What there is to {C} in Kamloops Wawa shorthand

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CHINOOK List

Pronunciations of nearly all letters of the Duployan shorthand in which Father J.-M.R. LeJeune wrote Kamloops Wawa Chinook Jargon are easily inferred, especially for the vowels. The major exception is the letter shaped {C}, which to judge by LeJeune's romanizations apparently represents the three distinct phonemes /i e y/. Within a corpus of LeJeune's writing, this paper checks the distribution of the three romanizations for consistent differentiation of these phonemes. Mechanisms of Duployan are then examined with a view to discovering whether, and if so how, LeJeune used them to facilitate proper choice among {C}'s readings. In a final test for predicting correct readings of {C}, LeJeune's forms containing it are compared with cognates outside this variety of Chinook Jargon. Proper interpretation of {C} is shown to hinge on the reader's knowledge of contexts (semantic and social) in addition to one's literacy in Duployan.

1 Introduction

It's easy to read the Duployan shorthand alphabet that was used to write the Chinook Jargon in the newspaper Kamloops Wawa ("Kamloops Speaks"; hereinafter abbreviated "KW"), and related publications, apparently all written by Father Jean-Marie Raphaël LeJeune, O.M.I. (in this paper also 'LJ'). This is so because "Jargon" makes use of at most a few hundred distinct morphemes, all of which can be called independent words, and, lacking processes such as inflection by affixation, these words never vary morphologically. In conjunction with the fact that this shorthand is alphabetic, and has only about 29 letters, each being of invariant shape, this means that it isn't difficult for a speaker of Chinook – as it's most commonly called [1] – to recognize, understand, and assign an intelligible pronunciation to the words on the mimeographed pages of KW. LeJeune's perhaps final publication in

[1] Not to be confused with the *Chinookan* languages. For more discussion of synonymy, see Silverstein 1996:127ff.

Jargon[2], "Chinook Rudiments" (1924), bears witness to this claim; in this small book, LJ conveniently provides a Romanized pronunciation of each shorthand Chinook word, showing that the sound of each shorthand letter is both predictable and quite consistent. For example[3]:

(1)	Page	Shorthand	My Transcription	Romanized	Gloss
	(6)		/mokst/	<mokst>	"two"
	(6)		/tlun/	<tloon>	"three"
	(6)		/ka.kwa/	<kakwa>	"like"
	(6)		/tak.mu.nak/	<takmoohak>	"100"

There is one prominent exception to the rule that a given shorthand letter has a predictable reading. There's a shorthand letter  , i.e. shaped approximately {C}[4]. (I'll represent the *shapes* of letters of the Duployan alphabet between {curly brackets} in order to distinguish them from both transcribed and romanized letters.) LeJeune 1924:5, a table of the "Phonetic Alphabet"(sic), is shown here as Figure 1.

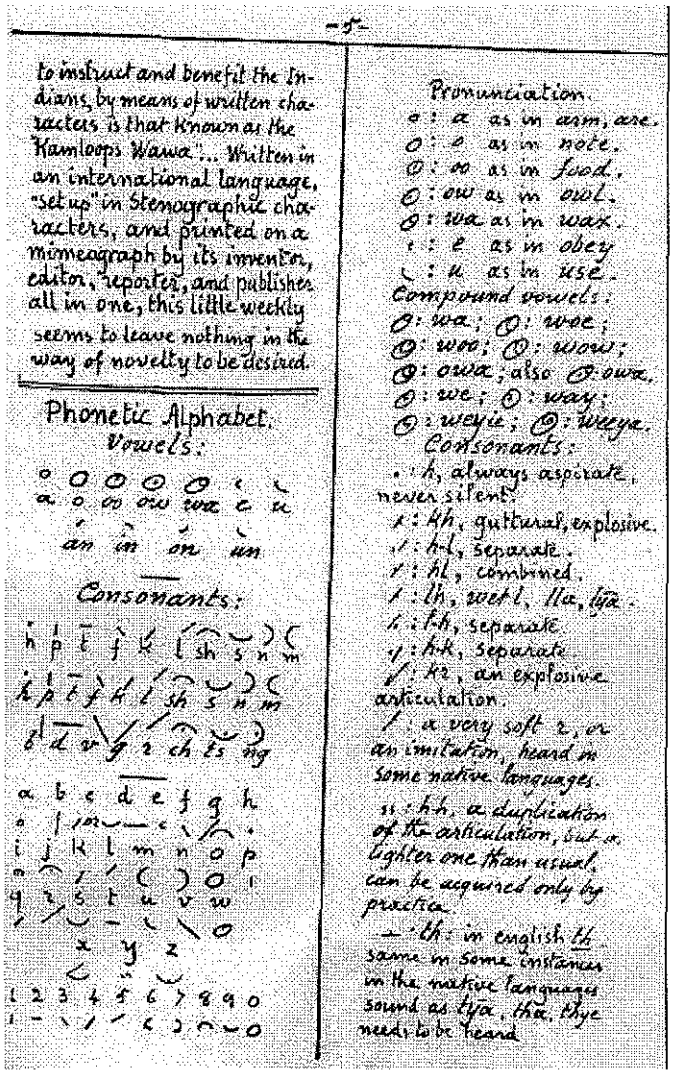
Here LJ romanizes this letter only as <e>, presumably as a default reading, but I call the reader's attention to the following varying transcriptions of {C}, for clarity underlined in the romanized forms:

(2)	Page	Shorthand	Transcription	Romanized	Gloss
	(6)		/{C}.h.t/	<iht>	"one"
	(6)		/la.k{C}t/	<lak et>	"four"
	(7)		/{C}a.{C}{C}m/	<ya'yem>	"to talk"

[2] And thus something of a summation of his work on this language. It is also nearly his final opus overall; LeJeune 1925, on Secwepemctsín, is his only later work known to me. Cf. Davis & Robertson 2000.

