

NORTHERN EAST CREE ACCENT *

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1. Introduction

This paper provides a description and preliminary analysis of accent in Northern East Cree, a Cree-Montagnais-Naskapi dialect spoken in Chisasibi (formerly Fort George), Quebec. While brief descriptions of Northern East Cree accent are to be found in Martin (1974) and MacKenzie (1980), the accentual system of Northern East Cree is otherwise undocumented. The closely-related dialect of Southern East Cree accent has been analysed by Brittain (2000) and Piggott (2003).

The research described here is part of a larger project, the Chisasibi Child Language Acquisition Study (CCLAS <http://arts-srv.arts.mun.ca/cclas/>). One of the project goals is to characterize the acquisition of heads in Northern East Cree. In this paper we describe the target (adult) metrical system as a prerequisite to characterizing the acquisition of metrical heads in Northern East Cree.

2. Methodology

The data is based on three separate recordings of a word list, provided in 2005 and 2006 by two female Northern East Cree speakers (LBS and DB) from Chisasibi. Four linguists phonetically transcribed the recordings. The two most experienced transcribers largely agreed on the placement of word accent. We also measured the pitch, intensity, and length of some penults and antepenults in PRAAT. Further details are provided in §8 and §9.

3. Overview

We describe Northern East Cree segments and syllable structure in §4, and the evidence for metrical constituents in §5. Metrical parameters are provided in §6, and data conforming to the parameters are described in §7. The remaining data

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are treated in §8-10: we discuss words ending with a heavy, light and final syllable in §8, and words ending with a span of light syllables, followed by a final syllable, in §9. The phenomenon of apparent word-final accent, triggered by the addition of various abstract endings, is discussed in §10. Finally, §11 summarizes our findings.

4. Segments and syllable structure

Northern East Cree has the segments shown in (1) and (2). The consonants are listed in (1).

(1) Consonants¹

p	t	ch [tʃ]	k, k ^w
	s	sh [ʃ]	
m	n		h
w	y		

Other consonants (or sequences), such as [p^w, t^w, s^w, f^w, m^w] also exist; these can either be analysed as complex onsets (such as [p^w]) or as simple onsets followed by a diphthong (such as [pwâw]). Neither analysis has any relevance for syllable weight.

The vowels of Northern East Cree are listed in (2). The historic contrast in vowel length is realized as a contrast in vowel quality in Northern East Cree. However, phonological patterning, notably the alternations caused by Initial Change, provide evidence that the length contrast is still present underlyingly. For example, in Northern East Cree, short /a/ becomes [â] as a result of Initial Change, while long /â/ becomes [iyâ] (MacKenzie 1980:187).

(2) Vowels²

Heavy	Light
î [i(:)] â [æ(:), ε(:)]	û [u(:)] i [ɪ, ɿ, ə] a [ɪ, ε, i, ə, ʌ]
âw [aw], aw [aw], wâw [(^w)ɒ(^w), (^w)ɔ(^w)], wâ [wa], îw [iu], iw [i ^w , u ^w , o ^w], uy [uy], wî [wi], wîw [wiw]	

Northern East Cree syllable structure is summarized in (3). Northern East Cree words consist of ‘CVC’ syllables; an extra, word-final onset is also allowed. Onsets can contain any of the consonants listed in (1). Codas are restricted to the segments [h, s, f, n, m]. The segments [n, m] occur as codas only in syncopated structures such as <kâ:ntʃi> [ká:ntʃi] ‘sweater’.

¹ [w] and [y] are listed here simply for convenience. They are allophones of /u/ and /i/.

² The contrast between long /e:/ and /a:/, present in other dialects of Cree, has been merged to /a:/ in Northern East Cree. Similarly, short /i/ and /a/ have merged into a short unrounded vowel.

