ta]
‘little bird’	[tʃɪptʃɪdʒ], [tʃɪptʃɪtʃ]
‘little blue fly’	[wudʒɪtʃ]
‘little boy’	[badutʃ], [lbɑdudʒitʃ]
‘little pot’	[otʃɪtʃ]
‘little river’	[tʃibudʒitʃ] 2, [dʒibudʒitʃ]

‘little rivers’	[tʃĭbudʒitʃkʰ]
‘little short man’	[tegwɑhtʃĭdʒɪt]
‘liver’	[uskun̥]
‘living people’	[mɪmɑdʒuwɪno]
‘lock a door with a key’	[apəsigən̥], [apəsχegɪn̥]
‘long’	[idaχ]
‘long ago’	[kisa]
‘looking for him’	[ulwɑdʒɪl̥]
‘looking for it’	[kwiləmɪn̥]
‘loon’	[əpkwimʊ], [kwimu]
‘lots of smoke’	[mɛdludɛwik], [mkludɛwikʰ]
‘lots of snow’	[wɑstɛwikʰ]
‘louse’	[wɑkʰ] 2, [wɔkʰ]
‘lynx’	[abuksigən], [abuksigɪn]
‘mad’	[wɛgajɪkʰ]
‘maggot’	[dʒudʒitʃ] 2
‘make them fight’	[wɛgojwɑdl̥]
‘make them vex’	[wɛgajwɑdʒɪɬ]
‘male beaver’	[nuzɔms]
‘male cow/moose’	[windʒudija], [winjudijam̥], [windʒudijam̥] 2
‘man’	[dʒinəm]
‘many nostrils’	[wɪnadaɑmwɑl̥]
‘maple’	[mestɪkʰ]
‘maple sugar’	[kastijomi]
‘maple tree’	[snɑwe] 3
‘May’	[pənamwejgus], [punamwegus] 2, [unadamwegus]
‘me and him (but not you) break it off’	[temegedɪtʃ]
‘meat’	[wijus]
‘medicine’	[ənpisun], [npizun̥], [n̥pizun̥] 2, [ənpizun̥], [pisun]

‘men’s clothes’ [tʃinəməhwɑn], [tʃinəməhwɑn̥]

‘Mi’kmaq’ [migmɑh], [migmɑw]

‘middle oars’ [mɛgwɑjibi]

‘milk’ [məlagɪtʃ] 2

‘moccasin’ [mkəsn], [magas], [kəsn]

‘moon’ [tep̄konozɪp]

‘morning’ [ɛskit̄pu], [skit̄pu]

‘mother’ [kidʒuwo] 2, [kidʒəwo], [əkidʒuwo] 2

‘mother bear’ [nabɛskʰ] 4

‘mother-in-law’ [dʒugwidʒitʃ], [tʃugwidʒitʃ]

‘mountain’ [pəmdn̥], [pəmdɪn]

‘mountains’ [pəmdənkʰ]

‘mouse’ [əlnuwi abuktʃɪtʃ] 3, [nuwi abuktʃɪtʃ] 2

‘murre’ [wɑbizigwɑh]

‘murres’ [wɑbisikʰ] 3, [wɑbizikʰ] 2

‘my (female) brother-in-law’ [nɪləmus], [nɛləmus] 2

‘my animal’ [ntuwɛmkʰ], [tuwemkʰ]

‘my arms’ [pɪdnogɔm̥], [ənpɪdnogɔm]

‘my back’ [pɑʔəm̥], [ənˀpɑʔəm̥]

‘my beard’ [nidul̥]

‘my belt’ [ntkɪspɪzun̥]

‘my big head’ [mɑɣɑt̄paj], [mɛnɑtpaj], [mɑɣɑtpaj]

‘my boat’ [ni ntul] 2, [ntul], [ntulɪk]

‘my body’ [ntenɪn], [ənteni], [ntenɪn̥]

‘my brain’ [ntəp] 2, [ntʊp], [ntʊb]

‘my brother’ [wɪdʒɪgədijɛkʰ] 3, [wɛzɪgədijɛ]

‘my brother-in-law’ [nəmɑχtɑm], [nɛmɑχtɑm], [nəmɑχtɛm]

‘my cabin’ [nik], [ni]

‘my ear’ [nɪn siduwɑn̥] 2

‘my elbow’ [nuskənigən̥], [ni nuskənigən̥] 2

‘my elder sister’ [kwidʒitʃ], [ənʔkwidʒitʃ]

‘my father’ [nutʃʰ]

‘my fingernail’ [ənχɔzi], [n̥χɔzi]

‘my fingernails’ [n̥qɔzil], [ənχɔzil], [nthɔziɬ]

‘my foot’ [ənʔkat], [mʔkat]

‘my forehead’ [togwɪdʒən̥], [əntogwɪdʒən]

‘my four sons’ [newdʒɪ nʔkwɪskʰ] 2

‘my friend’ [nigəmatʃ], [meti] 2, [medi]

‘my godson’ [kəlnɪgən], [ninɪnʔ kəlnɪgən̥] 2

‘my grandchildren’ [nudʒitʃkʰ]

‘my grandmother’ [nugumiɛ]

‘my hair (pl.)’ [nuzɑbun] 2

‘my hair (sg.)’ [nusɑbun] 2, [nusabən], [nuzɑbən]

‘my hand’ [ənpɪdn̥], [npɪdn̥]

‘my head’ [ninudʒi], [nunodʒi], [ninunədʒi]

‘my heart’ [ənʔkɑmlɑmən]

‘my heel’ [nqɔn̥], [ənʔqɔn], [nʔqənʔkʰ], [ənʔqunkʰ], [nʔqunkʰ]

‘my husband’ [nin nigəmɑtʃ] 2, [mtʃinəmən̥], [ntʃinəmu]

‘my husbands’ [tʃinəmən̥]

‘my knee’ [tʃɪgun], [mtʃɪgun̥]

‘my leg’ [ənʔkadʒigən̥], [ənʔkaʑigən], [ni ənʔkadʒigə] 2, [əntkadʒigən̥]

‘my little cabin’ [nɪktʃitʃ], [dʒiktʃitʃ]

‘my little house’ [niktʃitʃ] 2

‘my medicine’ [nin ənpizun̥] 2

‘my mother’ [ənkɪtʃ], [nkitʃ], [ən̥ʔkitʃ], [nin ənʔkitʃ] 2

‘my mouth’ [əntən̥] 2, [ənʔtun]

‘my mouth is always open’ [pantunebi] 3

‘my mouth is open’ [əntun pantedıh] 2, [patedɪk̄], [pantedɪk̄], [pantunebi] 2

‘my nose’ [uχsɪshun̥]

‘my nostril’ [wɪt̄nadej], [wɛdnade], [wɪdnade]

‘my nostrils’ [wətnadaaməl̥], [nadaaməl̥]

‘my older brother’ [kɪsigwɪt wɪdʒɪgədijɛh] 2

‘my older sisters’ [nəmɪskʰ]

‘my pipe’ [nudəmɑʔɑn̥], [nudəmɑʔɑn], [nin nudəmɑʔɑn̥], [nin nudəmɑɑn̥]

‘my rib’ [pigahɑn]

‘my ribs’ [pigaʔən], [pigaɣan]

‘my sheep’ [nin ənʔtuweɪ̯n̥] 2, [ənʔtuweɪ̯n̥]

‘my shoes’ [ni nəmuksn̥ʔkʰ]

‘my shoulder’ [tl̥mɑʔən̥], [əntl̥mahan]

‘my shoulders’ [tl̥maɣanʔkʰ], [tl̥maʔən]

‘my sibling’ [wɪdʒɪgədijɛh]

‘my skin’ [məgegenəm], [məgegenəm̥], [məkekenəm]

‘my snowshoe’ [taqəmkʰ], [əntahəmkʰ], [mtahəm̥]

‘my soap’ [sɪspanigənəm], [sɪspanigənəm̥]

‘my sons-in-law’ [nkluzukʰ]

‘my stick’ [kumudʒəm̥]

‘my sticks’ [kəmudʒəməl̥]

‘my teeth’ [nibɪdl̥]

‘my tooth’ [nɛbɪt], [nɛbɪtʰ], [nɛbit]

‘my whiskers’ [nidul̥]

‘my younger sister’ [kwedʒitʃkʰ], [kweɪ̯dʒitʃ], [nʔkwedʒitʃ]

‘my younger sisters’ [kwedʒitʃkʰ]

‘near kins’ [wɪdʒɨwɑgwədijɛkʰ], [wɛdʒiwɑgudijɛkʰ]

‘nephew’ [nuluks] 2

‘new’ [pɛle], [pɪle]

‘new rope’ [pɪll̥tuk], [pɪltuk], [pɪltəkʰ], [pɪltukʰ], [pɪl̥tu]

‘New Year’s Day’ [punanewɛmʔkəsən̥], [punanewɛmp]

‘new/fresh’	[pɪle] 2
‘next spring’	[tɪgisɪgunukʰ]
‘night’	[tɛpki]
‘nineteen’	[nɛwtɪnskɑdʒɪl pɛskonadɪχ]
‘no’	[mokwa], [mohwa]
‘noise’	[kɪzɪdɛwɛdah] 2
‘noise going along’	[pemta]
‘north’	[ohwɑdn̥], [okwɑt̄n], [ohwɑt̄nu], [oqwɑt], [okwɑt] 2, [oχwɑt], [ohwɑt], [ɔkwɑtk]
‘North American redstart’	[puktewsɪt] 2
‘north pole’	[pɔktʃi]
‘north wind’	[okwɑtkʰ] 3
‘northern’	[oqwɑn] 2, [okwɑdn̥] 2, [oqwɑtn] 2, [oχwɑdn̥], [oqwɑn̥]
‘noses’	[sɪsqun] 2
‘not dry’	[muwispadenu], [mugispadeno]
‘not long ago’	[kɛdʒigaw]
‘not sharp/blunt’	[mugezigiknək], [mugezigiknu], [mugezigiknɔ]
‘nothing’	[moqɑʔɔhwej]
‘November’	[toqwaχ], [tɛgigus]
‘now’	[nuda] 3, [mədaχ], [mədah], [muda] 3, [nɛda]
‘nut’	[ɛwɪpkʰ] 4
‘oars’	[tahən] 2, [taʔan̥], [taɣən]
‘ocean’	[ləmbuk̄]
‘off in the water’	[abaχtu]
‘old’	[saɣəwe], [saɣawe]
‘old wild beaver’	[inamsk]
‘older’	[kɪziguwɪt]
‘older sister’	[nəmɪs]
‘on earth’	[mɑmigɛgɛjməχ], [mɑɣɑmiɛkʰ], [mɑɣɑmigɪkʰ]
‘on the other side’	[hameʲɪkʰ]

‘on top’	[kegwɑdu]
‘one and the other’	[nɛgəm owe] 2, [aχɑlɑ nɛgəm owe], [nɛgəm owɛ], [aχɑlɑ nɛgəm owɛ], [aχnɛgəm owɛ]
‘one dollar’	[nəhtagɪk], [nəwhtagɪkʰ] 3
‘one hundred’	[kɛskɪmˀkɪlnaɣɑn̥]
‘one person’	[uskidʒɪn̥], [nəktedʒɪt], [nəwtedʒɪt], [uskidʒɪn]
‘one son’	[nkwɪs], [ənˀkwɪs], [newtedʒɪt nkwɪs] 2
‘otter’	[kɛwnɪkʰ], [kɛwnɪk] 2, [kɛwnɪt], [kɪwnɪk]
‘otters’	[kɛwnigaχ] 2
‘our brother’	[wɛdʒigɪmpkʰ], [wɪʑigɪmpkʰ], [wɪdʒɪgɪmpkʰ], [wɪdʒɪgɪmkʰ]
‘our godfathers’	[kɛkunidʒɪkʰ]
‘out in the bay’	[ləmbuktu]
‘out in the ocean’	[əktanokʰ]
‘outside’	[pɑpki], [pɑpke], [pɑpkɪkʰ], [kwɪdʒm̥kʰ]
‘owl’	[tidikli], [tidigli]
‘paddle’	[wɪnjuwibi], [kəbidan], [kəbidan̥]
‘pair of oars’	[uktahən]
‘pantry’	[pɔktəshɑzi]
‘paper’	[wigadigɪn]
‘partridge’	[plawɪtʃ], [lawɪtʃ], [pəlawɪtʃ]
‘partridge berries’	[wɪskimɑn] 3, [wɪskimɑn̥]
‘partridge berry’	[wɪskimɑn̥], [wɪskimɑn]
‘partridges’	[pəlawɪtʃkʰ], [plawɪtʃkʰ]
‘path’	[awti]
‘paths’	[awtil] 4, [awtiɬ], [awtijəl̥]
‘people’	[skwɪdʒɪn̥] 2, [skwidʒɪn̥] 2, [skwidʒin], [skwidʒɪn], [skwɪdʒɪn], [skwɪdʒɪnˀkʰ] 2, [skwɪdʒɪn̥], [skwɪdʒɪnˀk], [skidʒɪn̥]
‘perhaps’	[tʃɪptəkʰ]
‘person’	[skwɪdʒɪn]

‘pine’	[kwɔtʃ]
‘pines’	[kwokʰ]
‘pipe’	[tɛmɑqɑn]
‘pipes’	[tɛmɑʔɑnʔkʰ]
‘pit’	[wɑlɑmʔki], [wəlɑmʔkɪh], [wəlɑmʔkɪkʰ]
‘plate’	[lɑsiɛt]
‘playing cards’	[laskəgwɛ], [laskugwɛj]
‘plenty of ashes’	[wɪskukʰ], [wɪsku]
‘polar bear’	[wɑbus]
‘poplar tree’	[midik], [medi], [midi] 2
‘poplar trees’	[medijaɣɑmigɪk]
‘pot’	[wɔ] 2
‘pots’	[wɔk], [wɔkʰ] 3, [wokʰ]
‘priest’	[pɑtlijɑs]
‘prince’	[ɛlɛgewidʒidʒɪt]
‘princess’	[ɛlɛgewiskwɪtʃ]
‘puppy’	[ləmudʒɪtʃ] 2
‘push off’	[pusi]
‘put it down in the water’	[ɛdabɑdu]
‘put someone to sleep’	[mpa] 4
‘quarter’	[kalḷtiʲe] 2, [kaltiʲe], [kɑltijɛ]
‘quartered an animal’	[kɑltijɛdɪk]
‘quarters’	[kaltijegəḷ], [kaltiʲeḷ], [kaltegə]
‘queen’	[lɛgɛwiskʰ], [ɛlɛgewiskʰ] 2, [ɛlɛgewis]
‘rabbit’	[labɪt], [lɑbɪts] 4
‘rain’	[pɛzaχ], [pɛza]
‘rapids’	[hɑpskuḷ], [hɑpsku]
‘raspberries’	[kəlidaχ] 3, [klidaχ]
‘raspberry’	[klidɛw] 2, [klidəw], [klidɛw]