[3] Note that throughout this paper, I'll present my letter-for-letter transcriptions of the shorthand alphabet between /slash marks/, and LJ's Romanizations between <angled brackets> like these; other conventions will be explained shortly.

[4] I half-facetiously recommend that the reader mentally "name" this representation "see", as a mnemonic that the shorthand letter is shaped like the third letter of the English alphabet, and that {C} is *only* a representation of the letter's form.



to instruct and benefit the Indians, by means of written characters is that known as the "Kamloops Wawa"... Written in an international language, "set up" in stenographic characters, and printed on a mimeograph by its inventor, editor, reporter, and publisher all in one, this little weekly seems to leave nothing in the way of novelty to be desired.

Phonetic Alphabet.
Vowels:

Consonants:

Pronunciation.
a : a as in arm, are.
o : o as in note.
oo : oo as in food.
ow : ow as in owl.
wa : wa as in wax.
e : e as in obey
u : u as in use.
Compound vowels:
wa; wae;
woo; wow;
owa; also owa.
we; way;
weyie; weye.
Consonants:
h, always aspirate, never silent.
kh, guttural, explosive.
h-l, separate.
hl, combined.
lh, welsh ll, lla, tlya.
h-h, separate
h-k, separate
k2, an explosive articulation.
a very soft z, or an imitation, heard in some native languages.
h-h, a duplication of the articulation, but a lighter one than usual, can be acquired only by practice.
th: in english th same in some instances in the native languages sound as tlya, tha, thye need to be heard

Figure 1: Alphabet chart, LJ 1924:5

From this information, we can see that {C} is sometimes romanized as something like the high front phoneme /i/ of Chinook Jargon[5]. At other times, LJ romanizes {C} as something like the mid front Jargon phoneme /e/; at still

[5] See Thomason & Kaufman 1988 for the language's sound inventory, amended slightly by Davis & Robertson 2000 with the inclusion of /c?.

others, like Jargon's palatal glide phoneme /y/. Just why this shorthand letter, alone among 28 others, appears in so many and such varied representations when romanized by Father LeJeune, is the central question of this study[6]. Poser 2002, citing Mulhall 1986, describes the choice circa 1890 of LJ's invention, KW shorthand, for writing Chinook Jargon as having been a rejection of Father A.G. Morice's Carrier (Dakelh) Athabaskan syllabics, which clearly distinguish a /y/, /i/, and /e/ from one another. Poser goes on to state that the Duployan shorthand

> "provided an adequate representation of the sounds of English and of the European version of Chinook Jargon, that is, Chinook Jargon without the sounds that Europeans found exotic, such as the ejectives and lateral fricatives and affricates, for which it was extensively used. It was, however, a poor writing system for [indigenous languages' sounds], because, by failing to provide for the "exotic" sounds of these languages, it seriously underdifferentiated them."

However, as we shall see, this shorthand did provide special symbols for some non-European sounds, and particularly the vowels in LJ 1924 receive very consistent romanizations; e.g. for his shorthand /u/ LJ virtually always gives <oo>[7,8]. For this reason it's odd that two vowels and /y/ should have been conflated into a single letter of LJ's alphabet. In an effort to learn what factors dictated LJ's varying representations of {C}, and to make it possible to transcribe KW all the more accurately for purposes of analyzing this variety of Jargon, I'll bring several approaches to bear.

In section 2, I will analyze LJ's romanizations themselves, in order to see whether they consistently differentiate the three Jargon phonemes just mentioned. In section 3, I will consider the Duployan forms of LJ's words containing the letter {C}, in light of the mechanics of writing KW shorthand. This approach is intended to help determine whether LJ exploited the available nuances of the shorthand alphabet to add redundancy to, and thus maximize, the 3-way distinction among the phonemes covered by {C}. In section 4, I'll spotlight some KW Jargon words which have cognates in other documented varieties of Jargon; a group of LJ's Jargon words having cognates in Kamloops' local Secwepemctsín language, which definitely does contrast among /e/, /i/, and /y/; and a number of "ex libris" inscriptions written in shorthand by First

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[6] There's also a diphthongal shorthand letter (<we> in LJ 1924:5, but sometimes <wi>) which, for simplicity's sake, I'm ignoring for the moment. Like other diphthong symbols in KW shorthand, this one is visibly a compound of /u/ and {C}, and thus at most a (quite small) subset of the occurrences of {C}.

[7] His <u> being reserved, as in 1924:5, for my /ü/ and when it isn't, LJ assigns a recognizable variant spelling for the same high back rounded vowel (as on page 14: <la bouche> for /la.buš).

[8] The corpus of data used for this study is drawn mostly from LeJeune 1924; items from other sources are noted accordingly.

Nations people of the Kamloops region, and compare these with what we know from sources outside LJ regarding their pronunciation. By this method, I hope to find a test case illustrating whether and how we can truly predict the reading (essentially, the pronunciation) of {C} in any given case.