(3) Syllable structure

#	C_{onset}	V	C_{coda} .	C_{onset}	#
	any consonant		h, s, f n, m	any consonant	

5. Evidence for metrical constituents

Evidence for metrical constituents in Northern East Cree includes pitch, intensity, syncope and devoicing. The single word accent provides evidence for the head foot of the word. Syncope and devoicing provide evidence for additional, abstract secondary feet within the word.

Words have one main prominence or accent per citation form; the accented syllable has greater pitch and intensity, but is not lengthened.³ Syncope or devoicing can also optionally apply to short vowels in metrically weak position (light penults), as shown in (4).

(4) Optional syncope

	<i>orthography</i>	<i>phonetic transcription</i>	
<i>syncope or devoicing in metrically weak penult</i>	â.mih.kwân châh.ku.sâm kâ.ni.chî	'æ m ^h gõn 'dʒæ k ^w sæm 'gæ n dʒi:	spoon long snowshoe sweater
<i>lack of syncope in metrically weak penult</i>	â.shi.mwâkw	'æ ſø mɔk ^w	loon

Pitch and loudness will be discussed in further detail in §8 and §9.

6. Metrical Parameters

Our preliminary formulation of the metrical parameters relevant for Northern East Cree is provided in (5); in §11 we present a more detailed description of the parameters.

(5) Summary of metrical parameters⁴

- a. The final syllable is extrametrical, unless extrametricality would render the whole word invisible or unaccentable.
- b. Northern East Cree is quantity-sensitive at the level of the nucleus. A heavy (H) syllable contains an historically long vowel

³ Martin (1974:116) observes that “La nature physiologique de l’accent, en cris, est... un mélange d’énergie articulatoire, de hauteur mélodique et de duré. Il ne nous a pas été possible de déterminer s’il y avait une prédominance de l’un ou de l’autre de ces trois éléments.” Unlike Martin, we find no acoustic evidence that duration is a correlate of accent in Northern East Cree.

⁴ H = heavy syllable; L = light syllable; S = word-final extrametrical syllable; H = accented heavy syllable; L = accented light syllable.

or a rising diphthong. A light (L) syllable contains an historically short vowel.

- c. There is no Weight-By-Position.
- d. Feet are iambic; footing is from the right edge of the word, excluding the final syllable.
- e. There are no degenerate (L) feet.
- f. End Rule Right: the rightmost metrical prominence is accented.

Parameter (5e) will be discussed in later sections; parameter (5f) is self-evident and will not be further commented on. The remaining parameters are justified below.

(5a): The generalizations listed in (6) provide evidence for extrametricality (specifically, a word-final extrametrical syllable, preceded by a quantity-sensitive foot.)

(6) Extrametrical final syllable

- a. The final syllable is never accented.⁵
- b. Either the penult or antepenult is accented.

(5b): Evidence for quantity-sensitivity is provided in (7): Northern East Cree accents the penult if it is heavy; otherwise it accents the antepenult.

(7) Quantity-sensitivity (accented syllables are underlined)

a.	<u>l</u> ti.nim	hold like so
b.	ni.pâ.win	bed
c.	wâ.pu.shuch	rabbits
d.	a.wâ.shish	child

(5c): Although Northern East Cree is quantity-sensitive, it does not have Weight-By-Position, or moraic codas. To illustrate, the word in (8a) has a universally light (C)V antepenult and penult; (8b) begins with a potentially heavy antepenult, followed by a light penult. The fact that the accent pattern is the same in both examples argues against Weight-By-Position. Similarly, the initial closed syllable in (8b) does not pattern like the initial heavy syllable in (7a, c), suggesting that closed syllables are not heavy.

(8) No Weight-By-Position

a.	a. <u>ti</u> .pis	snowshoe netting
b.	ish.pi.mihch	above

As shown in (9), the evidence for the type of foot required for Northern East Cree is surprisingly difficult to interpret.⁶ The item in (9a) is only compatible with a right-headed foot, while the item in (9b) is only compatible with a

⁵ A type of apparent counterexample will be dealt with in §10.