‘rat’	[abuktʃɨtʃ], [abʊktʃɪtʃ], [abuktʃɪtʃ]
‘ready’	[kɛgɪskadʒijaχ], [kɪskadʒa]
‘really’	[əlba]
‘red’	[megwekʰ], [megwɛh], [megwɛk], [mɛgwɛ]
‘red stone’	[ɪgwɛ kundɛw] 2, [mɛgwɛ kundɛw] 2
‘relative’	[noguməw]
‘relatives’	[mogumaχ], [mogomah]
‘rib’	[pigaʔaŋ̊] 2, [pigaχan], [pigahən], [ənpigahəŋ̊]
‘ribs’	[ənpigaχan], [pigaaŋ̊], [pigahən]
‘rich people’	[sɑʔəmɑh]
‘rich person’	[sɑmɑwudi] 2
‘ridge’	[pəmˀdən]
‘ridges’	[pəmdənˀkʰ] 2, [kəmtənˀkʰ], [pəmˀdənˀkʰ]
‘right (direction)’	[inɑχɑn], [inɑʔɑn], [inɑhɑŋ̊]
‘ripe fruit’	[kɪsɪgwɛgəl̥], [kɪzimɑnigəl̥]
‘river’	[sɛbu], [sibu] 2, [tʃɨbu]
‘rivers’	[sibul]
‘road’	[awti] 7
‘robin’	[tʃɪptʃawetʃ] 2
‘robins’	[tʃɪptʃawetʃkʰ], [tʃɑwɪtʃkʰ]
‘rock’	[kundejo] 3
‘rocky’	[kundɛwik]
‘rocky cove/rocky island’	[mɑnapskʰ]
‘rocky coves/rocky islands’	[mɑnapskul̥] 2, [mɑnapsku]
‘room’	[əlmigazi]
‘rooms’	[migasil̥]
‘rooster’	[nɑbɛjo], [nabejo], [nɑbɛjo]
‘roosters’	[nabejokʰ], [nabeokʰ]
‘root’	[tʃɨbɪskʰ] 3, [tʃɨbəskʰ], [tʃɨbɪsk], [tʃɨbɪs]

‘roots’	[tʃĭbʊskɬ̩], [uktʃĭbʊskl̩̊], [tʃĭbɪskl̩], [tʃĭbɪskəl], [tʃĭbiskəl] 2, [tʃbuskəl̩̊], [tʃĭbiskəl̩̊]
‘rope’	[abi], [abɑbi] 2, [ɑbɑbi] 2
‘ropes’	[abɑbikʰ]
‘rough’	[mɛduna] 2
‘rough weather/storm’	[tunɔχt], [tunɑχt]
‘rowboat’	[ənʔtul̩̊]
‘rum’	[puk̄tɛwɪɛ], [pok̄tɛwɪɛ]
‘s/he breaks it (window)’	[sɛwiste], [sɛwistɛkʰ]
‘s/he broke it’	[temegɪtʃ], [temegetʃ]
‘s/he broke it off’	[negəm temegetʃ] 2
‘sailboat’	[qɔdamozən̩̊]
‘salmon (sg.)’	[plamo], [plamu]
‘salmon (pl.)’	[plamokʰ]
‘salt’	[saləwej]
‘salt (lots of it)’	[salawɛl]
‘sand’	[tɪpkwɑn̩̊]
‘school’	[kinamwoɣuwom̩̊], [keginawogwum], [ɛginamogwəm], [eginamowɔm̩̊]
‘scissors (pl.)’	[təmətχigən̩̊], [təmətχaigən]
‘scissors (sg.)’	[matχigɪn], [matχigɪn̩̊], [matχigən] 2, [matχəigən], [maχtign̩], [matχaigən]
‘sea’	[tan], [uktan], [ktan], [uχtan̩̊]
‘seabird’	[abɑhtugowe] 4, [abɑhtuwi], [abɑhtuwəwɪkʰ], [abɑhtugowɪkʰ]
‘seaweed’	[kɪlpəl̩̊], [kɪlpəl] 2, [kadasko] 3, [kodasko] 2
‘sees everything’	[sətkoɔjnimidɔχ]
‘September’	[madʒɔʔtuwigus] 2, [madʒɔtuwigus]
‘servant girl’	[nuk̄tɔq̄tes], [nutɔqtes]
‘seven’	[əluwiganək]

‘seventeen’ [nəwtiskadʒɪl əluwiganɪkʰ] 2

‘seventy’ [əluwiganək tezinskah] 2

‘sharpening stone’ [kidaʔaŋ̊] 2

‘shawl’ [puduwe], [pɪduwe], [pɪdugwɛj], [pɪdugwɛ]

‘she suckles him’ [nunaladl̥] 2

‘she’s pretty’ [kɛluzɪt]

‘sheep (pl.)’ [ɪtʃkələwəwtʃɪk]

‘sheep (sg.)’ [tʃɪtʃkəluwəwtʃ]

‘shin’ [nulu]

‘shirt’ [sɑlɑdʒɪl̥], [adlawe]

‘shoe’ [wɪndʒuksnat]

‘short’ [tegwɑχtʃɪtʃkʰ]

‘short stick’ [tegwɑ] 2, [tegwɑh], [tegwɑχtʃɪtʃʰ]

‘short sticks’ [tegwɑχtʃɪtʃkəl̥]

‘shovel’ [halibudi]

‘shovels’ [halibudil̥]

‘sick’ [azəgɔm] 2, [azəgɔm̥]

‘sing’ [kɛdabɛgi]

‘sit’ [pasi] 2

‘six’ [azɛgɔm] 2, [asəgɔm̥]

‘sixteen’ [utiskadʒɪl azɛgɔm] 2

‘sixty’ [azɛgɔm dezɪnkah] 2

‘skin’ [məgegən̥]

‘skins’ [məgegənʔkʰ]

‘skipper over the men’ [kibelewɪktuwɑdʒi]

‘sky’ [məsigɪs], [muzigɪskʰ]

‘sky without clouds’ [məɛχunamu], [m̥ɛhənamo]

‘sleet’ [kumi]

‘sleet falling’ [kumi neziet] 2

‘slide’	[tɑbɑgən̥], [tabɑχən̥] 2, [təbɑɣən̥], [tabɑɣɑn̥], [tabɑɣən̥]
‘slides’	[utabɑɣɑn], [tɑbɑχɑn]
‘small’	[aptʃitʃk], [aptʃitʃkʰ] 3, [aptʃitʃ] 2, [aptʃiʑɪt]
‘small bird’	[aptʃidʒɪt]
‘smashed off’	[tɛmptɛzɪnʔka]
‘smoke’	[tludɛw], [əmtludɛw]
‘smoke rising’	[mkludo], [mkludɛw] 2
‘snake’	[mteskə], [tɛskum]
‘snakes’	[teskəmʊkʰ], [teskəmʊk], [mtɛskəmukʰ]
‘snow’	[wɑstɛw] 3
‘snow falling’	[pezah], [peza]
‘snow shovel’	[halibʊli], [halibəli]
‘snowbird’	[sikuwe sizɪp] 2, [sikəwe sizɪ] 2
‘snowing’	[pɛsa], [pɛsaχ] 2
‘snowshoes’	[aqn̥kʰ]
‘soap’	[sɪspanigɪn]
‘soft ice’	[nugwe]
‘someone comes in’	[piskwɑh]
‘someone with no head’	[temkwi], [temkwekʰ]
‘someone’s elbow’	[uskənigən]
‘something’	[nadowoj], [nadooj]
‘something hard to get out’	[mɛlḷkədɪkʰ]
‘something that belongs to rich people’	[sɑmɑwudɪḷ], [sɑmɑwudɪl]
‘something that’s hard’	[ɛlḷʔkədɪh]
‘sometimes’	[egɪn] 2, [egɪn̥], [igɪn̥] 3
‘someone’s rib’	[upigaɣan̥]
‘son-in-law’	[nkluzu]
‘sons-in-law’	[kluzukʰ] 3
‘soon’	[buktʃɪkʰ], [əbuktʃɪkʰ], [obuktʃɪkʰ], [ubuktʃɪk]

‘sounds like’	[tɪlḷta]
‘sour’	[wɪtʃhətʃ]
‘south’	[kədesn] 2
‘southward’	[sɛnuχsaχtɪkʰ], [sɛnuχsaχtɪk]
‘southwest’	[pɪktezɪkʰ]
‘spark’	[saptegni], [saptegəne]
‘sparrow’	[nidʒɪpqadegɪt], [nidʒɪphadegɪt]
‘spider’	[awɔwɪdʒɪt] 2
‘spiders’	[awɔwɪdʒɪdʒɪk], [awɔkɪdʒɪdʒɪk]
‘spoon’	[əmhwɑntʃĭtʃ], [əmʔkwɑntʃĭtʃ]
‘spring’	[sikʰ], [sekʰ], [sɪkʰ] 2, [sigun]
‘spring month’	[sɪkəwigus] 2
‘sprupce beer’	[kɑwɑtkwɑboχ], [awɑtkwɑbi], [kɛwɑtkwɑbi]
‘spruce tree’	[kawɑtkʰ] 3, [kɑwɑtkʰ]
‘spruce trees’	[kɑwɑtkəkʰ]
‘stale bread’	[saʔɔwoj], [saχɑwe], [saɣɑwe], [saʔɛwe]
‘star’	[klohwojtʃ], [klohwɛtʃ], [klɔwɔwɪtʃ], [klɔwɪtʃ], [klɔgwɪtʃ] 2, [klɔgwɪɛ]
‘stars’	[klɔwɛdʒwikʰ] 2, [klɔwɛdʒiwɪkʰ], [klɔgwɪdʒɪwɪk]
‘stick’	[kumudʒ], [kəmudʒ], [kəmutʃ] 2
‘stick you hang your kettle on’	[nabɔɔn̥], [nabɔn̥]
‘sticks’	[kəmudʒɪḷ]
‘still water’	[qɔdɑps], [qɔdɑps], [qɔdapskʰ]
‘still waters’	[pudɑp͡] 2, [pudɑps], [qɔdɑpskʰ], [qɔdapskuḷ]
‘stone’	[kundɛo]
‘stones’	[kundaḷ], [kundal]
‘stories’	[adəgwɑʔɑnʔkʰ]
‘storms’	[ɛdunaχ]
‘stove’	[pɑʔəzi]
‘stoves’	[pɑʔɑzigɪn], [mpɑɑzigɪn̥], [pɑɑzigɪn] 2

‘straight ahead’ [kunudʒɛkliʲɛ] 2

‘strawberries’ [adwɔmˀkəmɪnt], [adwɔmkomɪntkʰ], [adwɔmˀkəmɪnˀk]

‘strawberry’ [adwɔmkʊmɪn̥]

‘string’ [ənhunɛbisun], [ənhunebisən̥], [nɑstɑhɑʲgən̥] 2, [ənhunɛbisən]

‘strips used for making baskets’ [lɪptɛnigun]

‘sugar/sweet’ [sɪsməhn], [sismɔʔən̥], [əmˀkina], [nɔmˀkina], [sismɔʔun], [nlasismɔʔun], [nomˀkinah], [sismɔʔun̥]

‘summer’ [nɪpkʰ]

‘sun’ [naguzɪt] 4, [naguze]

‘sure’ [kɛdlɛwiʲiktək]

‘swallow (animal)’ [kuglwɑles] 2

‘swallows (animal)’ [kugwɑleskʰ] 2

‘swim along’ [pɛma]

‘talk a little bit’ [kɪtʃkah], [ɪtʃka], [kɪtʃka]

‘tea’ [pədewe] 2

‘teacher’ [keginamwɑdʒi], [nɪdʒigenamwɛt], [nudʒigenamwɛt], [nudʒiginamwɛt] 2, [nudʒiginamwɛ], [nudʒiginamwɪt]

‘tell someone off’ [kɪzigawɪmpkʰ] 2, [ɪzigawɪmˀkʰ]

‘that’s enough’ [na dɛbijaχ] 2, [na dɛbija]

‘the crook on the hook’ [klukɛwɛ]

‘the fire is hot’ [kɛzustuwɪk] 2, [kəzustuwɪk]

‘the foreman’ [skibəl]

‘the ice is not hard enough’ [məlgɛnək], [wɑdɛməlgenək]

‘the log rolls’ [teduwiʲɛt], [tedubiʲɛt]

‘the north’ [oqwɑtkʰ] 3

‘the other crowd’ [uhtəgɪkʰ]

‘the other one’ [uχteg], [apəktɪk], [apəktɪk̄], [apəktɪ], [uχtəkʰ] 2, [uχtə], [abəktəh], [apəktɪh], [tɛgɪk], [əktegɪkʰ], [əktəkʰ]

‘the other one comes’ [abəktɪkʰ], [uχtəg]

‘the others’ [abuktɪkʰ], [apəktɪk], [abəktɪkʰ]

‘the place’ [kwɛgadi]

‘the tide is rising’ [wɪtʃkaba], [pɔχtabaχ]

‘their (any woman’s) brother-in-law’ [wɛlmuʑwɑl̥], [wɛlməʑəwɑl]

‘their brother’ [wɪdʒigɪmɑdʒəl̥] 3

‘their home’ [wɪgwɑm] 2

‘then’ [nahej]

‘there’ [nadel]

‘these chairs’ [kut̄pudi]

‘they (inanimate) are heavy’ [kɛskugəl]

‘they (inanimate) are under it’ [bidɛgəl̥]

‘they grab him’ [kokwɑladidʒəl̥]

‘they hate it’ [pɔwɑdʒidɛdəmidɪtʃ]

‘they hate those’ [pɔwɑdʒidɛtkəl̥], [owɑdʒidɛdəmididʒəl̥]

‘they have him’ [kɛkunɑdɪdəl̥]

‘they hear a lot of noise’ [nudəmidɪtʃ]

‘they hear a noise’ [nudəmidi], [nudəmidɪtʃ]

‘they hear noises’ [nudemidɪtʃ]

‘they help him’ [abɔʔənˀkɪkʰ], [abɔwənˀkɪkʰ], [abɔnwɑdidʒɪl]

‘they help them’ [abɔnəmwɑdɪdʒi]

‘they hide him’ [mɪmgwɑladɪdʒəl]

‘they hide it’ [mɪmgwɑdudɪtʃ]

‘they hide them’ [ɪmgwɑdudidʒəl̥]

‘they hurry up’ [wɪnpazultɪdʒɪχ], [wɪnpazultɪdʒɪh]

‘they hurt him’ [atʃknejwɑdɪdʒəl]

‘they knock them down’ [mɪshunɑdɑdɪl]

‘they knocked them over’ [nɪstegəl̥]

‘they look for it (a moose)’ [kɛdanadidʒəl̥]