2 What Do the Romanizations Tell Us?

First of all a glance through LJ 1924 makes it apparent that where we find {C} immediately adjacent to a vowel within the same word, it can be read as a palatal glide /y/, whether LJ presents it to us as <y> or as <i>:

(3a)	Page	Shorthand	Transcription	Romanized	Gloss
i.	(6)		/na{C}n/	<naln>	"nine"
ii.	(6)		/a.{C}ak/	<a'yak>	"quick"
iii.	(7)		/{C}a.ka/	<yaka>	"he"
iv.	(7)		/{C}a.{C}{C}m/	<ya'yem>	"to talk"
v.	(7)		/k{C}.la.pa{C}/	<kilapai>	"to come back"

This correlates predictively with other well-documented varieties of Jargon, viz. the respective cognates of ii.-v. above[9] in Zenk & Johnson's (2001) Grand Ronde (Oregon) Jargon and in Gibbs'(1863) authoritative dictionary:

(3b)	Zenk & Johnson	Gibbs
ii.	/áyaq/	<hy'-ak>
iii.	/yáka/	<yáh-ka> or <yok'-ka>
iv.	/yá/im/	<yi'-em>
v.	/kīlapay/	<kel'-a-pi> or <ká-la-pi>

A special case of {C}-as- /y/ is that of a word containing a sequence {C}{C}. I list several such here:

(3c)	Page	Shorthand	Transcription	Romanized	Gloss
i.	(7)		/{C}a.{C}{C}m/	<ya'yem>	"to talk"
	(13)		/ta.{C}{C}/	<ta'ye>	"chief"
	(7)		/s{C}{C}s{C}m/	<sie'sem>	"to tell"
	(26)		/l{C}p{C}{C}/	<lepi'e>	"feet"
ii.	(6)		/{C}{C}t/	<eit>	"eight"

In this environment, {C}{C} is generally read as /ye/; LJ's <ie> here is (cf. the discussion after 4c below) most sensibly understood as another way of writing this sequence. The exception is item (3c)ii., where we find the reading /ey/ remaining true to the English source word. We can't claim that the reason

[9] An English loanword "nine" being lacking in these two references.

for this difference in reading is due to relative position in a graph or in a syllable, because <ya'yem> here also shows us a closed syllable and graph beginning with {C}{C}. Instead, we have to suppose that another factor accounts for the variance; position after a preceding letter in the same word would work to explain things, for example. Orientation (horizontal for /ye/ and vertical for /ey/) also would. Anecdotally, I can attest that in actual KW texts, LeJeune as a rule used the spelling /mit.h.wi.it/ for the verb "to stand" [which he however gives in LJ1924:7 as /mit.u.it/], and I wonder whether his dividing that {C}{C} sequence between two graphs, unlike (3c) where every such sequence lies within a single graph, is his way of distinguishing a reading like /iy/ from /ye/. The small number of {C}{C} items prevents us from knowing for certain, and it has to be pointed out that so far, we can't rule out a lexically-determined reading wherein we'd simply have to know which of these two pronunciations LJ intended in a given case. That issue will reappear in a later section of this paper.

Of course this only partially answers the question posed in this section's title. As regards the question of LJ's <e> versus <i>, we can use the test of minimal pairs to establish meaningful, i.e. phonemic, contrasts. If it can be shown that there are minimal (or at least, perhaps, near-minimal) pairs among LJ's romanizations, then we may know something interesting about the character of KW Jargon's sounds, at least as exemplified in Father LeJeune's usage. With this in mind, in (4a), I list the minimal, and in (4b) some of the most-nearly minimal, pairs that I have found in LJ 1924 that show contrast between <e> and <i>. In (4c) I show an example in which essentially the same Jargon phoneme is given two distinct romanizations. Again, I underline the relevant compared segments of the romanizations:

(4a)	Page	Shorthand	Transcription	Romanized	Gloss
i.	(8)		/s{C}l/	<sell>	"sell"
	(35)		/s{C}l/	<sil>	"cloth"
ii.	(9)		/t{C}n.t{C}n/	<tintin>	"bell"
	(17)		/t{C}n/	<ten>	"ten"
(4b) i.	(11)		/{C}.na.ta{C}/	<enata'>	"across"
	(13)		/{C}.na/	<iha >	"beaver"
ii.	(13)		/c{C}.p{C}/	<tse'pe>	"mistaken"
	(13)		/c{C}/	<tsi>	"sweet"
iii.	(12)		/p{C}/	<pi>	"and"
	(13)		/c{C}.p{C}/	<tse'pe>	"mistaken"
iv.	(11)		/{C}l{C}.h.{C}/	<ele he>	"earth"
	(11)		/{C}l{C}p/	<ile p>	"first"
v.	(13)		/sa.pl{C}l/	<saple1>	"bread"
	(13)		/tl{C}l/	<tlil>	"black"

etc. ad nauseam

(4c)	(6)	✓	/p{C}l/	<pel>	"red"
	(16)	✓	/p{C}l/	<pail>	"pail"

At this point it's good to explain that in the column of romanizations , where LJ marks an apostrophe <>, there is never any shorthand symbol corresponding to it – rather, comparison with other varieties of Jargon reveals that it's usually a mark of primary word stress, frequently (as part of the digraph <h>) the signal of a velar or uvular voiceless fricative /x/ or /ʔ/[10], and in some cases simply establishes that vowels separated by it are to articulate separately rather than read as a digraph. A neat example of apparently all three uses of <> in the same word is (page 13) <hpai> "cedar".

It should be no surprise if we find there are very few minimal pairs in our corpus, or indeed in any variety of Jargon, given both the very small number of words in the language, which has been commented on by a range of observers[11] and its relatively large phonemic inventory (34 phonemes). And in fact I've so far found just two minimal pairs, shown in (4a).[12] For a greater amount of potentially useful information, we can appeal to an admittedly less conclusive method, the comparison of near-minimal pairs, as in (4b); there are many, many more in our corpus than I list, but these five should serve well as an illustration. So we see LJ making numerous distinctions between /e/ and /i/ in environments ranging from the very similar to the nearly identical, and this suggests that he did hear a consistent difference between two front nonlow vowels. The pair in (4c), where LJ seems to even distinguish what we may term two lengths of a phoneme /e/, reinforces the impression that he had a keen enough ear for vocalic nuances.