⁶ Brittain (2000:205-6) observes that most of the data for *Southern* East Cree is compatible with either a bounded or unbounded right-headed foot.

left-headed foot. In contrast, the data in (9c, d) and (9e, f) are compatible with several analyses.

(9) Foot type?

	Iamb		moraic trochee
a.	a. <u>chih</u> .kush (L <u>L</u>) < S >	b.	a.kuh.tin (<u>L</u> L) < S >
c.	â.mih.kwân (H) L < S >	d.	â.mih.kwân (H) L < S >
e.	mâs. <u>ki</u> .niu ...H) (<u>L</u>) < S >	f.	mâs. <u>ki</u> .niu (H) (<u>L</u>) < S >

An unbounded foot analysis can, however, be ruled out: the data in (9e, f) cannot be accounted for by proposing an unbounded left-headed foot. Similarly, an item such as (18k) (*pi.chi.wi.yân* ‘cloth’) rules out both right- and left-headed unbounded feet; the penult would be accented if Northern East Cree had a right-headed, unbounded foot; the initial syllable would be accented if Northern East Cree had a left-headed, unbounded foot.

The remaining data can be accounted for by proposing binary feet. For descriptive purposes, we assume an iambic foot for Northern East Cree, commenting on trochaic analyses as required.

7. Unexceptional data

The data in (10-12) are unexceptional in that they conform to the parameters in (5). Example (10) consists of one-syllable words, in which the only available vowel of the word is accented (c.f., the Unstressable Word Syndrome; Hayes 1995:110).⁷

(10) One-syllable words

		(H)	
a.	ât	'æt ^h	even; if; though; etc.
b.	pîn	'pi:n	wooden clothespin
		(L)	
c.	miht	'miçt ^h , 'miht ^h	firewood
d.	pit	'pit ^h , 'bit ^h	soon

The examples in (11) illustrate the case of two-syllable words with penultimate accent. Here, the final syllable is extrametrical, and the remaining syllable is accented regardless of syllable weight (due to the fact that it is the only visible vowel in the word; c.f., Hayes 1995:110).

⁷ Few one-syllable words contain short vowels. This is evidence for a bimoraic word minimum.

- (11) Two-syllable words with penultimate accent

	(H)<S>			(L)<S>		
a.	â.mû	'æ:.mɒ:	bee	d.	is.kwâw	'ɪs.kwɔ:w
b.	chî.mân	'dʒi:.mæ:n	boat	e.	mi.tâs	'mit.tæ:s
c.	wâ.push	'wɒ.pʃʃ	rabbit	f.	nih.pin	'nɪh.pɪn

The examples in (12) illustrate the case of words with a heavy, accented penult. The final syllable is extrametrical, and the rightmost metrical prominence — the heavy syllable — is accented.

- (12) Penultimate accent, penult is heavy⁸

	(H)(H) < S >		
a.	kâh.kâ.chiw	læ(h).kæ.dziw	raven
b.	kû.nâ.puy	gu:næ.bøy	snow water
	(LH) < S >		
c.	ah.châ.pi	ç:dʒæ.bi:	bow
d.	chish.tâ.mâw	tʃ:tæ.mæw	tobacco
e.	mih.châ.tiw	pʰ:tfæ.diw, mʰ:tʃæ.diw	be a lot
f.	ni.mâ.pî	ni:mæ.bi:	fish (sucker)
	(LH)(H) < S >		
g.	ni.yâ.nâ.nâw	ni.yæ.'næ.næw	eight
h.	u.tâ.pâ.niwi	u.dæ.'bæ.nəw	s/he has a car
	(H)(H)(H)(H)<S>		
i.	nû.tâ.pâ.nâs.kun	nu.dæ.bæ.'næs.gʊn	I have a toboggan
	(LH)(H)(H) < S >		
j.	ni.wî.châ.wâ.kin	nə.wi.dʒæ.'wæ.gɪn	my companion

The remaining data, discussed in §8-10, require revisiting the parameters in (5).