‘they look for them (animate)’ [kɛdanadidʒi]

‘they hate him’ [pɔwɑdʒidɛlmɑdidʒəl̥]

‘they broke it off’ [temegedɪtʃ], [temegedɪɛ]

‘they fall over’ [padʒidʒiadidʒɪk]

‘they grab them’ [kohwɑladʒi], [kohwɑladɪdʒi]

‘they had that’ [kɛkunəmidɪtʃ]

‘they had those’ [kɛkunmidɪdʒəl̥]

‘they hate them’ [owɑdʒidɛlmɑdʒi], [ɛkunɑdidʒi], [kɛkunɑdidʒi]

‘they’re chasing him’ [peteska]

‘they’re hunting for it’ [kwɪləmidɪtʃ], [kwɪlmidi]

‘they’re looking for them’ [kwɪlmididʒəl̥]

‘they’re ready to leave’ [ɪskɑdʒɔɬtidʒɪh]

‘they’re telling stories’ [adugwɑdɪdʒɪk], [adugwɑdidʒɪk]

‘thin ice’ [ɛnadʒɪtʃ], [mɛnadʒɪtʃ], [ənadʒɪtʃ]

‘things quieting down’ [wəntɑɑzə], [wəntɑhɑzi]

‘this fall’ [əthɔ]

‘this morning’ [sɛbɑj]

‘this summer’ [nibɪnu]

‘thread’ [ɑbɑbitʃ]

‘three’ [sist] 2

‘three dollars’ [nestajgəɬ], [nezajgəɬ]

‘three people’ [nesidʒi]

‘three quarters’ [nazɪskəl̥ kaltijɛl̥] 2, [nezɪskəl̥ kalˀtiʲel̥] 2

‘thrushes’ [ɛthəlnɪs], [məthəlnɪs]

‘tide is falling’ [pemniwadɪk], [pemniwadəh], [pɔtʃiniwedɪks]

‘tide is level’ [kispa]

‘tide rising’ [pɔχtaba], [pɔʔtaba], [pɔhtaba]

‘tie him on’ [kɛltɑpɛlɑdʒɪl]

‘tie something up’ [tʃĩbilaʔɑn̥]

‘tie up something/anything’ [ɛltɑʔpɛlˀl̥ˀk]

‘tight’	[ɛdʒɪmkegəl̥], [edʒɪmʔkelə], [ɛdʒɪmkelək]
‘to ambush someone’	[ɛmimgwɑzi], [mimgwɑzi], [imgwɑzi]
‘to appear/come’	[pɛgisɪnʔkʰ], [pɛgisɪn̥]
‘to arrange/put in order’	[mawɑl], [mawɑdu]
‘to be ready’	[iskɑdʒejɪn̥], [iskɑdʒeje]
‘to be sick’	[kɛsinugwən̥]
‘to break something’	[təmadu]
‘to bring’	[dʒigwɑdu]
‘to go astray’	[kɪskatʰ] 2, [kɪskat], [kɪsgad]
‘to grow ripe’	[kɪzigwɛkʰ]
‘to hinder’	[wədmejah]
‘to kick’	[tkədɪsku] 2, [tkadɪsko] 3, [tɪk͡tɪsku]
‘to lie’	[ɪluskabɛwi]
‘to look for something’	[kwilɛin]
‘to pray for him’	[alazudəmɛsɛwɑdʒɪl]
‘to ride a bicycle’	[tagaʔəne]
‘to roll’	[kil̥təwazɪt], [kill̥towazɪt], [kiltowɑzɪt͡]
‘to rouse someone from sleep’	[tugwɑl], [tugwɑli]
‘to sew it up’ (context: sewing up a moccasin seam)	[lisχqɔn̥], [lisɔqɔn̥] 2
‘to smear’	[mɪdʒɪgaduɲ]
‘to smear somebody up’	[sɛwɪstadʒɪl̥], [sɛwɪstegəl̥]
‘to squeal’	[alɛwista] 2, [alɛwistɑ]
‘to stand’	[aqmit], [hahami], [kahəmi], [kahəmit]
‘to steer’	[ɪɬkwidək], [ɪɬkwidɪkʰ]
‘to stop talking’	[mənɛwistudɪkʰ], [munɛwistudɪkʰ]
‘to strike’	[tɑhəmitʰ], [tɑmit], [kɑhəmitʰ]
‘to swim’	[tkɪsmi] 2, [kɪsmi], [ətkɪsmi]
‘to take a shortcut’	[wɛdʒwɑdʒitʃkʰ], [wɛdʒwɑdʒitʃ]
‘to teach’	[eginamwɛt]

‘to whistle’	[mpɪmgwɑzɨmgweʲi], [pɪmgwazɨmgwej], [pimgwɑəmgwe], [pɪmgwɑzɨmgwej]
‘tobacco’	[təmawe]
‘today’	[kɪskuχ]
‘too much for me’	[ɛwsami] 2, [ewsami] 2
‘top’	[skwɪtuk], [skwiduk], [skwɪtu] 2
‘toward the south’	[sɛnuχsaχtɛg]
‘town’	[tʃigaŋ̍], [uktʃigaŋ̍]
‘trap’	[əʔtegəŋ̍], [ləktegən]
‘traps’	[ləχtegən]
‘tree’	[stoʔən]
‘tree bark’ (specifically fir and spruce)	[əphwɑw], [əpχwɑw], [əpwɑw] 2, [əp̄wɑw]
‘truly’	[kedl̥]
‘turkey’	[tagali], [tagalitʃ]
‘twelve noon’	[kəntʃɪdabow adʒɪt] 2, [mʔkəntʃɪltabo adʒɪt]
‘two dollars’	[tabwajgəɬ]
‘two hundred’	[tabuwɑskɪmʔkɪlnawɑŋ̍]
‘two stars’	[klɔgwɛtʃk], [klɔgwɪtʃ] 2, [klɔgwɪtʃkʰ], [klɔhuwɛtʃ]
‘two stories’	[adugwɪdʒɪkʰ]
‘two suns’	[naguzidʒɪk], [naguzɪdʒɪkʰ]
‘under’	[lamɛkʰ], [lɑmɛ] 2, [lɑmek], [lɑmeʲɪkʰ]
‘under arms’	[kɪktʃəlkoj] 2
‘under the chair’	[lɑmej kut̄pudi] 2, [kɔmej k̄ut̄pudi] 2
‘under your arms’	[mtʃkɛktʃəlʔkoj]
‘village’	[udan]
‘water’	[ɛomwɑŋ̍], [sɨmwɑŋ̍], [somwɑŋ̍]
‘water boiled’	[wɪdʒaɣɑmija]
‘waterfall’	[hɑpskʰ], [kɑpsku]
‘waterfalls’	[ɑpskul̥]
‘wave’	[tku], [ətku]

‘waves’	[tkukʰ] 2, [ətkuk] 2
‘we break it off’	[temegekʰ] 7, [temegikʰ], [temɑdu temegwɪkʰ] 2, [temegeɪkʰ]
‘we speak’	[keluzulḻ̥ti], [kɛlusi]
‘we all come’	[pɛgizuḻ̥tɪmʔkʰ], [pɛgizuḻ̥tɪmkʰ] 2
‘we bet each other’	[igadat͡ni], [igadadinɪtʃ], [gadadinɪtʃ]
‘we broke it off’	[temegwekʰ]
‘we hear you’	[nudul]
‘we sleep together’	[wibɛdijɛk], [wibɛdijɛh]
‘we’re arguing’	[kigadʒadiʲɛ], [kigadʒadijɛkʰ] 2
‘we’re ready to leave’	[kɪskɑdʒɔɬtiws]
‘we’re wandering around’	[alidajeh], [alidaje]
‘weasel’	[əskwus], [əskus]
‘well’	[qənobadi], [ənʔhənobadi]
‘well furred’	[ulawɛluwɑt]
‘west’	[tkəsn] 2, [ətkəsn]
‘whale boat’	[welibukʰ], [welibo], [welɪbu]
‘what’	[talawɪn̥]
‘what a smell’	[tɪslɛkʰ]
‘what do you call yourself’	[talawiduzɪn̥], [talawiduɛɪn]
‘what happened’	[talijaχ]
‘what thing’	[hɔk͡wej]
‘what’s that smell’	[tɛlimah], [kowəjtɪlima]
‘what’s your name?’	[tɛstalawizɪn]
‘which one’	[naduwɪn], [naduwɛn], [tegɪn̥]
‘white owl’	[əχsine] 2, [χsine] 2
‘white pine’	[wɑbek], [wɑbekuo], [kuwo], [kwo] 3
‘who’	[wɛn]
‘who’s son’	[wɛnukwɪs], [wɛnukwɪsəḻ̥]
‘who’s sons’	[wɛnukwɪskʰ]

‘wild cat’	[wɑhɑsimeowtʃ]
‘wind’	[dʒuzəkʰ]
‘windy’	[wadʒuzəkʰ], [wɪdʒuzəkʰ]
‘woman’	[ibit]
‘women’s clothes’	[ebidutapsuŋ̊]
‘wood cat’	[abɪstanɛwtʃ] 2
‘wood cats’	[wɪstanɛwtʃɪkʰ]
‘wood growing’	[mimadʒɪkʰ] 2
‘wood stove’	[pɑɑzigɪni], [pɑɣɑzigɪni]
‘woodpecker’	[abɔhwɑdʒɪt], [abowɑdʒɪt] 4
‘working at it’	[ɛldu] 4
‘wren’	[məthəlnɪs] 2, [teməthəlnɪs]
‘yes’	[amutʃ]
‘yesterday’	[ulagu]
‘you all’	[kiləw]
‘you all break it off’	[temegekʰ], [temegwɪk]
‘you and I’	[kɪnu]
‘you are big’	[mɛskɛlŋ̊], [mɛskɪləmən], [mɛskiḷ], [mɛskilŋ̊]
‘you are blind’	[negabigwɑŋ̊], [negabigwɑn]
‘you are good’	[kɛluzi]
‘you are heavy’	[kɛskən]
‘you are hungry’	[kɛwizɪn]
‘you are ready’	[iskɑdʒijɪn], [kɪskɑdʒijɪn]
‘you are that size’	[nadɛlɬkɪləŋ̊], [nadɛlḷkɪlŋ̊], [nadɛlɬkɪləməŋ̊]
‘you arrive’	[igan], [pɛgizɪn], [kil pɛgisɪn] 4
‘you belong here’	[əklejawɪŋ̊] 2, [uklejawɪn] 2, [nklejawi], [uklejawɪŋ̊]
‘you blow at them’	[puduwɑdəm], [pudəwɑdəm̥]
‘you break it (by dropping it)’	[tɛmtɛstun], [mʔtɛstuŋ̊]
‘you break it’ (context: chopped up a piece of furniture)	[sɛwistemən]

‘you break it (window)’	[sɛwistɛm] 2, [sɛwistɛm̥]
‘you breathe’	[kamlamudın], [əkamlamudım], [kamlamın̥]
‘you bring him’	[tʃɪkwɑl̥] 3, [tʃigwɑl] 4, [ki tʃɪgwɑl] 2, [wɪtʃkwɑləkʰ]
‘you bring it’	[tʃigwɑdəw], [tʃkwɑdun]
‘you’re bringing it’	[wɪtʃkwɑdɔ] 2
‘you broke it off’	[kil̥ temegɛn̥] 2
‘you brought him’	[pɛgizulutʰ]
‘you build’	[kil ɛwigan̥] 2
‘you come in’	[piskwaj], [kil piskwa] 2, [hil piskwa] 2
‘you cough’	[noɣomin]
‘you cover up’	[ənʔhonozın]
‘you dropped it’	[sɛwistɛzın̥]
‘you eat’	[kıl midʒəsın̥] 2
‘you expect to see somebody/something’	[ɛskibɛdo], [əskibɛdo]
‘you frighten me’	[kɛdajwımpkʰ] 2
‘you get up’	[ləmdʒazi] 3, [lımtʃazıt], [lımdʒazi], [ləmdʒazi]
‘you go’	[kil lijɛ] 2
‘you go out’	[tujɛ]
‘you go with him’	[kil wıdʒijo] 2, [wıdʒejo], [widʒejo]
‘you got it’	[kɛkunəmən] 3, [kɛkunəmən̥]
‘you grab it’	[kohwɑl], [kowɑl̥], [kohwɑl̥] 2
‘you grow up’	[kızıgwɛn̥]
‘you have a bald head’	[mɛgwɑdat̄pɑn̥]
‘you have a big head’	[mɑʔɑtpan]
‘you have it’	[kɛkunəmən̥]
‘you hear it’	[kil nudəmən̥] 2
‘you hear someone’	[nudaχ]
‘you hear them’	[nudat̄], [ninudaɣıkʰ]
‘you hide away from him’	[mɛmkwɑzıktah], [mgwɑzıktaχ]

‘you hit him’ [tɑʔɑmɪtʰ]

‘you hold me’ [kɛlnɪn]

‘you hold onto him’ [məlˀgən]

‘you hunt’ [kɛdantegɪn]

‘you hurry up’ [wɪnpazɪn]

‘you itch’ [kɛzɪbijɛn]

‘you jump’ [unaʔɑje] 2

‘you keep ahold of it’ [kəlnɛn]

‘you kick him’ [tkədɪsku]

‘you kick it’ [tɪk̄tɪskəmə̨]

‘you kill it’ [nebɑduə̨]

‘you killed’ [nebɑt] 2

‘you kiss’ [usəgaɣələm]

‘you kiss it’ [uskɑhəltəm], [wɪskɑhəlt̨əm̨]

‘you knock him down’ [m̨ɛshənɑdek]

‘you knock it down’ [mɪshunɑde], [kuwɑdu], [kilˀ kuwɑdu] 2

‘you knocked them (inanimate) down’ [mɪshunɑdejl]

‘you know’ [kil kɛdʒiduə̨] 2

‘you know me’ [kɛdʒiə̨], [kɛdʒiʲɪə̨]

‘you lick it’ [məskwɑləmən]

‘you lock it’ [apəsχɑjeə̨], [pəsχɑeə̨], [apusχɑen], [apəsχɑeə̨]

‘you look for it (inanimate)’ [kwɪləm]

‘you look for them (inanimate)’ [kwɪləmɑn] 3, [kwɪləmən]

‘you make a lot of noise’ [ɛdʒigawɛn], [kɛzigawɛə̨]

‘you make him slide’ [nɛziowɑdəl̨], [nɛɛijowɑdɪɬ]

‘you make it’ [kil ɛwigadəmə̨] 2

‘you make it slide’ [ɛzɛdidʒaləgwək], [isadidʒaləgwɪkʰ]

‘you plug it up’ [kɛbidʒɔʔmə̨]

‘you pray’ [lazudmɑn]

‘you see’ [nɛmidaŋ̊]

‘you see a light’ [wɑzɔʔekʰ], [wɑsohək], [wɑzɔqwe]