But we're still left with much of our problem. How is the reader of LeJeune's Jargon shorthand going to know *when* to read {C} as /e/, and when as /i/? Looking at the question from another viewpoint, what we do know is that if a {C} stands adjacent to a vowel symbol within the same word, a {C} is always to be read as /y/; and conversely, only if this shorthand letter is not in adjacency to a vowel letter in the same word can it be read as a non-glide, i.e. as a front nonlow vowel. Yet we, LJ's (potential) reading audience, still need to determine how to replicate his distinction of /e/ from /i/; this is another way of saying that we need to learn what his motivations were in distinguishing the two. Since LJ was highly consistent both in his shorthand spellings and in his Romanizations throughout the hundreds of pages of KW-related Jargon materials he published, it would seem that this vowel distinction was of real importance to him. His surprising use of what he himself apparently considered a single letter (recall LJ 1924:5) of his "phonetic" shorthand to represent three

[10] Cf. Vrzic 1998.

[11] Cf. Landerholm 1956 and Gibbs 1863:viii.

[12] Let it be clear that I allow <tintin> as a minimal partner with <ten> based on the former being perhaps a reduplicated form; if this isn't the case (and there is no attested /tin/ simplex in any variety of Jargon I've found, nor listed in e.g. the voluminous comparison tables in Johnson 1977), we have only one minimal pair.

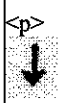
different phonemes begs the question: Did he use some additional device to make clear which reading of {C} he intended in each given instance, just as say standard French, Portuguese, and Slovenian are able to clearly differentiate sounds written <e>, <è> and <é> by the use of diacritics? I now turn to the KW Duployan writing system itself in search of clues to such mechanisms.

3 How Did LeJeune Use the Mechanics of Shorthand?

If we want to judge how well LeJeune used this alphabet in KW, it will be useful now to examine just how one writes Jargon in Duployan shorthand. The essential rules: KW shorthand is composed of some 29 commonly used *letters,* shown in Table 1.[13] Each letter of KW shorthand has an inherent *shape*, and inherently written in a given *direction* (either *clockwise or counter-clockwise*), notated herein as superscripted + or -, respectively, when necessary. A number of groups of letters are distinguished from each other only by size (short versus long versions of the same), or by the presence versus the absence of a diacritical dot or dash. Compare <t>, <d>, <?> in the table above. Groups of letters having identical shape and direction values, and distinguished from one another only by size, diacritic, or both, form what I call *families*. For brevity's sake in the present discussion, I notate a family by a representative capital letter between angled brackets. There are 12 families, which I'll show in Table 3, below.

[13] Note that this is significantly less letters than those LJ gives in his own Duployan alphabet tables for Jargon, many of which are rarely or never used in practice.

Table 1: The commonly used letters of KW

Family	Letters	Total
<A>	<a>  <o>  <u>  <aw>  <wa>  <w{C}> 	6
<I>	<ü>  {C} 	2
<T>	<t>  <d>  <?> 	3
<P>	<p>  <b> 	2
<L>	<l>  <r>  <l> 	3
<F>	<f>  <v> 	2
<K>	<k>  <g>  <k'> 	3
<S>	<s>  <c> 	2
<Š>	<š>  <c> 	2
<M>	<m> 	1
<N>	<n>  <?> 	2
<H>	<h> 	1
12		29

A letter can be written in isolation, though this is a heavily disfavored and extremely rare option for consonants; or it can be written attached to a preceding or following letter, or both. (<h> is the only nonconnecting letter and thus isn't subject to the latter process.) In any case, the visual unit of writing that I call a *graph* is constituted: an isolate or multiple letters written attached to each other, set off from other graphs by preceding and following spaces. Note that the graph is the highest level of complexity in KW shorthand writing. By definition, graphs are separated by spaces, rather than being connected together. So the word-level is relevant only in terms of the lexicon and of (morpho) syntax, because a written KW Duployan word is composed simply of one or more graphs in sequence. To make perfectly clear the distinction between a space between words and a *space between graphs* within a word, I use the symbol <.> (period) for the latter, and a space for the former.

Writing of multi-letter graphs and of sequences of graphs *flows* in a general left-to-right direction. The only exceptions occur when a given letter is inherently written in a counter-flow direction, as is the case with <K> (see table below); so letters may be said to have ±flow values, as well as the values already listed above. Lines of writing are arranged in a general top-to-bottom direction on the page. We can already refer above for the shape, size, relevant diacritic, and directional value of each letter. To see how the remaining criterion applies to actual KW letters, let's look at Table 2 below.

Table 2: Flow values by family

	Family/-ies	
Flow-wise	*Variable*	*Counter-flow-wise*
<T>		<K>
<S>		<N>
<Š>		
<P>		
<L>		
<M>		
<F>		
<H>		
	<I>	
	<A>	

This table serves as a concise list of the 12 families of letters, and shows that consonants have definite flow values, while vowels apparently do not

-- an interesting point in a discussion of a shorthand vowel letter's properties! Therefore, this is a claim worth investigating in more depth, as in Table 3 below.