8. Accenting L penults

Assuming that Northern East Cree does not have degenerate feet (5e), the expected pattern for words ending with a heavy, light and final syllable is antepe-

⁸ Algonquian makes a grammatical distinction between animate and inanimate gender, but not masculine and feminine. For the sake of brevity, our English glosses do not show all translation options. “She” and “he” are used merely to show disjoint reference. Unless indicated otherwise, the pronoun “it” should be interpreted as an inanimate argument.

nultimate accent, $(\underline{H})L < S >$.⁹ While the words in (13) follow the anticipated pattern, unexpectedly, those in (14) do not, having penultimate accent instead.¹⁰

(13) Antepenultimate accent, (HLS)

	$(\underline{H})L < S >$			$(H)(\underline{H}) L < S >$	
a.	<u>â</u> .mih.kwân	<i>spoon</i>	m.	mâ.mâ.pi.sun	<i>cradle</i>
b.	<u>â</u> .shi.mwâkw	<i>loon</i>	n.	nâ.pâ.shi.shich	<i>boys</i>
c.	<u>kâ</u> .ni.chî	<i>sweater</i>	o.	pû.tâ.chi.kin	<i>mouth organ</i>
d.	<u>mâ</u> .ni.tâw	<i>stranger</i>			
e.	<u>mûh</u> .ku.mân	<i>knife</i>		$(L\underline{H})L < S >$	
f.	<u>nî</u> .pi.sî	<i>willow</i>	p.	ish.kwâ.shi.shich	<i>girls</i>
g.	<u>nû</u> .ti.nân	<i>I pull it</i>	q.	pi.yâ.shi.kin	<i>duffle sock</i>
h.	<u>nû</u> .ti.nâw	<i>I pull s.o.</i>	r.	u.shî.mi.shish	<i>younger sibling</i>
i.	<u>yûs</u> .chi.shîw	<i>it (anim) is soft</i>			
j.	<u>tî</u> .ti.nim	<i>hold like so</i>		$(L\underline{H})(\underline{H})L < S >$	
k.	<u>wâ</u> .pu.shuch	<i>rabbits</i>	s.	mi.shâ.yâ.ku.yân	
l.	<u>mû</u> .su.yân	<i>moose- hide</i>			
				$(L\underline{H})(\underline{H})(\underline{H})L < S >$	
			t.	ni.wî.châ.wâ.ki.nich	<i>my com- panions</i>

(14) Penultimate accent, (HLS)

	$(\underline{H})(\underline{L}) < S >$			$(H)(\underline{H})(\underline{L}) < S >$	
a.	mâs.ki.niu	<i>road</i>	c.	kâh.kâ.chi.wich	<i>ravens</i>
b.	mî.chi.wâhp	<i>tent</i>			

Using PRAAT, acoustic measurements were undertaken to determine whether the transcribers — all English speakers — mistakenly perceived the antepenults in (13) to be accented because they were phonetically long. However, as shown in (15), length correlates with vowel type (long vs. short); in contrast, both pitch and intensity occur on the syllables transcribed as accented, confirming the transcriptions in (13) and (14).

⁹ For the remainder of the paper, we use, for example, $(\underline{H})L < S >$ to describe the metrical structure assigned to the last three syllables of the word(s) in question; we also use, for example, (HLS) to describe the last three syllables of the word(s) in question.

¹⁰ For reasons of space, we omit phonetic transcriptions for the remainder of the paper.