‘you shoot’ [peskəmən], [peskaməŋ̊]

‘you sling it over’ [wɪɛkidʒegɪn]

‘you smash it up’ [əwisteməŋ̊]

‘you smell him’ [kipɛset]

‘you smell it’ [pɛsedun], [kil pɛzɛdun] 2

‘you smoke’ [kilɬ kɪdəmaŋ̊] 2

‘you speak’ [kɛluzɪn] 2

‘you steal’ [kemud̄nej]

‘you strike him’ [pɛtitʰ]

‘you strike it’ [tɑχtəməŋ̊]

‘you tie it up’ [kɛlɬtɑpɛləməŋ̊]

‘you understand’ [nestəmən]

‘you untie it’ [kil ap̄kwɑdu] 2, [ap̄kwɑdu]

‘you wake him up’ [təgwɑləχ]

‘you want to cover up’ [kɪduwijanʔqənozɪn], [kɪduwijanhonozɪn]

‘you want to cover up’ [kɛduwikwɑjɪkʰ], [ɛduwikwɑjɪkʰ]

‘you want to know it’ [ɛdwitʃɪdʒidɔ]

‘you’re angry’ [wɛgajin]

‘you’re big’ [mɛskil] 3, [mɛskɪln], [ɛskɪln], [mɛskɪl̥]

‘you’re coming closer’ [kɪktʃazɪn]

‘you’re doing good’ [wɛlaladʒɪl], [jaladuwɑdl̥], [wɛlalawɑdʒɪl̥]

‘you’re finished sleeping’ [kɪskuzɪŋ̊]

‘you’re going to bet’ [igaduwi], [igaduwe] 2

‘you’re good’ [kɛluzi] 2

‘you’re grabbing it’ [kowɑdu]

‘you’re heavy’ [kɛskul]

‘you’re holding on’ [kɛlnɪk], [kɛlnɪkʰ]

‘you’re kind of hungry’ [mimɛlɪn]

‘you’re ready’ [kɪskadʒɪʲɪn]

‘you’re sick’ [kesinəgwɑn], [kesinəgwɑn̥]

‘you’re under it’ [pɪsɪn] 2

‘you’re warm’ [ɛpsi]

‘you’re well’ [wɛlejɪn]

‘young bear’ [mwinɪtʃ] 2

‘younger sister’ [kwedʒitʃ]

‘your brother-in-law’ [kɛləmus], [kɪləmus]

‘your two brothers’ [wɛdʒɪgədikʰ], [wɪdʒɪgədikʰ], [ɑdʒigədikʰ], [wɪdʒɪgudikʰ]

‘your beard’ [kidul̥]

‘your belt’ [uspizun]

‘your book’ [tuwigadigɪn]

‘your breath’ [entkamlamudɪn̥]

‘your brother’ [wɪdʒɪgudijɔχ], [əksɪs], [mɑhtamwɑl̥]

‘your brother-in-law’ [kəmɑχtɑm], [kəmɑχtam], [kəmɑχtam]

‘your elbow’ [nuskənigən̥] 2, [kil uskənigən̥] 2

‘your father’ [kil kutʃ] 4

‘your feet’ [kadl̥]

‘your food’ [kiluk], [kilu]

‘your forehead’ [kilˀ togodʒən̥] 2, [əχtogojɛt], [əχtowgwɛdʒa]

‘your godson’ [nˀkɛkunɪt]

‘your hand’ [nəmɪs], [kənuʑi], [kil kunədʒi]

‘your heart’ [təkɑmlɑmun]

‘your husband’ [kil kigəmɑtʃ]

‘your leg’ [il əkadʒigən̥]

‘your little house’ [kil kiptʃɨtʃ] 2

‘your medicine’ [kil ukpizun̥], [pizunəm̥] 2, [kil ukpizunəm̥] 2

‘your mother’ [kwidʒiwo], [əkɪdʒwo], [kil əkitʃ] 4, [əkitʃ], [kil ukitʃ] 2

‘your name’	[talawizɪn] 3
‘your nose’	[sɪsquŋ̊], [əsɪsqun], [nsɪshuŋ̊], [sɪsqun]
‘your nostrils’	[nadaɑnəm̥], [uknadaɑnəm̥], [uknadaʔɑnəm̥]
‘your older sister’	[kəmɪs]
‘your pipe’	[kil kudəmɑʔɑŋ̊]
‘your rib’	[ənpigaʔəŋ̊], [ənpigaʔaŋ̊], [kil ɨkpigaʔaŋ̊] 2, [ənˀpigaɣɑn], [uk̄pigaʔaŋ̊], [kil uk̄pigaʔan]
‘your ribs’	[pigaʔɑŋ̊], [kil ukpigahɑŋ̊], [ukpigaʔɑŋ̊]
‘your shoes’	[kilˀ kəmuksn̥ˀkʰ]
‘your shoulders’	[χtəlmɑhaŋ̊], [əntl̥mɑhaŋ̊]
‘your skin’	[məgegenəm]
‘your soap’	[əχsɪspanigənəm̥]
‘your son’	[kil ɨkwɪs] 2, [kwɪs]
‘your sons’	[əkwɪskʰ]
‘your sons-in-law’	[χkluzu], [ukluzukʰ], [əkluzukʰ]
‘your workers’	[kənɔʔəbɛm̥], [kənɑʔɑbɛm̥], [kənɑʔɑbɛmp]

Appendix B: Matthew Jeddore List of Phonetic Environments

The following is a list of the phonetic environments for every consonant that occurs in Matthew's speech.

Phonetic Environments for [p]					
#_	**V_V**	**V_C**	**C_V**	**C_C**	**_#**
#_a	i_ɑ	a_k ə_w	k_ɑ n_o	m_k	ɑ_#
#_ɑ	i_ɛ	a_s ə_χ	ʔ_ɛ n_u	m_kʰ	m_#
#_e	a_ə	a_t ɛ_k	k_i n[_a	m_t	a_#
#_ə	a_iʲ	a_tʃ ɛ_s	l_a n[_ɛ		ə_#
#_ɛ	a_ɔ	ɑ_k i_tʃ	l_ə n[_i		ɪ_#
#_i	a_u	ɑ_kʰ ɪ_h	l[_ɛ n[_ɪ		ʊ_#
#_ɪ	ɑ_ɛ	ɑ_s ɪ_k	l[_i n[_u		
#_o	ɑ_u	ɑ_tʃ ɪ_kʰ	m_a nˀ_ɑ		
#_ɔ	ə_ɑ	e_k ɪ_q	m_ɑ nˀ_i		
#_u	ɛ_ɛ	ə_h ɪ_t	m_ɪ s_a		
#_ʊ	i_ɪ	ə_k ɪ_tʃ	m̥_ɪ s_ɑ		
#_k	ɪ_ɑ	ə_s u_k	m[_ɛ s_ə		
#_l	u_i	ə_tʃ	m[_i s_i		
	u_ɪ		n_a s_ɪ		
	u[_ə		n_i t_a		
			n̥_i t_ɑ		
			n_ɪ t_u		

Phonetic Environments for [b]							
#_	**V_V**			**V_C**	**C_V**	**C_C**	**_#**
#_a	ɑ_ɪ	e_a	i_ɨ	a_l	j_ɑ		ʊ_#
#_ɑ	a_a	e_ɑ	i_o	a_w	l_a		
#_e	a_ɑ	e_i	i_ɔ	ɑ_l	l_ɑ		
#_ə	ɑ_i	e_ɪ	i_u	i_l	l_i		
#_ɛ	a_e	ə_ɑ	i_ʊ		m_ɔ		
#_i	a_ə	ə_ə	iː_i		m_u		
#_ɪ	a_ɛ	ə_ɛ	ɪ_ə		m_ʊ		
#_u	a_i	ə_i	ɪ_ɛ		n_a		
	a_ɪ	ə_u	ɪ_i				
	a_o	ɛ_a	ɪ_ɪ				
	a_ɔ	ɛ_ɑ	ɪ_ɨ				
	a_u	ɛ_i	ɪ_o				
	a_ʊ	ɛ_ɪ	ɪ_ɔ				
	ɑ_ɑ	ɛ_o	ɪ_u				
	ɑ_e	ɛ_u	o_a				
	ɑ_ə	i_e	o_ɪ				
	ɑ_ɛ	i_ə	o_u				
	ɑ_ɪ	i_ɛ	ɔ_i				
	ɑ_o	i_i	u_e				
	ɑ_u	i_ɪ	u_iʲ				
			u_u				

Phonetic Environments for [t]										
#_	**V_V**		**V_C**		**C_V**				**C_C**	**_#**
#_a	a_a	ɪ_e	ə_h	ə_kʰ	h_a	l_o	n_ə	s_ə	n_kʰ	ɪ_#
#_ɑ	a_e	ɪ_ɛ	ə_χ	ə_n	h_e	l̥_ɔ	n_ɛ	s_ɛ	k_l	i_#
#_e	a_i	ɪ_o	ɪ_h	ɛ_h	h_ə	l_u	n_o	s_i	k_l̩	ɛ_#
#_ə	a_ɪ	ɪ_ɔ	a_kʰ	ɛ_k	h_ɛ	l̥_a	n_ɔ	s_ɪ	m_k	χ_#
#_ɛ	a_o	ɪ_ɔ	a_l	ɛ_kʰ	h_o	l̥_i	n_u	s_o	m_l	a_#
#_i	ɑ_e	ɪ_u	a_n	ɛ_l	h_u	l̥_iʲ	n_ʊ	s_ɔ	n_]k	ɑ_#
#_ɪ	ɑ_ɪ	o[_e	a_p	i_kʰ	j_ɪ	l̥_ɪ	n[_e	s_u	n_h	e_#
#_o	e_e	ɔ_e	a_χ	i_p	k_a	l̥_o	n[_ɛ	w_a	n_k	ə_#
#_ɔ	e_i	ɔ_u	ɑ_k	ɪ_]w	k_e	l̥_ɔ	nˀ_a	w_e	n_l	k_#
#_u	e_ɪ	ɔ[_e	ɑ_kʰ	ɪ_k	k_ə	l̥_u	nˀ_e	w_i	nˀ_k	n_#
#_k	ɛ_a	u_a	ɑ_l	ɪ_n	k_ɛ	lˀ_e	nˀ_u	w_ɪ	n_χ	ɔ_#
#_l	ɛ_ɛ	u_e	ɑ_n	ɪ_p	k_i	lˀ_i	p_a	χ_a		p_#
#_l̩	ɛ_i	u_ə	ɑ_p	ɪ_s	k_ɪ	lˀ[_o	p_e	χ_ɑ		s_#
#_m	i_e	u_i	e_kʰ	ɪ_h	k_o	ɬ_ɑ	p_ə	χ_e		u_#
	i_ɛ	u_o	e_m	ɔ_k	k_ɔ	ɬ_i	p_ɛ	χ_ə		
	ɪ_a	u_ɔ	ə_k	u_m	k_u	m_a	p_ɪ	χ_ɛ		
		u[_e		u_n	k[_e	m_e	p_u	χ_ɪ		
				u_p	l_a	m_ə	q_a	χ_o		
				u_k	l_ɑ	m_ɛ	q_ɑ	χ[_ɛ		
				u_kʰ	l_e	m_ɪ	q_e	χ_u		
					l_ə	m̥_ɪ	q_ə			
					l_i	m[_e	q_ɛ			
					l̥_i	mˀ_ɛ	q_u			
					l_iʲ	n_a	s_a			
					l_ɪ	n_ɑ	s_ɑ			
					l̥_ɪ	n_e	s_e			

Phonetic Environments for [d]							
#_	V_V			V_C	C_V	C_C	_#
#_a	a_a	e_i	i_u	a_l	l_a	m_n̩	a_#
#_ə	a_e	e_ɪ	ɪ_]a	a_l̩	l_e		ɑ_#
#_ɛ	a_ə	ə_a	ɪ_a	ɑ_l	l_ə		ɛ_#
	a_ɛ	ə_e	ɪ_e	a_w	l_ɛ		u_#
	a_i	ə_i	ɪ_ə	ɑ_n̩	l_u		
	a_iʲ	ə_ɪ	ɪ_i	ɪ_l̩	m_ə		
	a_ɪ	ə_u	ɪ_ɪ	e_l	m_ɪ		
	a_i̟	ɛ_a	ɪ_o	e_l̩	m[_e		
	a_o	ɛ_e	ɪ_u	ə_m	mˀ_ə		
	a_ɔ	ɛ_ə	o_a	ɛ_l	n_a		
	a_u	ɛ_i	o_ə	ɛ_n	n_e		
	a[_ɛ	ɛ_ɪ	o_u	i_n	n_ə		
	ɑ_a	ɛ_o	ɔ_a	i_n̩	n_ɛ		
	ɑ_ɑ	ɛ_u	ɔ_ɑ	ɪ_n	n_i		
	ɑ_e	i_a	u_a	ɪ_n̩	n_iʲ		
	ɑ_ə	i_e	u_ɑ	u_m	n_ɪ		
	ɑ_ɛ	i_eʲ	u_ə	u_n	n_u		
	ɑ_i	i_ə	u_ɛ				
	ɑ_ɪ	i_ɛ	u_i				
	ɑ_o	i_i	u_ɪ				
	ɑ_ɔ	i_ɪ	u_o				
	ɑ_u	i_o	u_ɔ				
	e_a	i_ɔ	u_u				
	e_ɛ	ɪ_ɛ					
	e_u						