Table 3: Do vowel letters have inherent flow values?[14]

Family/-ies	Page	KW Shorthand	Romanized, +/- clockwise	Flow values
<I>, <A>	7		<y+a-'ka>	<y> w/ flow; <a> indeterminate
	7		<y-a+'yem>	<y> w/ flow; <a> indeterminate
<A>	7		<e.h'p oo-.i>	indeterminate
	11		<e.h'p oo+i>	with the flow
<A>	30		<e.la+.h.an>	indeterminate
	30		<i.tla-n>	against the flow
<I>	6		<dla'i>	indeterminate
	7		<ki.la.pa'i+>	indeterminate
<I>	8		<se-ll>	with the flow
	8		<kwa'ne.s e+m>	with the flow
<I>	9		<i+k.i+k>	against the flow
	7		<ki-.la.pai>	with the flow

The above table demonstrates that the member letters of both of the vowel families in KW shorthand differ from consonant letters in not having inherent definite flow values. The identical vowel letter can be found in our corpus with all three possible flow values, in various words and even (viz. <e.h'.pooi>) in various instances of the same word. Additionally, like

[14] Relevant segments are underlined here for clarity; clockwiseness values added to Romanizations of vowels because vowels are known to be not inherently determinate for this feature; (near-)minimal pair comparisons are made. Clockwiseness values are given also for <y> in order to demonstrate that an entire syllable can be written in either of two opposite ways.

consonants[15], vowels are romanized by LJ in quite consistent ways: He virtually always writes a given vowel letter one way in his Romanizations, regardless of direction values (see <yaka> vs. <ya'yem> above), and even in minimal pairs distinguished only by a vowel letter's direction value (e.g. <e.h'pooi> above) and other factors.

As already noted, the great exception to this generalization is {C}, which LeJeune variously romanizes as (most often):

<e>, <è>, <é> -- which I take as allomorphic representations of Thomason & Kaufman's (1988) Jargon phoneme /e/, and herein transcribe, when specificity is needed, under the cover symbol /e/ --,

<i>, <ì> -- which I take as allomorphic representations of the Jargon phoneme /i/, and herein transcribe, as necessary, under the cover symbol /i/ --, and

<y>, <ỳ> -- which I take as allomorphic represenations of the Jargon phoneme /y/, and herein transcribe when necessary as /y/.

As we consider whether LJ somehow exploited the mechanics of his shorthand alphabet in order to make a predictable distinction between an /e/ and an /i/ (we've already established the predictability of a /y/ reading at (3a) above), we must consider some possible explanations for the great variety of {C}'s romanizations. Since KW shorthand vowels apparently depend on letters *adjacent* to them for their written orientation, perhaps status of a {C} as a free-standing isolate, vs. its adjacency to another letter, will reveal some clues about distinctive readings as <e> or <i>. Additionally, though flow value has been ruled out as a salient characteristic of {C}, ±clockwise direction has not entirely been. Let's investigate both of these suggestions now.

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[15] LJ nearly always gives the same Romanization to each consonant letter, variations being introduced only
under the influence of standard spellings in a given word's (assumed!) lexifier language, e.g. 15 <Le Vijil> /l{C}.p{C}ʃ{C}l/;
15 <le poivre> /l.pwa.war/; 16 <chicken> /c{C}k{C}n/].

Table 4: {C} as isolate

Page	Transcription	Shape of {C}
6	i̲ht	c
11	i̲tloo'ilh	c
13	i̲'na	c
13, 30	i̲'tlokom	c
24	i̲h'soot	c
30	i̲tlan	c
7, 11	eh'poo'i̲	c
9	e̲!	^
30	e̲h'kanam	^
7, 11	e̲h'poo'i	u
8	e̲'he̲	u
11	e̲nata'i	u
30	e̲lahan	u

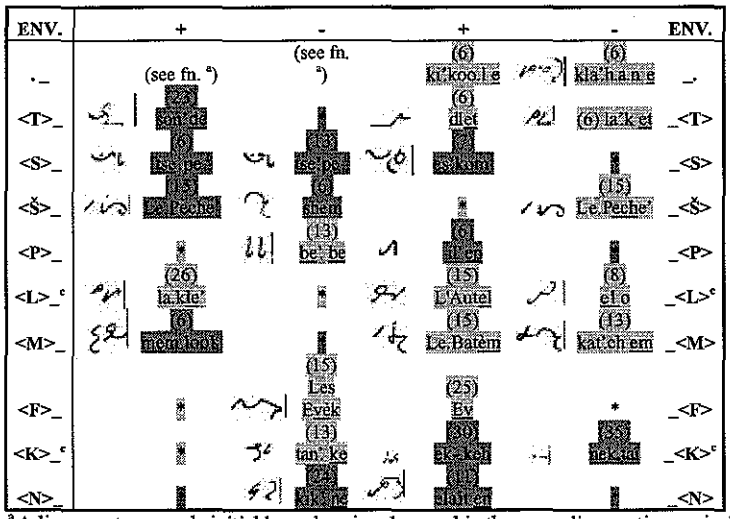
In the above table, a clear two-way distinction emerges: The {c} shape is always romanized as <i>, and the other attested shapes of isolate {C}, that is {u} and {n }, are always given the romanization <e>.[16]

Questions remain, of course. For one, how are we to characterize the differences between these two groups of {C}'s shapes? As these are isolate forms, each standing as a graph by itself, it would seem that a distinction ±clockwise cannot be invoked. Rather, it appears that the specific letter *shapes* {c} vs. {u} (with the latter's mirror-image { n }) are *arbitrarily* invoked. For another, this distinction based on just one parameter, that of shape, cannot have any bearing on how we are to read {C} in the majority of cases – when it's one of multiple member letters of a graph – because as can be surmised from the tables above, {C} can be found orientated in various directions, depending on the (consonant) letters in its immediate environment. So, what will provide a key to distinguishing shorthand <e> from <i> in graphs?