- (15) Acoustic correlates of accent in words with (HLS) pattern

	HLS antepenultimate accent (13)		HLS penultimate accent (14)	
pitch (Hz)	antepenult	penult	antepenult	penult
	201.52	132.96	196.83	208.11
	$t = 3.274, df 20,$ $p < 0.01$		$t = -2.328, df 4,$ $p < 0.05$	
intensity (dB)	antepenult	penult	antepenult	penult
	66.12	53.49	65.03	63.82
	$t = 3.129, df 20,$ $p < 0.01$		$t = 0.459, df 4,$ $p > 0.05$	
length (ms)	antepenult	penult	antepenult	penult
	0.11	0.08	0.13	0.10
	$t = 3.193, df 16,$ $p < 0.01$		$t = 2.980, df 4,$ $p < 0.05$	

We hypothesize that the words in (13) are regular while the words in (14) are exceptional. Explanations for the exceptional pattern in (14) would include historical change, and/or variation among speakers. Martin (1974:115) provides some support for an historical change account, citing regular, antepenultimate accent for (14a) [maskinoo] *une piste*. Evidence for speaker variation is shown in example (16): LBS has antepenultimate accent, and DB, penultimate accent for the same word.

- (16) Variation (antepenultimate or penultimate accent in words with HLS pattern)

	(H)L < S >		(H)(L) < S >	
a.	mûsh.ki.mî	broth (LBS)	b.	mûsh.ki.mî

Sub-dialectal differences are also possible: LBS and DB's families originated from different regions; LBS comes from the group of families referred to as "Coasters" while DB is a member of the "Inlander" subgroup (Marguerite MacKenzie, p.c.).

9. Accenting a series of L syllables

Words with an LLS syllable structure provide the greatest challenge for a metrical analysis of Northern East Cree.¹¹ The words in (17) conform to the assump-

¹¹ We are not the first to have noted this: Martin (1974:116) observes that, "Dans le parler de Fort George [Chisasibi], la place de l'accent est généralement libre...". More accurately, MacKenzie (1980:48) observes of dialects with non-final stress that "*Where the word has two short vowels, one or the other carries the stress.* (Emphasis is ours.) In words of three syllables or more, stress usually falls on the rightmost underlying long vowel."

tions in (5), displaying penultimate accent. In contrast, the words in (18) unexpectedly display antepenultimate accent.

(17) Penultimate accent, (LLS)

	(LL) < S >			(H)(LL) < S >	
a.	a. <u>sí</u> .nî	<i>stone</i>	u.	â.yih. <u>ku</u> .nâw	<i>bannock</i>
b.	ish. <u>ku</u> .tâw	<i>fire</i>	v.	nâ.mi. <u>tí</u> .niw	<i>forty</i>
c.	mis. <u>ku</u> .mî	<i>ice</i>	w.	pîh.tu. <u>si</u> .nân	<i>ammunition pouch</i>
d.	ni. <u>shi</u> .kî	<i>my skin</i>	x.	shâ.puh. <u>ti</u> .wân	<i>long tent with two doors</i>
e.	a.chih.kush	<i>star</i>	y.	wâ.pu. <u>shu</u> .yân	<i>rabbit skin</i>
f.	a. <u>ti</u> .much	<i>dogs</i>	z.	â.pih. <u>tu</u> .win	<i>half</i>
g.	a. <u>ti</u> .pis	<i>snowshoe netting</i>	aa.	pâs.chi. <u>si</u> .kin	<i>gun; rifle</i>
h.	chis. <u>tuh</u> .kin	<i>door</i>	bb.	tâh.ti. <u>pu</u> .win	<i>chair</i>
i.	i. <u>yi</u> .kich	<i>frogs</i>			
j.	is. <u>pi</u> .kun	<i>taste</i>		(LH)(LL) < S >	
k.	ish. <u>pi</u> .mihch	<i>above</i>	cc.	ti.pâ.chi. <u>mu</u> .win	<i>story</i>
l.	ni. <u>si</u> .kus	<i>my aunt</i>			
m.	nis. <u>pi</u> .tun	<i>my arm</i>		L(LL) < S >	
n.	nuh. <u>ku</u> .mich	<i>my grandmothers</i>	dd.	a.ni. <u>ku</u> .châsh	<i>squirrel</i>
o.	pi. <u>chi</u> .wich	<i>gum (pl.)</i>	ee.	u.chi. <u>pi</u> .tim	<i>s/he pulls it</i>
p.	uh. <u>pi</u> .nim	<i>s/he lifts it</i>	ff.	ni.mu. <u>shu</u> .mich	<i>my grandfathers</i>
q.	us. <u>chi</u> .win	<i>animal muzzle</i>			
r.	a. <u>ku</u> .nim	<i>s/he holds onto it</i>			
s.	a. <u>ku</u> .chin	<i>it (anim) is hanging up</i>			
t.	ni. <u>mu</u> .shum	<i>my grandfather</i>			