Phonetic Environments for [k]									
#_	**V_V**	**V_C**		**C_V**				**C_C**	**_#**
#_a	a_ɔ	a_l	ɪ_t	ɛ_a	lɬ_a	mˀ_a	p_ɪ	t_w	ɪ_#
#_ɑ	e_e	ɑ_t	ɪ_tʃ	ɛ_ə	lɬ_ɑ	mˀ_e	p_o	p_w	lˀ_#
#_e	e_ɪ	e_]s	ɪ_w	ɛ_i	lɬ_ə	mˀ_ə	s_a	s_w	i_#
#_ə	e_u	ə_]t	ɨ_p	ɛ_o	lɬ_i	mˀ_i	s_ɑ	s_l	e_#
#_ɛ	ə_a	ə_l	ɨ_w	h[_i	lɬ_ɪ	mˀ_ɪ	s_e	s_ɬ	ɛ_#
#_i	ə_ɑ	ə_s	o_w	j_ə	lɬ[_u	mˀ_o	s_ə	tʃ_l	nˀ_#
#_ɪ	ə_e	ə_t	ɔ_t	j[_u	lˀ_ə	mˀ_u	s_ɛ	tʃ_n	ə_#
#_j	ə_i	ə_w	ɔ_tʃ	l_a	lˀ_i	m̥ˀ_u	s_i	tʃ_w	l̥ˀ_#
#_l	ə_ɪ	ɛ_l	ɔ_w	l_ə	lˀ_o	n_a	s_ɪ	s_l̥	u_#
#_m	ɛ_ə	ɛ_tʃ	u_k	l_o	lˀ[_ə	n_ɛ	s_ɨ	ɛ_w	tʃ_#
#_o	ɛ_u	ɛ_w	u_l	l̥[_a	ɬ_a	n_i	s_o	h_t	m̥_#
#_ɔ	ɛ[_u	i_l	u_n	l̥[_ə	ɬ_i	n_ɪ	s_u	h_w	ɑ_#
#_t	i_a	i_n	u_p	l[_ɛ	m_]e	n[_e	t_a	ɬ_w	e_#
#_u	i_ə	i_s	u_s	l[_i	m_e	n[_ɛ	t_ə	m_l	ɨ_#
#_w	i_ɛ	i_t	u_t	l[_u	m_ə	nˀ_a	t_ɪ	m_w	l̥lˀ_#
	i_o	i_tʃ	u_tʃ	l̥l_e	m_i	nˀ_ɑ	t_o	mˀ_w	o_#
	i_u	i_w	u_w	l̥l_ə	m_ɪ	nˀ_ə	t_u	n_l	ɔ_#
	ɪ_ə	ɪ_s	ʊ_t	l̥l_ɛ	m_o	nˀ_ɛ	t[_ɛ	n_w	t_#
	ɪ_u			l̥l_i	m_u	nˀ_i	tʃ_a	nˀ_w	s_#
	u_a			l̥l_ɪ	m̥_u	n̥ˀ_i	tʃ_ə	p_w	ʊ_#
	u_ɑ			l̥lˀ_a	m_ʊ	nˀ_ɪ	tʃ_ɛ	χ_l	
	u_ɛ			llˀ_ə	m[_e	nˀ[_ə	tʃ_u		
	u_i			l̥lˀ_ə	m[_ɛ	p_e			
	u_ɪ			l̥lˀ_ɪ	m[_ɪ	p_ɛ			
						p_i			

Phonetic Environments for [kʰ]					
#_	V_V	V_C	C_V	C_C	_#
					u_# tʃ_#
					ə_# p_#
					i_# n_#
					ɪ_# t_#
					ɛ_# s_#
					e_# m_#
					o_# nˀ_#
					ɔ_# ɬ_#
					a_# l̥ˀ_#
					ɑ_# n̥ˀ_#
					ʊ_# lɬ_#
					mˀ_# n̩ˀ_#
					l̬l̥_# w_#
					l̥_# j_#
					l̩_# m̩_#

Phonetic Environments for [g]							
#_	**V_V**			**V_C**	**C_V**	**C_C**	**_#**
#_a	a_a	ə_ɪ	i_ɪ	ɑ_w	m[_u	m_w	e_#
#_ə	a_ɛ	ə_ɔ	i_o	i_w	j_ə	mˀ_w	ə_#
#_ɛ	a_ɪ	ɛ_a	i_ɔ	e_w	j_u	s_w	ɛ_#
#_ɪ	a_o	ɛ_e	i_u	ə_w	l_e	w_w	i_#
	a_u	ɛ_ə	ɪ_a	ɛ_w	l_ə		
	ɑ_e	ɛ_ɛ	ɪ_ə	o_w	l_ɛ		
	ɑ_i	ɛ_i	ɪ_ɛ	a_w	l_ɪ		
	ɑ_u	ɛ_iʲ	ɪ_i	i_m	lˀ_ə		
	ɑʲ_ə	ɛ_ɪ	ɪ_ɪ	i_n̩	s_a		
	e_a	ɛ_o	ɪ_u	ɔ_w			
	e_e	ɛ_ɔ	o_o	ɪ_m			
	e_eʲ	ɛ_u	o_ɔ	ɪ_n			
	e_ə	i_]ɛ	o_u	ɪ_w			
	e_ɛ	i_]ɪ	u_ɑ	u_w			
	e_i	i_a	u_e				
	e_ɪ	i_ɑ	u_ə				
	e_ɨ	i_e	u_ɛ				
	e_o	i_eʲ	u_i				
	e_u	i_ə	u_ɪ				
	ə_a	i_ɛ	u_o				
	ə_e	i_i	u_u				
	ə_ə						

Phonetic Environments for [q]					
#_	V_V	V_C	C_V	C_C	_#
#_ə	a_ə	a_m̩	p_a		
#_ɔ	o_a	ɔ_t	s_u		
#_ɑ	a_ɔ	o_w	ɬ_ə		
	a_o	ɑ_m	n_ɔ		
	ɑ_ɑ	ɔ_w	nˀ_ɔ		
	ɔ_ɔ		χ_ɔ		
			s_ʊ		
			n̥_ɔ		
			nˀ_ə		
			nˀ_u		
			t_ɔ		

Phonetic Environments for [ʔ]					
#_	V_V		V_C	C_V	C_C	_#
	a_a	ɑ_ɔ	ɑ_m			
	a_ɑ	ə_o	ɑ_p			
	a_e	o_ə	ɔ_m			
	a_ə	o_ɔ	ɔ_t			
	a_ɛ	ɔ_e	ɔ_w			
	a_ɔ	ɔ_ə				
	ɑ_a	ɔ_ɔ				
	ɑ_ɑ	ɔ_u				
	ɑ_ə					

Phonetic Environments for [h]							
#_	V_V		V_C	C_V		C_C	_#
#_a	a_a	ɑ_ə	a_s	ɛ_ə	nˀ_o	m_w	a_#
#_ɑ	a_ɔ	e_e	a_t	ɛ_o	p_a	p_w	ə_#
#_e	a_ɑ	o_ə	ɑ_t	ɛ_u	s_ɑ	w_t	ɑ_#
#_ɛ	a_ɑʲ	o_o	ɑ_tʃ	ɬ_ə	s_ə		u_#
#_i	a_e	ɔ_ɑ	ə_ɛ	m_ɔ	s_u		e_#
#_ɔ	a_ə	ɔ_o	ə_t	n_a	t_a		eʲ_#
	ɑ_ɑ	ɔ_ɔ	o_t	n_o	t_ɑ		ɛ_#
	ɑ_ɑʲ	ɔ_u	o_w	n_u	t_ə		i_#
			ɔ_n	nˀ_ɑ	t_ɔ		ɪ_#
			ɔ_t	nˀ_ə	tʃ_ə		l_#
			ɔ_w				ɔ_#
			u_t				

Phonetic Environments for [ɣ]					
#_	V_V		V_C	C_V	C_C	_#
	a_a	ɑ_ə				
	a_ɑ	ɑ_ɔ				
	a_ə	o_o				
	a_ɪ	o_ɔ				
	a_ɔ	o_u				
	ɑ_a	ɔ_ɔ				
	ɑ_ɑ					

Phonetic Environments for [χ]							
#_	**V_V**	**V_C**		**C_V**		**C_C**	**_#**
#_k	a_a	a_]k	ə_s	ɛ_u	s_ɑ	p_w	a_#
#_s	a_ɑ	a_l	ə_t	n_a	s_ə	s_q	ɑ_#
#_t	a_ə	a_n	ɪ_]t	n_ɑ	s_u		ə_#
	ɑ_a	a_s	o_t	n_ɔ	t_a		ɛ_#
	ɑ_ɑ	a_t	o_w	n̥_ɔ	t_ə		i_#
	ɑ_ə	a_tʃ	u_s	n_u	t_i		ɪ_#
	o_ɔ	u_t	ɔ_s	nˀ_u			l_#
		ɑ_s	ɔ_t				o_#
		ɑ_t	ɔ_tʃ				ɔ_#
		ɑ_tʃ	ɔ_w				u_#

Phonetic Environments for [s]									
#_	V_V		V_C			C_V		C_C	_#
#_a	a_a	ɛ[_a	a_k	ɛ_k	ɪ_l	w_i	l_u	h_k	u_#
#_ɑ	a_ə	ɛ[_ɪ	a_m	ɛ_kʰ	ɪ_l̥	χ_a	m_ə	n_k	ɑ_#
#_e	a_ɛ	i_a	a_t	ɛ_l	ɪ_m	h_i	m_i	k_n	e_#
#_ɛ	a_i	i_ə	a_tʃ	ɛ_t	ɪ_n	h_ɪ	n_ɛ	k_n̥ʔ	ɛ_#
#_i	a_ɪ	i_ɛ	ɑ_k	ɛ_χ	ɪ_nʔ	j_ɪ	n_ɪ	m̥_h	i_#
#_ɪ	a_u	i_i	ɑ_t	i_k	ɪ_p	j[_ɪ	n[_i	m_k	ɪ_#
#_i̇	ɑ_ɑ	i_iʲ	e_k	i_kʰ	ɪ_q	k_a	p_a	m̥_kʰ	i̇_#
#_k	ɑ_i	i_ɪ	e_kʰ	i_l	ɪ_t	k_e	p_i	m[_i	k_#
#_n	ɑ_ɪ	i_ɔ	e_n	i_l̥	ɪ_χ	k_ɪ	p_u	n_k	m_#
#_o	ɑ_o	i_u	e_t	i_m	o_t	k_i	w_a	p_k	n_#
#_t	e_a	i_ʊ	e_w	i_m	ɔ_n	k_u	w_ɪ	p_kʰ	p_#
#_u	e_i	ɪ_a	ə_h	i_nʔ	u_g	k[_i	χ_i		t_#
#_w	e_ɪ	ɪ_ə	ə_k	i_p	u_h	l_ə	χ_ɪ		u_#
	e[_i	ɪ_i	ə_kʰ	i_t	u_k	l_ɛ	χ_k		
	ə_ɑ	ɪ_ɪ	ə_n	i_χ	u_kʰ	l_i			
	ə_ə	ɪ_u	ə_n̥	i_χ	u_n				
	ə_i	o_ə	ə_q	ɪ_g	u_p				
	ə_ɪ	ɔ_ə	ə_t	ɪ_h	u_t				
	ɛ_a	ɔ_i	ə_χ	ɪ_k	u_χ				
	ɛ_e	u_a	ɛ_h	ɪ_kʰ	ʊ_k				
	ɛ_ɛ	u_ə							
	ɛ_i	u_ɛ							
	ɛ_ɪ	u_i							

Phonetic Environments for [z]							
#_	V_V			V_C	C_V	C_C	_#
#_i	a_ə	e_i	ɪ_ə	ɛ_w	j_ɪ		
	a_ɛ	e_ɪ	ɪ_i	i_m			
	a_i	e_u	ɪ_ɪ	u_w			
	a_ɪ	ə_i	ɪ_u				
	a_ɨ	ə_u	ɪ_ɔ				
	a_u	ɛ_a	o_ə				
	ɑ_ɑ	ɛ_ɛ	o_i				
	ɑ_ə	ɛ_i	o_ɪ				
	ɑ_ɛ	ɛ_ɪ	ɔ_i				
	ɑ_i	ɛ_u	u_a				
	ɑ_ɪ	i_a	u_ɑ				
	ɑ_ɨ	i_ə	u_e				
	ɑ_o	i_u	u_ə				
	ɑ_ɔ	i_ɑ	u_i				
	ɑ_u	i_i	u_ɪ				
	e_a	i_ɪ	u_ɔ				
		i_u	u_u				
		ɪ_a	u:_ɪ				

Phonetic Environments for [ɛ]					
#_	V_V	V_C	C_V	C_C	_#
#_o	a_i	ɪ_k	h_u		ɪ_#
#_w	ɛ_i	ə_k			i_#
	i_ɪ	u_k			u_#
	o_ə	ə_h			
	u_ɑ	ə_χ			
	u_ɪ	ɛ_k			
		i_k			
		u_h			

Phonetic Environments for [ʑ]						
#_	V_V		V_C	C_V	C_C	_#
	a_i	ɪ_i	u_w			e_#
	ə_ə	ɪ_ɪ				
	ə_i	o_ɪ				
	ɛ_i	u_e				
	ɛ_ɪ	u_ə				
	i_i	u_i				
	i_ɪ	u_u				
	i_u					

Phonetic Environment for [tʃ]							
#_	V_V		V_C	C_V		C_C	_#
#_a	a_ə	ɪ_]i	ɪ_k^h	p_a	m_a	m_k	i_#
#_ɑ	a_i	ɪ_i	i_k^h	p_i	m_i		e_#
#_ə	a_ɔ	ɪ_u	e_k^h	h_i	m_ɪ		a_#
#_i	ɑ_i	o_ɛ	a_k	h_u	k_ə		ɑ_#
#_ɪ	i_a	o_ɪ	a_k^h	k_a	n_ə		ə_#
#_k	i_ə	ɔ_ɛ	ɑ_k^h	k_ə	n_i		ɛ_#
#_ɔ	i_i	ɔ_i	ɛ_k	k_i	n_ɪ		ɪ_#
#_u	i_u	ɔ_ɪ	i_k	k_ɪ	p_i^j		j_#
	i[_a	u_a	ɪ_k	k_u	p_ɪ		n_#
	i[_ɪ	u_ɪ	i_m̩	l̥_a	p_u		p_#
			i_m	l_e	s_ɔ		m̩_#
			i_n	ɬ_e	w_ɪ		u_#
			u_l̥	ɬ_a			w_#

Phonetic Environments for [dʒ]							
#_	V_V			V_C	C_V	C_C	_#
#_i	a_a	ɛ_a	ɪ_e	ɑ_l̥	j_ɪ		ɑ_#
#_ɪ	a_ɪ	ɛ_i	ɪ_ə	ɛ_w	m_a		i_#
#_o	a_ɔ	ɛ_iʲ	ɪ_ɛ	ɪ_w	n_i		u_#
#_u	a_u	ɛ_ɪ	ɪ_i	i_m	n_ɪ		
	ɑ_a	ɛ_u	ɪ_ɪ		n_u		
	ɑ_ə	i_a	ɪ_ɨ		w_ɪ		
	ɑ_ɛ	i_e	ɪ_ɔ		j_ɪ		
	ɑ_i	i_ə	ɪ_u				
	ɑ_ɪ	i_ɛ	ɨ_i				
	ɑ_u	i_i	o_ə				
	e_i	i_iʲ	o_i				
	e_iʲ	i_ɪ	ɔ_i				
	e_ɪ	i_o	ɔ_ɪ				
	e_u	i_ɔ	u_ə				
	eʲ_i	i_u	u_ɛ				
	ə_i	ɪ_a	u_i				
	ə_ɪ		u_ɪ				