Let's look separately at such cases. (A reminder: + = clockwise, - = counterclockwise, * = unattested in LJ 1924, and . = graph boundary.)

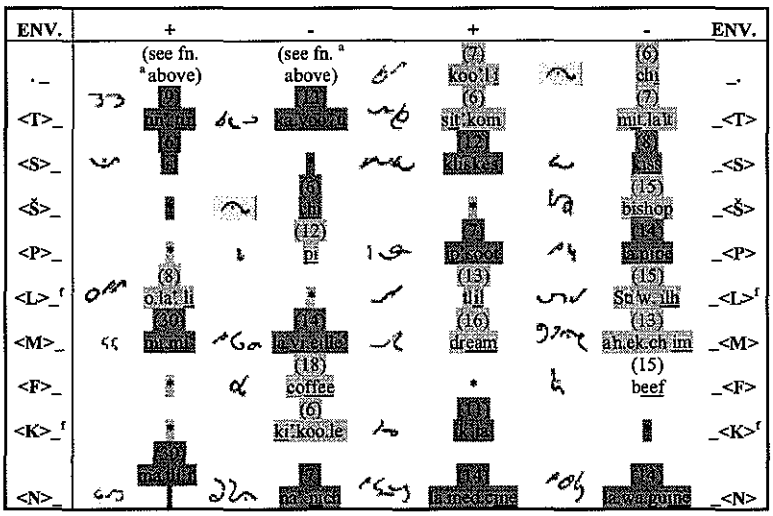
[16] Here I introduce the convention of using lower-case forms between {curly brackets}, in order to show specific shapes in which the capital shorthand letter {C} is realized. Thus, {C} stands in relation to {c}, {u}, { n } as e.g. <K> does to <k>, <g>, <k'>. Both in the former domain of letter forms and in the latter domain of my more-or-less phonemic transcriptions, the capital shape is a variable, covering a set of meaningfully related forms.

Table 5: <e> next to a consonant or a graph boundary



[a] Adjacency to a graph-initial boundary is subsumed in the preceding section on isolate graphs. It's thus already been dealt with – and deemed an environment of arbitrary or indeterminate clockwiseness.
[b] Minimal pair, i.e. <tse> appears with both clockwiseness values on {C}.
[c] Cf. footnote [f] to the following table.

Table 6: <i> next to a consonant or a graph boundary



[d] English spelling conventions, interestingly, as used in many 19th century published Jargon guidebooks, must have influenced LJ to render this term "used in other districts [than Kamloops]" as <mimi> in his "Phonetic Alphabet". Cf. Gibbs 1863: "Mi´-mie, *adv.* Chinook, MÁIAMI."

[e] LJ actually spells this in shorthand <la.mi.ay>, the form expected based on a a comparison with the standard references (Gibbs "Lam´-mi-eh, or Lam-mi-i"; Zenk & Johnson 2001 /lamiyáy/, /lamiyéy/).

[f] <tli^{+}l>, <L'Aute^{+}l>, and <ne^{-}k.taï> are very rare exceptions to the following rule: <Li> and <iK> on the one hand, and <iL> and <Ki> on the other, regardless of their inherent flow values, tend in effect to be minimal pairs distinguished solely by ±clockwise values of {C}. When occurring (as each of these four sequences frequently does) as members of graphs where the consonant member of the sequence stands in immediate adjacency to a graph boundary, these consequently lack a discernible ±flow value. (Whether the consonant was written in a downward or upward direction tends in LJ's actual handwriting to be indistinguishable in this position.) For this reason, these four need to be distinguished by an additional mechanism, clockwiseness of the *vowel* letter.

From the preceding two tables, showing the 19 possible relevant sequences of {C} with either graph boundary or a consonant letter, we can see that in LJ 1924:

- <e> occurs in both clockwise and counterclockwise variants in 7 of the 19 (~37%) of these positions, while
  <i> occurs in both clockwise and counterclockwise variants in 10 of the 19 (~53%) of these positions.
  Thus, ±clockwise direction cannot be, any more than the already ruled-out ±flow values, the distinctive, always decisive determinant of an /e/ versus an /i/ reading of {C}.

- Both <e> and <i> occur in identical environments, with identical clockwiseness values (or identically unattested), in 9/19 (~47%) of the positions. These parallelisms are shaded light grey in the above pair of tables, for easy comparison. Thus, at best, only in about half the environments within graphs might we be able to discern a single definite reading of {C}. A further observation, moreover, is that

- In an additional 9/19 of the positions (~47%), either <e> occurs in both possible clockwiseness variants while <i> occurs also in one of these directions, or vice versa. These positions are shaded dark grey in the two preceding tables. In other words, now there is left only one environment within multi-letter graphs where a constantly reliable reading of {C} as one or the other of /e/ or /i/ might be possible. That environment, perhaps tellingly, is _<F>, and <F> is a very uncommon family within our corpus, occurring only in recent loans from English and French. I've found only six words containing <F> [17], of approximately 240 words overall, a segment ~2% of the total. So it's

[17] Viz. (15) La.co.fir.ma.si.o, (15) beef, (15) Les Evèk, (16) devil, (18) coffee, (25) Ev,

possibly accidental that this sole gap appears in the overall pattern at all. In any event, it's relatively uncontroversial to claim that an /e/ versus /i/ distinction which is viable only in this highly circumscribed environment is trivial to a fluent reading knowledge of KW shorthand.