(18) Antepenultimate accent, (LLS)

	(LL) < S >			(H) (LL) < S >	
a.	u.ti.nâw	s/he takes s.o.	k.	pâ.yi.kush.tâw	nine
b.	a.kuh.chin	s/he floats	l.	pî.si.muh.kân	clock
c.	a.kuh.tin	it floats	m.	pûh.ti.ni.kin	thimble
d.	mis.chi.shin	shoe			
e.	uh.pi.ham	s/he lifts it with an instrument			
f.	u.chi.mâw	boss	n.	û.chi.pi.chi.châw	s/he pulls on hide
g.	a.ti.sim	s/he dyes it			
h.	mi.ku.shân	feast		(LL)(LL) < S >	
i.	a.pi.shîsh	little	o.	u.shih.ti.mu.wâw	s/he makes it for s.o.
	L(LL) < S >			(LH)(H)(H)(LL)<S>	
j.	pi.chi.wi.yân	cloth	p.	pis.wâ-â.yih.ku.nâw	bread

Finally, the word in (19) is the only example of variation between antepenultimate and penultimate accent in words with an (LLS) syllable structure.

(19) Variation (antepenultimate or penultimate accent in words with LLS pattern)

a.	u.ti.nim	'u.tn.nəm	s/he takes it	(LL) < S >
b.	u.ti.nim	u.'dɪ.nəm, u.'tn.nəm	s/he takes it	(LL) < S >

Given that the data in (17) and (18) is contradictory, we felt it necessary to verify the accuracy of our transcriptions. We double-checked the forms with LBS and DB and found that both of their judgements were consistent with the transcriptions in (17) and (18). (Only LBS displayed the variation in 19.) We also analysed all the examples in (17-19) acoustically. The results are shown in (20): pitch and intensity are greatest on the syllables perceived as ‘accented’, confirming our transcriptions. Nevertheless, the acoustic observation about length in (20) is highly unexpected: in words with an (LLS) syllable structure, the *unaccented* L syllable is *longer* than the accented one. We have no explanation for this phenomenon.

(20) Acoustic correlates of accent in words with (LLS) syllable structure

	LLS		LLS	
Pitch (Hz)	antepenult	penult	antepenult	penult
	116.43	211.26	193.04	81.25
	$t = 5.637$, df 32		$t = 3.553$, df 15	
	$p < 0.01$		$p < 0.01$	
Intensity (dB)	antepenult	penult	antepenult	penult
	62.09	73.67	66.18	58.08
	$t = -2.494$, df 32		$t = 2.834$, df 15	
	$p < 0.01$		$p < 0.01$	
Length (ms)	antepenult	penult	antepenult	penult
	0.11	0.08	0.09	0.11
	$t = 2.455$, df 32		$t = -1.106$, df 15	
	$p < 0.01$		$p > 0.05$	

We now return to the central problem, first observed in MacKenzie (1980: 48), of why there is variation in accenting words with an (LLS) syllable structure.

Many Algonquian languages are analysed as having iambic metrical systems (c.f. Hayes 1995), suggesting that Proto-Algonquian was iambic. We hypothesize that the penultimate accent (LL) \llcorner S \lrcorner pattern in (17) represents the historic (Proto-Algonquian) pattern, and that the (L \llcorner L) \llcorner S \lrcorner (trochaic) pattern in (18) could thus be regarded as an innovation.