Phonetic Environments for [w]									
#_	V_V			V_C	C_V			C_C	_#
#_a	a_ɑ	ɛ_ɑ	o_ɛ	a_m	b_a	k_ɑ	m[_i		ɛ_#
#_ɑ	a_e	ɛ_e	o_iʲ	a_n	ɛ_a	k̄_e	n_ɑ		ɔ_#
#_e	a_ɛ	ɛ_ɛ	o_ɪ	a_t	d_i	k_eʲ	n_ɪ		a_#
#_ə	a_i	ɛ_i	o_o	a_tʃ	d_ɔ	k_ə	n[_ɪ		ɑ_#
#_ɛ	a_ɪ	ɛ_iʲ	o_ɔ	ɑ_m	dʒ_ɑ	k_ɛ	p_ɑ		e_#
#_i	a_o	ɛ_ɪ	o_u	ɑ_t	dʒ_i	k_i	q_ɑ		ə_#
#_iʲ	a_ɔ	ɛ_o	o[_i	e_dʒ	dʒ_o	k_ɪ	q_e		
#_ɪ	ɑ_ɑ	ɛ_ɔ	ɔ_ɑ	e_s	g_]ɪ	k_o	s_a		
#_o	ɑ_e	ɛ[_i	ɔ_e	e_t	g_a	k_ɔ	s_ɛ		
#_ɔ	ɑ_ɪ	i_a	ɔ_ɛ	ə_h	g_ɑ	k_u	t[_ɪ		
#_tʃ	ɑ_u	i_ɑ	ɔ_ɪ	ə_s	g_e	l_ɑ	z_ɑ		
#_u	e_a	i_e	ɔ_ɔ	ə_t	g_eʲ	l_i	χ_ɑ		
	e_ɑ	i_ɪ	ɔ_u	ə_tʃ	g_ə	l[_ɪ	χ_ɛ		
	e_e	i_o	u_a	ɛ_j	g_ɛ	m_a			
	e_ɛ	i_u	u_ɑ	ɛ_kʰ	g_i	m_ɑ			
	e_i	i[_ɪ	u_e	ɛ_n	g_iʲ	m_e			
	e_ɪ	ɪ_ɑ	u_eʲ	ɛ_s	g_ɪ	m_ə			
	e_o	ɪ_ɪ	u_ə	ɛ_t	g_ɔ	m_ɛ			
	ə_ɑ	ɨ_ɑ	u_ɛ	ɛ_tʃ	h_a	m_i			
	ə_e	o_]a	u_i	i_s	h_ɑ	m_ɪ			
	ə_ə	o_ɑ	u_iʲ	ɪ_n	h_e	m_o			
	ə_i	o_e	u_ɪ	o_tʃ	h_ə	m_ɔ			
	ə_ɪ	o_ə	u_o	ɔ_g					
	ə_o		u[_ɪ						
	ɛ_]ɑ								

Phonetic Environments for [j]							
#_	**V_V**		**V_C**		**C_V**	**C_C**	**_#**
#_a	a_a	ɛ_ə	a_g	ə_t	k_u		a_#
#_ɪ	a_e	ɛ_i	a_w	ɛ_]s	n_u		ɑ_#
#_o	a_i	ɛ_ɪ	e_]k	ɛ_m	w_e^{j}		e_#
	a_ɪ	ɛ_o	e_b	ɛ_w	w_ɛ		ɛ_#
	a_u	i_a	e_dʒ	o_n̥			o_#
	ɑ_e	i_ɑ	e_g	o_s			ɔ_#
	ɑ_ə	i_e	e_k^{h}	o_tʃ			
	ɑ_ɛ	i_ə	e_k	o_w			
	ɑ_i	i_ɛ	e_l	o_z			
	ɑ_ɪ	i_ɪ	e_l̥	ɔ_n			
	e_a	i_o	e_w				
	e_e	o_ɛ					
	e_ɪ	u_a					
	e_o	u_e					
	e_u	u_ɛ					
	ə_ɪ	u_ɪ					

Phonetic Environments for [m]										
#_	**V_V**			**V_C**			**C_V**		**C_C**	**_#**
#_a	a_a	ə_]i	i_i	a_l	ə_g	ɪ_n	d_a	n_i	j_]p	ɔ_#
#_ɑ	a_ɑ	ə_]o	i_u	a_p	ə_h	ɪ_p	d_ɑ	n[_i	l_dʒ	ə_#
#_dʒ	a_e	ə_]u	i_ʊ	a_s	ə_k	ɪ_t	d_e	q_e		a_#
#_e	a_ə	ə_a	ɪ_ɑ	a_w	ə_k^h	ɪ_tʃ	d_ɛ	q_i		ɪ_#
#_ə	a_ɛ	ə_a:	ɪ_ə	ɑ_l	ə_p	i̯_]k	dʒ_ɪ	s_a		ɑ_#
#_ɛ	a_i	ə_ɑ	ɪ_ɛ	ɑ_w	ə_p	i̯_g	g_ɑ	s_i		e_#
#_g	a_ɪ	ə_e	ɪ_i	e_k	ə_s	i̯_w	g_u	s_ɪ		ɛ_#
#_h	a_o	ə_ə	ɪ_ɪ	e_k^h	ə_t	o_]p	j_ə	s_ɔ		u_#
#_i	a_ɔ	ə_ɛ	ɪ_u	e_n	ə_tʃ	o_k	k_e	s_u		
#_ɪ	a_u	ə_i	o_a	e_p	ə_w	o_p	k_ɛ	t_a		
#_k	ɑ_ɑ	ə_ɪ	o_ə	e_t	ɛ_k	o_w	k[_o	t_ɑ		
#_o	ɑ_e	ə_o	o_i	ə_]g	ɛ_k^h	ɔ_]d	l̥_a	t_ɛ		
#_ɔ	ɑ_ə	ə_ɔ	o_ɪ	ə_]k	ɛ_p	ɔ_k	l_ɑ	tʃ_u		
#_p	ɑ_ɛ	ə_u	ɔ_e	ə_]m	ɛ_t	ɔ_l	l_ə	w_ɑ		
#_s	ɑ_i	ə_ʊ	ɔ_ə	ə_]n	ɛ_tʃ	ɔ_s	l_i	w_i		
#_t	ɑ_ɪ	ɛ_a	ɔ_i	ə_]p	i_g	u_]k	l_u	w_ɪ		
#_tʃ	ɑ_u	ɛ_ɑ	u_a	ə_]s	i_p	u_k	l[_i	z_a		
#_u	e_a	ɛ_ə	u_ɑ	ə_]t	ɪ_dʒ	u_l	m[_ɛ	ʔ_ɑ		
#_w	e_e	ɛ_ɛ	u_e	ə_]w	ɪ_g		m[_i	ʔ_ə		
	e_ə	ɛ_$ɛ^j$	u_ə	ə_b	ɪ_k					
	e_i	ɛ_i	u_ɛ	ə_d	ɪ_k^h					
	e_ɪ	ɛ_u	u_i	ə_dʒ						
	e_u	i_a	u_i							
	e[_i	i_ɑ	u_ɪ							
	ə_]ɛ	i_e	u_u							
		i_ɛ	ʊ_ɪ							

Phonetic Environments for [m̥]					
#_	V_V	V_C	C_V	C_C	_#
#_p #_k #_ɛ #_t		ə_k			o_# ɔ_# ə_# a_# ɛ_# ɑ_#

Phonetic Environments for [m̩]					
#_	V_V	V_C	C_V	C_C	_#
#_ɐ #_s		u_s		q_k tʃ_tʃʰ dʒ_k	d_#

Phonetic Environments for [mˀ]						
#_	V_V	V_C		C_V	C_C	_#
#_t #_k		ɨ_g ɪ_g ə_kʰ ɛ_t ə_d ə_k ɪ_k	ɛ_kʰ ɔ_k o_k ɑ_k ɛ_k ɪ_kʰ			

Phonetic Environments for [n]										
#_	V_V			V_C			C_V		C_C	_#
#_a	a_a	ə_e	i_ɪ	a_b	ɛ_t	ɪ_k	d_a	l_ɪ	z_kʰ	ɛ_#
#_ɑ	a_e	ə_ə	i_u	a_h	ɛ_tʃ	ɪ_kʰ	d_ɑ	l_o	t[_k	ɪ_#
#_e	a_ə	ə_ɛ	i[_e	a_p	i_]k	ɪ_p	d_e	l_u		ɔ_#
#_ə	a_ɛ	ə_i	i[_ə	a_s	i_]m	ɪ_s	d_ɛ	l[_e		ə_#
#_ɛ	a_i	ə_ɪ	i[_u	a_t	i_]n	ɪ_t	d_ɛ	m_ɑ		a_#
#_h	a_ɪ	ə_o	ɪ_a	a_w	i_]p	ɪ_tʃ	d_ɪ	m_i		ɑ_#
#_i	a_o	ə_ɔ	ɪ_ɑ	ɑ_d	i_]t	ɨ_l	d_o	m[_ɛ		u_#
#_ɪ	a_u	ə_ɔ	ɪ_ə	ɑ_tʃ	i_]w	ɔ_d	d_u	m[_o		i_#
#_ɨ	a:_i	ə_u	ɪ_i	e_]p	i_dʒ	ɔ_w	g_ə	m[_u		e_#
#_k	ɑ_a	ɛ_a	ɪ_o	e_t	i_h	u_]p	g_i	n_ə		eʲ_#
#_l	ɑ_ɑ	ɛ_ɑ	ɪ_u	e_χ	i_j	u_d	j_i	n[_i		h_#
#_o	ɑ_ə	ɛ_ə	o_a	ə_d	i_p	u_dʒ	j_ɪ	n[_u		j_#
#_p	ɑ_i	ɛ_o	o_o	ə_dʒ	i_s	u_k	k_a	s_a		l_#
#_q	ɑ_ɪ	ɛ_ɔ	ɔ_ə	ə_h	i_t	u_kʰ	k_e	s_ɑ		s_#
#_s	ɑ[_ɛ	ɛ_u	u_a	ə_k	i[_t	u_l	k_ə	t_a		t_#
#_t	e_a	i_]a	u_ɑ	ə_kʰ	ɪ_]s	u_m	k_ɔ	t_ə		
#_tʃ	e_ə	i_]ə	u_e	ə_l	ɪ_dʒ	u_n	k_u	t_i		
#_u	e_ɪ	i_]ɛ	u_ə	ə_p	ɪ_j	ʊ_l	l_a	t_ɪ		
#_χ	e_o	i_a	u_ɛ	ə_q			l_e	tʃ_u		
	e_ɔ	i_ɑ	u_i	ə_t			l_eʲ	tʃ_u		
	e_u	i_e	u_ɪ	ə_tʃ			l_ə	w_ə		
	e[_u	i_ə	u_o	ə_χ			l_ɛ	w_i		
	ə_a	i_ɛ	u_ɔ				l_i	w_ɪ		
	ə_ɑ	i_i	u_u							

Phonetic Environments for [n̥]					
#_	V_V	V_C	C_V	C_C	_#
#_p #_q #_χ		u_kʰ			a_# ɛ_# ə_# eʲ_# ɑ_# l_# ɪ_# ɔ_# u_# j_#

Phonetic Environments for [n̩]					
#_	V_V	V_C	C_V	C_C	_#
					d_# g_# s_#

Phonetic Environments for [nˀ]					
#_	V_V	V_C	C_V	C_C	_#
#_k #_h	ɪ_ɑ	a_k ɪ_]k a_kʰ ɪ_h a_t ɪ_k ɑ_kʰ ɪ_kʰ ə_h ɪ_t ə_k ɪ[_k ə_kʰ ɔ_k ə_p u_k ə_q u_kʰ ə_t ɛ_h		s_kʰ	

Phonetic Environments for [l]												
#_	V_V			V_C		C_V		C_C	_#			
#_a	a_a	e_i	i_]a	a_d	i_]k	h_o	k_iʲ	t_d	k_#			
#_ɑ	a_ɑ	e_ɪ	i_]ə	a_h	i_]l	k_a	k_o		a_#			
#_b	a_e	e_u	i_]ɛ	a_p	i_]n	b_e	k_ɔ		ɪ_#			
#_e	a_ə	e_u:	i_ɛ	a_s	i_]p	b_ə	k_u		ɑ_#			
#_ə	a_ɛ	ə_a	i_u	a_t	i_]w	b_i	m_a		ə_#			
#_ɛ	a_i	ə_ɑ	ɪ_]a	a_tʃ	i_n	d_a	m_ɑ		e_#			
#_i	a_ɪ	ə_e	ɪ_]ə	ɑ_n	i_n̥	d_ɛ	n_a		ɛ_#			
#_iʲ	a_ɨ	ə_ə	ɪ_ə	ɑ_t	i_p	d_ɔ	n_ə		i_#			
#_ɪ	a_ɔ	ə_ɛ	ɪ_i	ɑ_w	i_t	d_u	n_u		j_#			
#_m	a_u	ə_i	ɪ_ɪ	e_b	ɪ_]m	g_i	p_a		u_#			
#_n	ɑ_a	ə_ɪ	ɪ_u	e_k	ɪ_]p	l_]i	s_ɛ		n_#			
#_ɔ	ɑ_ɑ	ə_ɔ	o_a	eʲ_m	ɪ_kʰ	k_e	t_a		s_#			
#_u	ɑ_e	ə_u	o_i	ə_b	ɪ_m	k_ə	t_i					
	ɑ_ə	ɛ_a	ɔ_a	ə_g	ɪ_n	k_i	t_u					
	ɑ_ɛ	ɛ_ɑ	u_]ɛ	ə_k	ɪ_n̥		χ_o					
	ɑ_i	ɛ_e	u_a	ə_m	ɪ_p							
	ɑ_ɪ	ɛ_ə	u_ɪ	ə_n	ɪ_t							
	ɑ_ɔ	ɛ_ɛ	u_o	ə_t	ɪ_tʃʰ							
	ɑ_u	ɛ_i	u_u	ə_w	o_s							
	e_]ɪ	ɛ_ɪ	ʊ_i	ɛ_d	u_b							
	e_e	ɛ_u		ɛ_χ	u_d							
	e_ə			ɛ_m	u_kʰ							
				ɛ_n	u_t							
				ɛ_n̥	u_w							
				ɛ_s	ʊ_kʰ							
				ɛ_t								

Phonetic Environments for [l̥]					
#_	V_V	V_C	C_V	C_C	_#
		i_t e_k ə_]k u_t ɪ_t i_kʰ i_tʃ ɪ_kʰ			k_# ɑ_# ɪ_# o_# ə_# w_# u_# eʲ_# ɛ_# s_# e_# tʃ_# dʒ_#

Phonetic Environments for [l̩]					
#_	V_V	V_C	C_V	C_C	_#
				t_m	d_# k_#

Environments for [lˀ]					
#_	V_V	V_C	C_V	C_C	_#
		ɛ_k a_k a_t ə_k u_t ə_g i_]k i_]t			

Phonetic Environments for [ɨ]					
#_	**V_V**	**V_C**	**C_V**	**C_C**	**_#**
		ɪ_k			ə_#
		ɔ_t			u_#
		ɑ_h			ɛ_#
		i_tʃ			ɪ_#
		ɪ_tʃ			i_#
		i_kʰ			
		ɛ_k			

Appendix C: Paul Jeddore Word List

The following is a complete list of every word spoken by Paul Jeddore that contributed to this analysis. This list includes every recorded variation in pronunciation of each word. If a word was pronounced the same way more than once it is followed by the number of times it was spoken.