One more observation is apt, based on a scan of the entire LJ 1924 corpus: There are, of all corpus items containing a non-/y/ instance of {C}, essentially equal numbers of words containing <e> (circa 124), as of words containing <i> (circa 114) -- That is, about 52% versus about 48% of the relevant words. Why then did LJ assign these two different romanizations?

4 LJ's Ear: Comparing KW Jargon {C} with Other Authorities

As established just above, this vowel distinction is arbitrary as seen in terms of the KW shorthand writing system, and therefore must be regarded as irrelevant to the task of accurately extrapolating from shorthand Jargon to a reading pronunciation. But perhaps LJ's <e> versus <i> do reflect pronunciation differences he perceived "phonetically" in Jargon, presumably the variety of the Kamloops region. Outside LJ's work, we lack authoritative records of that area's Jargon sound patters, but we can put a sample from the words in LJ 1924 side by side with its counterparts in Gibbs 1863 and in Zenk & Johnson 2001, for a cross-Jargon evaluation of LJ's "ear", as in the following table. Note that all three sources notate stress most of the time, so I'll make use of that factor as well as of vowel quality in the following comparisons.

Table 7: Cross-Jargon comparisons with LJ's {C}

LJ 1924	Gibbs 1863	Zenk & Johnson 2001	Stress & Quality[a]
(6) i̲ht	<ikt>~<icht>	/ixt/	í – í – í
(6) il'ep	<e'-lip>~<el'-ip> ("Chihalis, ILIP")	/ilfp/	í – i – í
(7) ip'soot	<ip'-soot>	/ipsut/	í – í – í
(11) itlooilh	<itl'-wil-lie>	/il/wɬl(i)/	i – i – i
(7) es'kom	<is'-kum>	/iskam/	é – í – í
(8) e'lo	<ha'-lo>	/hílu/	é – é – í
(11) gh'pooi	<ik-poo'-ie>	/ʔpuy/	é – i – í
(11) e'lehe	<il'-la-hie>	/ílihi/~ /íli/i/	ée – íi – íi
(6) ki'koole	<keé-kwil-lie>	/kíkwɬli/	íe – íi – íi
(6) sik	<sick>	/sík/	í – í – í
(6) tlil	<klale>	/li/il/	í – é – í
(6) shem	<shame>~<shem>	/shím/	é – é – í
(6) dlet	<de-láte>~<de-létt>	/drét/	é – é – í
(6) le'le	*unattested (but cf. Shaw 1909 <laly>)	/líli/	ée – (éi) – íi
(6) pel	<pil>	/píl/	é – í – í
(6) chi	<chee>	/chxí/	í – í – í
(8) olal i	<o'-lil-lie>~<o'-lal-lie>	/úlɬli/	i – i – i
(12) pasis's i	<pa'-see-sie>	/pásisi/	íi – íi – íi
(7) tek e	<tik-égh>~<tu-égh>	/tíki/	e – é – i
(8) talk e	<táhl-kie>~<táhnl-kie>	/tá/anlki/	e – i – i
(26) lakle'	<le-kléh>	/lak^{h}li/	é – é – í
(13) poolal e	<po'-lal-lie>	/púlali/	e – i – i

[a] Inferred for respective {C}'s, and their non-schwa equivalents in the other two sources. ({C}, like virtually all vowel letters, also often stands for schwa, for which there is no distinct Duployan letter.) Acute accent (´) marks vowels inferred to be stressed; unstressed vowels are left unaccented. Items from LJ 1924 were chosen with an eye to providing about equal numbers of unstressed and stressed {C}'s in initial, medial, and final positions.

There is a definite pattern here. Among cases of LJ's {C} being in a 3-way match with both other authorities' /i~e/ in both quality and stress, <e> is never the romanization involved, while we find 6 stressed and 3 unstressed <i>'s. Conversely, in cases of {C} in a 2-way match with only

one of the other authorities' vowel, <i> is virtually excluded; it occurs in just one match, in stressed position, while <e> appears in 5 matches, also stressed. (There are no unstressed 2-way matches involving LJ's forms.) As for sets where LJ's form matches neither of the other two, <e> appears to the exclusion of <i> -- there are 4 stressed and 5 unstressed sets. In other words, when LJ's romanization differs from the corresponding vowel in Gibbs or in Zenk & Johnson, he is most likely to be hearing a sound like /e/, and when he hears a sound like /i/, it's very likely to be a close match with the comparanda. Unstressed {C} is much less likely than stressed {C} to have a romanization in accordance with the external authorities: Particularly, KW unstressed <e> is never matched. The reader of LeJeune's published materials can thus roughly approximate his pronunciation to that author's, by use of statistical methods: By pronouncing a significant percentage of {C}'s as /e/. These trends are not, however, more than feebly predictive. A larger body of data might allow for the refinement of these statistics.

(We may speculate that the relative perceptual prominence of stressed vowels makes them more likely to be heard, and uttered, identically by various people in different places and eras – unstressed vowels being by corollary relatively likely to be heard and uttered with more variation. In fact, Zenk & Johnson provide broad phonetic transcriptions of each word in their dictionary, which show relatively frequent variation in unstressed vowels on the order of e.g. [(?)ilɪhɪ] ~ [?ilɪ/i] and [lɪ́ili] ~ [lɪ́ilɪ].