There are several possible explanations for this innovation. One is based on MacKenzie's (1980:48) observation that "[a]t Fort George [Chisasibi], a y-dialect community, a shift in stress is used to differentiate otherwise homophonous words." Examples provided (1980:48) include *yá:ka:w* 'sand' vs. *ya:ká:w* 'it is sandy'. A similar example is shown in (21).

(21) Words that are homophonous except for accent

a.	pâ.yi.kush.tâw	<i>nine</i>
b.	pâ.yi.kush.tâw	<i>there's one object sitting over there</i>

We thus hypothesize that antepenultimate accent in words with an (LLS) syllable structure could result from constraints such as anti-homophony. If this were the case, then we would expect exceptional accent to occur only in one member of a pair of homophones.

¹² A similar phenomenon occurs in English (Raffelsieben 1999:137): the phenomenon concerns words in which the prefix constitutes a separate prosodic word; adjectives and verbs with such a prosodic structure have a weak-strong stress pattern, as in (*ún*)(afraíd) and (*mis*)(prínt). In contrast, one type of exception is that "...the prominence pattern strong - weak includes all nouns which are converted from verbs in which the prefix forms a separate p-word. *This exception is perhaps motivated by a constraint to avoid homophony with respect to the prefixed base.*" (Raffelsieben 1999:137, ft. 4; our emphasis added): compare the verb (*mís*)(prínt) and the noun (*mís*)(print).

Another possible explanation for the ‘exceptional’, antepenultimate pattern in (18) is that it is analogous to the leftward stress attraction or anti-right-alignment observed in English nouns (i.e., Final Noun Extrametricality). If something similar were operant in Northern East Cree, we would expect certain grammatical classes (or sub-classes) of words in Northern East Cree to display the property in question.

10. Final accent and abstract endings

One notable feature of Northern East Cree is a regular shift from non-final accent to apparently final accent, observed in certain classes of words, including inanimate plurals, which historically took short vowel suffixes.¹³ For example, singular [tʃí:ma:n^h] ‘boat’ corresponds to plural [tʃi:má:n^h] ‘boats’ in Northern East Cree.

Northern East Cree has lost all word-final short vowels.¹⁴ In their place, it has endings which are either realized as heavy aspiration /-h/ as in [dʒi:mæn^h] ‘boats’; or, as a lengthened fricative, as in [wi:yæ:ss] ‘meat’ (pl). A complete list of the relevant word-final phenomena is provided in (22).¹⁵

(22) Word-final phenomena

- a. Word-final stops can be aspirated [p^h, t^h, k^h, n^h, m^h].
- b. Word-final fricatives and affricates can be lengthened [ss, ſſ, tſſ]
- c. Word-final vowels can be followed by heavy aspiration [i:h], etc.

Words with final abstract /-h/ endings and apparent final accent are illustrated in (23) and (24). The endings in question correspond to short /-a/ suffixes in closely-related dialects.

¹³ Martin (1974:115) observed that “...la place de l’accent peut avoir, en cris [de Chisasibi], une fonction distinctive. En l’occurrence, elle sert ici à distinguer le singulier du pluriel.” He provided word pairs such as ['maskinoo] “une piste” and [mask'inoo] “des pistes”. MacKenzie (1980: 47) observed that “...for those y-dialects which apocope (sic.) final short vowels ... a shift in stress is used to mark morphological categories as in the inanimate plural.” Examples provided (1980:47) include masinahi:kan *book* vs. masinahi:kán *books*. Neither Martin nor MacKenzie noticed at the time the word-final devoiced vowel /-h/ present in the ‘final accent’ forms; MacKenzie reports that Cree speakers brought this fact to her attention.