‘afraid’	[tʃibakʰ] 2, [tʃibak]
‘animal’	[pojʑiɕk], [wojʑɪɛ] 2, [woezis]
‘animals’	[wojʑɪɕkʰ], [wojzɪɕkʰ] 3, [wojezɪɕkʰ], [wojɛɪɕkʰ] 2
‘awake’	[kiɕkɔze]
‘back’	[wɛgwilat͡], [wɛgwilat]
‘bad person’	[mɛduwejəɛ kwidʒɪ] 2
‘bag’	[mɔnde], [mɔndə]
‘beaver’	[kopik]
‘berries’	[menitʃkə]
‘bird’	[sɛsɪp͡k], [sesɪp], [sisɪp͡kʰ]
‘bite’	[paɣal]
‘black currents’	[ɕədomiŋ̊], [ɕədomink], [skədomin]
‘boat’	[wəlebət]
‘boil’	[ɕaɕke], [tʃawmal̥] 3, [tʃawma]
‘boiled it/boiled’	[utʃawmaladɪkɛnu]
‘bone’	[wɑhandejo] 2
‘boss’	[ɕkibə]
‘boss over a person’	[ɕkebələwikduwɑdʒɪl̥]
‘boss over something’	[kibləwɪktɛ]
‘bow (n.)’	[abi] 2, [abɛ]
‘bring’	[tʃugwɑ]
‘bring it to a boil’	[tʃugwɑdu utʃawmadu], [tʃɪgwɑdu utʃawmadu] 2, [tʃugwɑdu tʃawmadu]

‘bring water to a boil’	[ɐɑmwɑnudʒamija], [wɪdʒamija]
‘button’	[pidʒozədi]
‘buttons’	[pɪdʒozƶədi], [pidʒɔzƶədi]
‘cheek’	[mɪbido], [mɛbido]
‘coal’	[klumwɛdʒuwɑsk^{h}], [kləmwɛdʒuwɑsk]
‘come warm yourself’	[ep͡suzi], [hepɛuzi]
‘deer’	[hɑlibu], [qɑlibu]
‘dog’	[ləmutʃ]
‘dog berry’	[mudʒəmanahsi]
‘dry’	[kɪspadɪk], [kɪspadeh]
‘duck’	[ap͡tʃitʃ kəmutʃ] 2
‘eat’	[makodəm̥]
‘eye’	[mpugik^{h}], [m̥pugik^{h}]
‘eyebrow’	[niktʃu], [nɪktʃu] 6
‘eyebrows’	[nɪktʃul]
‘face’	[msɪsk^{h}]
‘fall to pieces’	[kaeɛkwɪɛdɪɛ] 3
‘fingernail’	[mqozi], [m̥qozi], [n̥qozi]
‘fingernails’	[mqozik], [ənqozik]
‘fire’	[nawɑn]
‘fish’	[nemetʃ]
‘five’	[natkə]
‘gooseberry’	[belbakɛtʃkə], [belbahkɪtʃ]
‘he makes it slide’	[ɛmadɛdʒɪbudo]
‘hammer’	[maltadʒəwe]
‘hare’	[habligəmutʃ]
‘he asks for it’	[igɪnamwe], [ɛgɪnamwe]
‘he brings him’	[nɛgəm pɛgiƶulut] 2, [pɛgiƶulut]
‘he brings it’	[pɛjeƶidɔh], [pɛgizidɔh]

‘he caries a lot of something to him’	[pigwəlsawepeməladı], [pigwalkʰ koweeladıtʃ], [pigwəlkelado], [pigwəlkɛlado]
‘he carries him’	[əntləmanəbemalıkʰ], [əntəlmaanepɛmalə]
‘he carries him on his back’	[nɛgəm upampımadɔ] 2, [upawəmp pɛmado] 2, [negəm upahəmbɛmado]
‘he carries it’	[ntəmanəpɛmadu], [təmanıpɛmadu]
‘he carries it on his back’	[nɛgəm pɛmado ukwɑhməkʰ] 2, [ukaəmpɛmalık]
‘he curses at him’	[winemadʒə] 2
‘he curses at it’	[winemɛkʰ], [winımɛk]
‘he curses him’	[winemadʒıl]
‘he curses it’	[wınemadʒo]
‘he curses you’	[winımɛk] 2
‘he hates him’	[puwɑdʒidelmadʒə], [pəwɑdʒidelmadʒə]
‘he hates it’	[puwɑdʒidɛtʃkʰ] 2
‘he helps him’	[abowɑnəmwɑdʒə], [abonəmwɑdʒıl]
‘he helps it’	[abowɑnəmatʰ], [abowɑnəmatkʰ]
‘he hits him’	[təmkʰ], [tahɑməkʰ], [tahmə], [tahəmə], [tahəməg]
‘he hits him unexpectedly’	[pɛteh], [pɛtɛjıh], [pɛtɛı]
‘he hits it’	[pɛmsahɑzitahtə], [tamıt]
‘he hunts for him’	[kwɛlut], [kwılut]
‘he hunts for it’	[kwilame], [kwılıt], [kwılaɛıkʰ], [kulasık]
‘he is the boss of him’	[nəmedləm̥]
‘he is the boss of it’	[ɛkibəlɛwıktıh], [skiblewıktıkʰ]
‘he kills him’	[nebaʑe]
‘he kills it’	[nebado]
‘he kisses her’	[tɛzagwɑj]
‘he knows him’	[kɛdʒik]
‘he knows it’	[ɛdʒidə], [kɛdʒidə]
‘he laughs at him’	[wıɛkɛwɛk̄tah]
‘he laughs at it’	[wıɛkɛwɛjuhtuwıt] 2, [wıɛkıwɛjuktuwın]

‘he licks him’	[muɕkwɑt͡]
‘he licks it’	[muɕkwɑdali]
‘he looks after him’	[ankewɑdʒu], [ankejwɑdʒɪl]
‘he looks after it’	[ankotkʰ] 2
‘he looks for him’	[alamut] 3
‘he looks for it’	[alap͡təkʰ], [alaptɪk] 2
‘he loses him’	[hɛnut], [ɛnut]
‘he loses it’	[ɛnto], [hɛnto]
‘he makes him slide’	[əladidʒipəduk], [pɛmadɛdʒimut]
‘he makes him work’	[hɛlugwɪt], [in ɛlugwɪt], [hiɕalɛgu tluwɛn̥] 2, [kiɕaladʒu utlugwɛn̥]
‘he makes it slide’	[pɛmadɛdʒibudɔ], [pɛmadɛdʒibudo]
‘he makes it work’	[kiɕado əlugwɪn̥], [kiɕado tləgwɛn̥] 2, [giʑado tlugwɛn̥] 2, [kiɕado tlugwɛn̥], [kiɕado utlugwɛn̥] 2
‘he mistreats it’	[eolijankotkʰ]
‘he mistreats him’	[eolijankəjɪwɑdʒə]
‘he puts him/it on’	[naɕado] 2, [naʑuadu], [naʑado] 2, [naʑadu]
‘he raises himself up’	[nɛmtʃazi], [lɛmtʃazi], [nɛmˀtʃazi], [nɛmdʒaʑɪt], [nɛmdʒazi]
‘he resembles him’	[nutelijamkamkuʑidʒɪkʰ]
‘he saws him’	[tɛmagito], [tɛmagipublawɑdʒɪl̥], [tɛmagipuladʒɪl̥]
‘he saw it’	[tɛmagito] 4, [tɛmagitu] 2, [tɛmagitoh], [ɛmagito], [atɛmagito]
‘he sleeps with him’	[wɪbɛdijɛkʰ]
‘he sleeps with it’	[wəbɛmɪt], [wibɛmɪt]
‘he smears him up’	[mɛʑigabut], [mɪdʒigalət]
‘he smears it up’	[pɪdʒigado tobədɪ], [mɪʑigadotobədi], [mɪdʒigadɔtobədi], [mɛʑikado]
‘he strikes it unexpectedly’	[pɛtɛkʰ] 2
‘he talks to him’	[pɛdlɛwiɕtuwɛk], [hɪdlɛwɪɕtuwɛkʰ], [hɛdlɛwɪɕtuwɪkʰ]
‘he throws him over’	[pɑzalutʰ], [pɑʑalut]
‘he throws it over’	[pɑʑekɪn̥]

‘he waits for him’	[ɛɕkəmalkʰ], [ɛɕkɪmalk]
‘he waits for it’	[ɛɕkəmatkʰ]
‘he’s laughing at him’	[wɪɕkɛwɛjuhtuwɑumadʒə
‘hen’	[kigliwɪtʃ]
‘herring’	[nalentʃ], [halentʃ]
‘I smell him’	[pɛsekʰ] 2
‘I strike him’	[taəməkʰ], [taɣəməkʰ]
‘leg’	[mkadu], [mkadʒigən] 2
‘legs’	[mkadʒigəns] 3, [mkadʒigənz], [mkadʒigənɛ]
‘licks’	[muɕkwɑtʃ]
‘lip’	[mtʃiju], [mtʃijo], [ənɛi]
‘lips’	[mtʃiju], [mtʃejə]
‘liquid’	[winpɔkʰ] 3
‘little boat’	[wɛlebɑtʃitʃ]
‘long’	[pidah], [pida]
‘many buttons’	[pɪgwəlkə widʒozəd̯i] 2, [pɪgwəlkə pidʒozəd̯i] 2
‘many people’	[pɛgwəlki ɕkwidʒɪk̄] 2, [pigwəlki əɕkwizɪn̥] 2
‘Mi’kmaq’	[əlnu] 2
‘money’	[ɕulejowe]
‘moon’	[tɛpkənəɛɪt], [tɛpkənusɪt]
‘my teeth’	[ni nibidu] 2
‘nail’	[plɛku], [plɛko]
‘nose’	[msiskun], [ənɛishun̥]
‘on the other side of the lake’	[hameɪkʰ] 2, [qamekʰ], [qamɪkʰ]
‘partridge berry’	[wɪɕkɪman] 2
‘people’	[segwɑkeɕkwidʒɪk]
‘person’	[əktɛzuskwɪtʃɪn̥]
‘red ochre’	[megweza], [megwesa]
‘river’	[ɕɛbu], [ɕɛbɔ]

‘rosary beads’	[ɕəgumin]
‘salmon’	[plamo] 2
‘shoe’	[nəmokɛin], [ndʒɔɛna], [ndʒɔkɛnə], [nəmɔkɛɪn], [windʒuksnəɲ̊] 4, [wɪndʒukɛnəɲ̊]
‘shoes’	[wɪndʒuksnankʰ], [wɪndʒuknankʰ]
‘shovel’	[kalibudi], [halibudi], [qalibudi]
‘sit’	[hebinigije], [hebijenike], [ebɪnegej]
‘skin’	[məgegɪɲ̊]
‘smell’	[əmpɛɕɛdu], [pɛɕɛdu]
‘string’	[nastai], [nastigəɲ̊]
‘sun’	[nagozɪt]
‘taste’	[nɛnudəm̥], [nɪnutəm̥]
‘teeth’	[nɪbilu], [nibidu], [nibidl̥]
‘ten’	[mtəɲ̊]
‘thigh/leg’	[qatije], [katije] 2, [kaltije]
‘thread’	[ababitʃ]
‘to beat someone’	[matot]
‘to boil’	[tʃawmaladɪɛnu]
‘to break’	[temadu] 2
‘to cut’	[pɛtsuli], [pɛsuwi]
‘to hear’	[ɕiduwɑɲ̊], [mɕiduwɑn]
‘to kiss’	[wəɕkalamu], [wɪskaəmuk]
‘to wait’	[kɛɕku], [kɛdi kɛskuk] 2, [kɛskuh]
‘tooth’	[nibit], [nipit]
‘trout’	[adawɑzu], [nadahwɑzu], [nadawɑʑu]
‘two fives’	[nantkə] 2
‘watch’	[amudlɛwe] 2, [namudlɛwe]
‘white’	[wɑbeɪk]
‘you laugh at me’	[wɪɕkɛwɛjukta] 2, [wɪkɛwɛjukta]
‘you’re crying’	[kaʑigoʑi], [kazigozi]

Appendix D: Paul Jeddore List of Phonetic Environments

The following is a list of the phonetic environments for every consonant that occurs in Paul's speech.

Phonetic Environments for [p]					
#_	**V_V**	**V_C**	**C_V**	**C_C**	**_#**
#_a	e_e	a_t	m_ɛ	m_]p	
#_ɑ	e_ɛ	a_tʃ	m_u	p[_ɛ	
#_ə	ə_ɛ	e_ɐ	m̥_u		
#_ɛ	i_ə	e_s	m[_ɛ		
#_i	i_i	ɛ_k	n_ɔ		
#_ɪ	i_u	ɪ_k	s_a		
#_l	ɪ_ɛ	ɪ_kʰ			
#_o	o_i				
#_u	u_a				

Phonetic Environments for [b]							
#_	**V_V**			**V_C**	**C_V**	**C_C**	**_#**
#_e	a_a	e_i	i_ə	a_l	l_a		
	a_i	e_ɪ	i_ɛ	u_l	m_ɛ		
	a_e	ə_e	i_i				
	a_o	ə_ɛ	i_u				
	a_u	ɛ_i	ɪ_ɛ				
	ɑ_e	ɛ_ɔ	ɪ_i				
	e_a	ɛ_u	o_ə				
	e_ɑ	i_a					
	e_ə						

Phonetic Environments for [t]						
#_	V_V	V_C	C_V		C_C	_#
#_a	i_o	a_k	ɛ_u	l_a	n_k	ɪ_#
#_e	a_ɛ	a_k^h	h_u	l_i	n_l	a_#
#_ə	a_i	ɛ_k^h	h_ə	m_ə		o_#
#_ɛ	a_o	ɛ_s	k_a	n_ə		ɑ_#
	a_u	ɪ_k	k_ɛ	n_o		ə_#
	ɛ_e	o_k^h	k_ɪ	p_ə		i_#
	ɛ_ɛ	o[_l	k_u	p_ɪ		u_#
	i_a	u_l		s_a		
	o_o	u[_l				
	ɔ_o					
	u_e					
	u_ə					
	i_u					

Phonetic Environments for [d]							
#_	V_V			V_C	C_V	C_C	_#
	a_a	ə_i	i_a:	e_l	ɛ_ɪ		
	a_e	a_u	i_e	ɛ_l	k_u		
	a_ɛ	ɑ_a	i_ɛ	i_l	n_e		
	u_o	ɑ_u	i_o	ɪ_l	n_ə		
	u_ɔ	ə_i	i_ɔ	u_l			
	a_i	ə_ɪ	i_u				
	ə_u	ə_o	o_ə				
	a_ɪ	ɛ_i	u_ə				
	a_o	ɛ_u	u_i				