¹⁴ The spelling system of Northern East Cree is still being developed. In an earlier version of the orthography, some words are spelled with word-final short vowels, reflecting an historical stage predating modern Northern East Cree. An example is < utâmiha > [o.'dæ.mæ:h] “hit him/her/it (animate)”. A later version of the orthography spells this same example as < utâmâh > [o.'dæ.mæ:h]. We posit the following historical account:

*utâmah-a > utâmâ-a (loss of h, with compensatory lengthening) > utâmâ-h (word-final -a becomes -h). Loss of /h/ with compensatory lengthening is well-advanced in the closely-related Naskapi dialects to the east. (See MacKenzie 1980:111-114 for details).

¹⁵ Citation forms *without* abstract endings also display the same word-final phenomena listed in (22). A question for future research is whether, for example, the aspiration of word-final stops is quantitatively different in the citation forms of words with and without the relevant abstract endings.

(23) The plural ending –h

	(H) <H>		(H)(H) <S>	
a.	chî.mân	boat	b.	chî.mâ.nH
c.	wî.yâs	meat	d.	wî.yâ.sH [wi.yæ.ss]
				meat (pl.)
	(H) < L >		(H)(L) < S >	
e.	wâ.tikw	hole, den	f.	wâ.ti.kwH
				dens
	(H) L < L >		(H) (LL) < S >	
g.	mis.chi.shin	shoe	h.	mis.chi.si.nH
				shoes
	(H)(L) < H >		(H) (L H) < S >	
i.	wâ.pu.yân	blanket	j.	wâ.pu.yâ.nH
				blankets
	(L)(LH) < L >		(L)(LH)(L) < S >	
k.	muh.ku.tâ.kin	crooked knife	l.	mûh.ku.tâ.ki.nH
				crooked knives
	(H)(LH) < L >		(H)(LH)(L) < S >	
m.	wa.ni.hî.kin	trap	n.	wa.ni.hî.ki.nH
				traps

(24) The obviative ending –h (corresponding to /-a/ in closely-related dialects)

	(L) <L>		(H) (L) <S>	
a.	nuh.kum	my grand- mother	b.	ûh.ku.mH

We hypothesize that the ‘final’ accent pattern shown in (23) and (24) is a type of unexceptional, non-final pattern. We theorize that the final abstract /-h/ endings constitute a syllable that is *metrically relevant*, in the sense that it can be labeled as extrametrical. Once this final abstract syllable is added to a word such as *nuh.kum* (L)<L> (24a), the accent necessarily moves to the right, as in *nuh.ku.mH* (L L)<S> (24b).¹⁶

A fact for which we currently have no explanation is that accent *must* be rightmost in words with an abstract ending. For example, it is obligatory to accent the light penult in *wâ.ti.kwH* (H)(L)<S> (23e), despite the fact that a ‘better’ H antepenult is available to be accented in this word.¹⁷

¹⁶ Northern East Cree thus requires two types of word-final empty-headed syllable: a non-metrically-relevant, ‘invisible’ type that will support a word-final onset while not affecting accent assignment; and a metrically-relevant, ‘visible’ one that can affect accent assignment.

¹⁷ This productive pattern could partly explain the exceptional, penultimately stressed ...HLS forms in (14), which could be viewed as analogous.

11. Summary and further research questions

We summarize our findings so far with respect to Northern East Cree in (25).

- (25) Accent parameters revised (revisions in italics)
- a. The final syllable is extrametrical, unless extrametricality would render the whole word invisible or unaccentable.
- Abstract final endings / syllables create the appearance of final accent.
 - b. Northern East Cree is quantity-sensitive at the level of the nucleus.
 - c. There is no Weight-By-Position.
 - d. Feet are iambic; footing is from the right edge of the word, excluding the final syllable.
- There are lexicalized instances of words with a moraic trochee, aligned at the right edge of the word.
 - e. There are no degenerate feet (L), except that
 - a single (L) penultimate foot can occur — see (13) and (14).
 - degenerate feet are obligatory in words containing a L syllable followed by a final abstract ending (see (23)).
 - f. End Rule Right: the rightmost metrical prominence is accented.

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