Phonetic Environments for [k]						
#_	V_V	V_C	C_V		C_C	_#
#_a	i[_ɛ	ɪ_t	ɐ_u	m_a	ɐ_w	i_#
#_ɛ	a_o	i_d	s_u	m̥_a	ɐ[_w	u_#
#_i	ɑ_e	u_t	ɐ_a	m_u	s_w	ɪ_#
#_ɪ	e_ɪ	ə_t	ɐ_e	n_e		s_#
#_l	ɛ_o	ɪ_ɐ	ɐ_ə	n_ə		a_#
#_o	ɛ_u	o_ɐ	t_a	n_o		ɐ_#
#_u	i_a	ɔ_ɐ	ɐ_ɛ	p_ə		l_#
#_w	i_e	u_ɐ	ɐ_i	s_a		ɛ_#
	ɪ_ɛ	u_n	ɐ_ɪ	s_ə		n_#
	u_a	u_s	kʰ[_o	s_i		
		u_w	l_e	t_ə		
			l_ə	t_u		
			l_ɛ	tʃ_ə		
			l_i	tʃ_u		
				tʃ[_ə		

Phonetic Environments for [kʰ]						
#_	V_V	V_C	C_V	C_C	_#	
				l_]k	p_#	i_#
					ɔ_#	a_#
					e_#	n_#
					ɐ_#	ɛ_#
					ə_#	l_#
					ɪ_#	t_#
						tʃ_#

Phonetic Environments for [g]						
#_	V_V		V_C	C_V	C_C	_#
#_i	a_i	ɛ_i	u_w			ə_#
	a_o	ɛ_ɪ	a_w			
	e_e	ɛ_u	e_w			
	e_ə	i_a	ə_w			
	ə_e	i_ə	ɛ_w			
	e_ɪ	i_i	i_l			
	ə_u	i_ɪ	i_w			
	ɛ_ə	i_o	ɪ_w			
		u_i				

Phonetic Environments for [q]					
#_	V_V	V_C	C_V	C_C	_#
#_ɑ			m_o		
#_a			m̥_o		
			n_o		
			n̥_o		

Phonetic Environments for [h]								
#_		V_V	V_C		C_V	C_C	_#	
#_a	#_ɛ	a_a	a_k	a_w	s_u		a_#	o_#
#_ɑ	#_i	a_ɑ	a_m	ɑ_m			a:_#	ɔ_#
#_e	#_ɪ	a_ə	a_s	u_t			e_#	u_#
		ɑ_a					ɪ_#	

Phonetic Environments for [s]					
#_	**V_V**	**V_C**	**C_V**	**C_C**	**_#**
#_e	e_ɪ	a_t	h_i	j_k	i_#
#_ɛ	ɛ_ɪ	ɑ_k	l_a	k_n	n_#
#_i	i_ɪ	ɑ_k^h	m_a		
#_k	a_ɪ	ɛ_k	m_i		
	e_a	i_h	m_ɪ		
	ɛ_e	ɪ_k	p_u		
	ɛ_u	ɪ_p	t_u		
	u_ɪ	i_k			
		ɪ_k^h			
		u_k			

Phonetic Environments for [z]					
#_	**V_V**	**V_C**	**C_V**	**C_C**	**_#**
	ɑ_a ɛ_a		j_ɪ		n_#
	ɑ_i i_i				
	a_i o_ə				
	ɑ_u o_i				
	e_a o_ɪ				
	e_i ɔ_e				
	e_ɪ u_i				

Phonetic Environments for [ɛ]						
#_	V_V	V_C		C_V	C_C	_#
#_a	a_a	a_k	i_t	j_ɪ	m_k	ɪ_#
#_ə	a_ɪ	e_k	ɪ_k	k_i	m_k^{h}	n_#
#_ɛ	ɑ_e	ɪ_d	ɪ_k^{h}	k_ɪ		
#_i	ə_ɪ	ə_]k	ɪ_n	m_i		
#_k	ɛ_ɛ	ə_k	ɪ_t	n_i		
#_u	i_a	ɛ_k	ɔ_n	p_u		
		i_k	u_k			

Phonetic Environments for [ʑ]					
#_	V_V		V_C	C_V	C_C	_#
	a_a	ɛ_i		j_ɪ		
	a_e	ɛ_u				
	a_i	i_a				
	o_i	i_ɪ				
	a_ɪ	i_u				
	a_u	ɪ_i				
	ɑ_e	o_ə				
	ɑ_u	ɔ_ə				
	e_i	u_i				

Phonetic Environments for [tʃ]					
#_	**V_V**	**V_C**	**C_V**	**C_C**	**_#**
#_a	u_a	ɛ_k	m_a		i_#
#_i	ɑ_i	i_k	m_e		e_#
#_ɪ	e_o	ɪ_k	m_i		ɪ_#
#_u	ɪ_ɪ	i_]k	mˀ_a		n_#
			p_i		u_#

Phonetic Environments for [dʒ]					
#_	**V_V**	**V_C**	**C_V**	**C_C**	**_#**
	a_ə		m_a		
	a_i		n_ɔ		
	e_o		n_u		
	ɛ_u				
	i_ɪ				
	i_o				
	i_ɔ				
	ɪ_a				
	ɪ_o				
	u_a				
	u_ə				

Phonetic Environments for [w]						
#_	V_V		V_C	C_V		C_C	_#
#_ɛ	a_ɑ	ɛ_ɪ	a_m	g_i	k_i		
#_ɪ	a_e	o_ɑ		m_ɛ	m_ɑ		
#_ə	e_ɑ	o_e		h_ɑ	g_ɪ		
#_ɑ	e_ɪ	o_ɪ		g_ɑ	m_e		
#_i	ə_e	u_ɑ		g_e	k_ɑ		
#_o	ə_i	u_e		k_ɪ	k_ɛ		
	ə_ɪ	u_ɛ		g_ə	g_ɛ		
	ɛ_e	u_i			j_ɑ		
	ɛ_ɛ	u_ɪ					
	ɛ_i						

Phonetic Environments for [j]					
#_	V_V	V_C	C_V	C_C	_#
	e_ə	e_w			ɑ_#
	e_o	o_ɛ			e_#
	ɛ_e	o_s			o_#
	ɛ_ɪ	o_z			
	ɛ_u	o_ʑ			
	i_a				
	ə_ɪ				
	i_e				
	i_ɛ				
	i_o				
	i_u				
	o_e				

Phonetic Environments for [m]						
#_	V_V		V_C	C_V	C_C	_#
#_a	a_e	ə_a	a_k	h_ə		
#_ɛ	a_ə	ə_e	a_w	l_a		
#_e	a_ɪ	ə_ə	ɑ_w	w_a		
#_ə	a_o	ə_o	e_ɛ			
#_ɛ	a_u	ə_ɔ	ə_]p			
#_ɪ	ɑ_ə	ə_u	a_p			
#_k	a_i	i_u	ə_b			
#_ɔ	e_a	ɛ_e	ə_p			
#_p	e_e	ɛ_ɪ	ə_w			
#_q	e_ə	ɪ_a	ɛ_dʒ			
#_s	ɛ_a	o_i	ɛ_s			
#_t	ɪ_a	u_a	ɛ_tʃ			
#_tʃ	ə_]u	u_i	ɪ_ɛ			
#_u			u_w			

Phonetic Environments for [m̥]					
#_	V_V	V_C	C_V	C_C	_#
#_p #_q #_k					ə_#

Phonetic Environments for [mˀ]					
#_	V_V	V_C	C_V	C_C	_#
		ɛ_tʃ			

Phonetic Environments for [n]						
#_	V_V		V_C		C_V	C_C	_#
#_a	i[_i	a_e	a_t	ə_z	ɐ_a		i_#
#_dʒ	ɪ_u	ə_u	a_d	ɛ_t	ɐ_u		ɪ_#
#_e	a_ə	ɛ_u	a_k	i_dʒ	s_ə		a_#
#_ə	a_a	i_e	e_tʃ	i_k	k_a		ɑ_#
#_ɛ	a_ɪ	i_ɛ	ə_ɐ	i_p	l_u		ə_#
#_i	ɑ_ə	i_i	ə_q	ɪ_dʒ			u_#
#_ɪ	ɑ_u	i_ɪ	ə_s	a_k^{h}			ɛ_#
#_t	e_i	ɪ_a	ə_t	ɔ_d			
#_u	ə_ə	ɪ_e					
#_q		o_ə					

Phonetic Environments for [n̥]					
#_	V_V	V_C	C_V	C_C	_#
#_q					i_# ə_# ɑ_# u_# ɪ_# ɛ_#

Phonetic Environments for [l]						
#_	V_V		V_C	C_V	C_C	_#
#_ə	a_a	ə_u	a_k	t_u		a_#
#_ɛ	a_e	ɛ_e	a_k^{h}	b_a		ɪ_#
	a_ə	ɛ_u	a_t	b_e		u_#
	a_ɛ	i_a	e_b	b_ə		
	a_i	i_u	e_m	b_i		
	a_ɪ	ɪ_a	ə_k	d_ə		
	e_a	ɪ_ɪ	ə_m	d_ɛ		
	a_u	ɪ_u	ə_n	g_i		
	ɑ_i	o_i	ə_s	k_ə		
	e_i	u_a		k_u		
	ə_a	u_e		p_a		
	ə_e	u_i		p_ɛ		
	ə_ə	u_u		t_ə		
	ə_ɛ					
	ɛ_a					

Phonetic Environments for [l̥]					
#_	V_V	V_C	C_V	C_C	_#
					a_# ɪ_#

Phonetic Environments for [l̩]					
#_	V_V	V_C	C_V	C_C	_#
					d_#

Appendix E: The Mi'kmaq of Newfoundland

According to Mi'kmaq oral tradition, their people "have continuously occupied the island [of Newfoundland] since precontact times and that this original population was later joined by a group from Cape Breton" (Pastore 1998). Other scholars think that although the Mi'kmaq most likely had knowledge of and travelled to Newfoundland seasonally, their permanent settlement on the island more accurately occurred some time during the mid eighteenth century (Speck 1922; Bartels & Jansen 1990).

The Mi'kmaq people living in Cape Breton, Nova Scotia regularly travelled to Newfoundland using a specific type of birch bark canoe which was "designed for use on open water" (Jackson 1993: 8). Some have argued that the journey between Cape North (the closest point of Cape Breton to Newfoundland) and Cape Ray (the closest point of Newfoundland to Cape Breton) – a total distance of roughly 150 kilometres – was "far too hazardous a journey for prehistoric travel by birch bark canoe" (Jackson 1993: 8), but these statements severely underestimate the capabilities of Mi'kmaq people who were accustomed to travelling long distances in all types of weather. The Mi'kmaq lived and hunted along coastal regions in the warmer months and moved inland to hunt larger mammals in the winter months for generations. Although these trips inland were made more difficult due to the weather conditions they were still "extended voyages far removed from their base camps" (Wicken 1994: 75). For example William Wicken, who wrote a PhD thesis on the history of the Mi'kmaq people between 1500 and 1760, states that in the winter of 1752-53 the "Mi'kmaq from Unimaki and Antigoniche[52] made several trips to Canceau[53]" (Wicken 1994: 75). The distance between Antigonish and Canso is just over 100 kilometres.

52 Presently spelled Antigonish

53 According to the maps from Wicken's paper, this place is referring to the city of Canso on the north-eastern tip of mainland Nova Scotia rather than the Straight of Canso (also called Straights of Canceau) that divides Nova Scotia from Cape Breton Island.

According to Frank Speck (1922) the journey between Cape North and Cape Ray typically lasted up to two days and was completed in two parts. First, the entire group would travel to St. Paul's Island located roughly 24 kilometres off the coast of Cape Breton. Then a few selected canoeists would travel ahead to Cape Ray and light a large fire that could be used as a beacon by the remaining travellers, who crossed at night when the waves were calmer.

There are several factors which led the Mi'kmaq to permanently settle in Newfoundland, but the most pressing reason was lack of food. When French colonists arrived and began to trade various goods for furs with the Mi'kmaq it severely impacted the fur-bearing animal populations in the region and affected the seasonal movement of the Mi'kmaq people themselves, who would remain closer to the coast in order to trade with the Frenchmen rather than move inland in the winter months to hunt larger game. The arrival of more Frenchmen only heightened the situation as food became more and more scarce. Some areas struggled more than others, but especially the Indigenous communities. In the mid 17th century there were reports of the Mi'kmaq of Cape Breton suffering from starvation (Jackson 1993). This, coupled with the encroachment of more and more Europeans – which placed further stress on the already critically low food levels – would have encouraged the Mi'kmaq to try to find a new place to live. They couldn't go inland due to rival indigenous groups so that left only one option: Newfoundland. At that time the "southern interior of the island [Newfoundland] was devoid of Europeans and perhaps only occasionally frequented by Beothuk" (Jackson 1993: 19). With nearly no humans living along the southern coast of Newfoundland the area was abundant with fur and food, making the permanent move from Cape Breton to Newfoundland all the more enticing. By the early 19th century "Mi'kmaq camps [could] be found in St. George's Bay and the Codroy River in the southwest, White Bear Bay and Bay d'Espoir on the island's south coast, and Bonavista Bay, Gander Bay, and the Bay of Exploits in the northeast" (Pastore 1998).

When Newfoundland officially joined Canada in 1949, the Mi'kmaq that had been living there for over 200 years now had to fight a new battle: being recognized as First Nations in the eyes of the Canadian government. The Mi'kmaq of Newfoundland participated in a "movement by Indigenous peoples throughout North America to reclaim their rights as First Nations" (Pastore 1998) in the 1960s and 1970s. Currently, there are only two official Mi'kmaq First Nations communities in Newfoundland, the Miawpukek First Nation (formerly known as Conne River) and the Qalipu Mi'kmaq First Nation.

The Miawpukek First Nation was established as a permanent community around 1822. Preceding this time it was used as a seasonal camping site when the Mi'kmaq would travel to that area to hunt and forage. According to oral history the Miawpukek Reserve was formed in 1870, but it was only recognized as a reserve under the Indian Act of 1987[54], when it was "officially designated as Samiajij Miawpukek Indian Reserve" (2012). According to the most recent census (Statistics Canada 2018) the population of the Miawpukek First Nation as of 2016 was 830. The Qalipu First Nation, on the other hand, was only recognized as an official band in 2011 under the Indian Act (Government of Canada 2013). Although this group was only recognized recently, it is considered "one of the largest First Nation groups in Canada" (Qalipu First Nation 2016).

54 In an article on the website *Heritage Newfoundland & Labrador* it is said that Miawpukek gained "federal status under the Indian Act in 1984" (Pastore) rather than 1987.