We can go on to compare some KW Jargon words with their cognates' well-documented pronunciations in (as respectively relevant) Secwepemctsín and English and French, as in the tables below. This external comparison allows us additional perspective on the assignment of one or the other non-low front vowel reading to {C}, according to circumstance. The transcribed shorthand forms labeled "ex libris" here are personal names written on the title pages of a number of copies of KW that I've found in the Clinton (BC) Museum and at the archives of the Kamloops Historical Society. Circumstantial evidence suggests that these represent First Nations people inscribing their own names.

Table 8: Comparing KW Jargon words with Secwepemctsín cognates' pronunciations

KW Jargon	Secwepemctsín Cognate	Meaning	Secwepemctsín Pronunciation	Quality, Stress
/p{C}ktür(s)/[13]	/pikce/	"picture"	[pikce]	í – í
(18) <saple'l>	/cfp-cfpli/	"wheat"	[cup- cupli]	é – í
(16) <chicken>	/cikn/	"chicken"	[cikn]	í – í
/s{C}st{C}r(s)/[13]	/siste/	"sister(s) (of mission)"	[šiste]	íe – íe
/šugrk {C}n/[18]	/sfk^{w}fk^{w}in(=)mx/	"people of Sugar Cane Reserve"	[šǒk^{w}ǒk^{w}inmx]	é – í
(14) <la pelle>	/lpelt/	"shovel"	[lfpR]	é – é
(15) <le sel> (/lsel/)	/lsel/	"salt"	[lfsR]	é – é
(18) <lagamin'n>	/lkfmin/	"flour soup"	[lfkfmin]	í – í
(33) <le'yam> "Devils" (/l{C}{C}am/)	/lyam/	"devil"	[leyám]	é - e
(18) <coffee>	/kapy/	"coffee"	[kápi(:)]	i – i
/kn{C}ml{C}k/[13]	/kfnmlik/	"Canim Lake (lake and reserve)"	[kfnfmlík]	é – í

Notes: Secwepemctsín forms, and their meanings and inferred pronunciations, are all *pace* Kuipers 1974. Inferred pronunciations are in more or less broad phonetics. By "cognate" above, I mean words either deriving from or original to KW Jargon forms. Instances of {C} having either [e] or [i] sounds as its counterpart in Secwepemctsín (i.e. relevant to this table) are underlined for easy comparison. Quality and stress of KW forms are inferred from English and French etymological sources, when not marked by LJ. In Secw. sequences [Kn] and [nm] above, the second consonant is syllabic. By [ǒ] above, Kuipers intends the breve. There is another word, (24) <kiknes> (kokanees), which fits here and is cognate with Secwepemctsín ~/kfknex^{w}/ [kfkn?x^{w}], but I haven't determined its stress pattern[19].

[18] An undated "page 164" of KW with the title "Our Monthly Budget" and a photo of "Rev. Father Martinet" contains in column 3, line 43, the phrase /ilip aü piktür/ ("more pictures"). A special issue of KW circa 1900 with a story "Besieged in Pekin by the Boxers" contains on page 80, column 1, line 8 the phrase /sistirs dlit skukum mamuk/, "The nuns did a marvelous thing". The title of a recurring KW feature of regional interest to those in the Williams Lake area was "Šugr Kin Tintin" or "The Sugarcane Bell". The name /knim lik/ occurs fairly frequently in local news stories in KW.

[19] A similar and surely related word in British Columbia English is 'kickininee", presumably with initial stress (and fascinatingly perhaps influenced by the word <pickaninny> = "small" in (Chinese?) Pidgin English – cf.

The data in this table suggest a conclusion similar to that arrived at from the cross-Jargon comparisons, even though the amount of relevant data is highly limited due to the small proportion of Jargon loans to native forms in Secwepemctsín. LJ's <i> is again more likely than <e> to be matched in stress by its Secwepemctsín counterpart, and in fact never disagrees with the latter. LeJeune's <e> is the only version of {C} in this table which ever mismatches in quality with its Salish cognate. So, with this selection of words too, the reader of Jargon shorthand can approximate LJ's nonlow vowel pronunciations through use of statistics, but only very roughly. If a greater number of relevant words in the Secwepemctsín lexicon existed, it would be most interesting to determine whether the findings arrived at from Table 8 could be extended to the reading of these words, e.g. whether <e> could be favored as a reading of unstressed {C}. Because our rules of interpretation of {C} predict only quite weakly which reading should be assigned to this letter, it would appear as though a reader must have learned a priori Father LeJeune's personal preferences for romanization, in order to transcribe his shorthand consistently with his perceptions.

Table 9: Comparing quasi-KW Jargon names with cognates' pronunciations

"Ex Libis"	Inferred Source	Inferred Source Language	Inferred Source Pronunciation
/{C}d{C}/	Eddie	< English	[Rdi]
	... or... Edie	< English	[idi]
/kas{C}m{C}r/	Casimir	< French?	[kasimir]
/nars({C})s/	Narcisse	< French	[narsis]
/bas{C}l al{C}ks{C}s/	Basil(e) Alexis	< French	[basil alɛksis]
/am{C}l{C}/	Amélie	< French	[amɛli]
/ǰul{C} {C}n/	Julienne	< (English)	[j~š~žulyR ɲ]
/sof{C}/	Sophie	< French~English	[sofi]
/f{C}l{C}ks/	Fe~élix	< French~English	[fɛ~iliks]

Note: Relevant {C}'s are again underlined for easy comparison.

Except for "Ed(d)ie" and "Julienne", no particular stress is inferred for the "ex libris" forms, mainly because it's unclear whether they're to be pronounced according to their etymologies (several immediately <

www.tricitiesonline.com/history2.asp: "Kickininee, a little red fish identical to Sockeye except in size").

French[20]) or according to their social environment (generally they date to the 1890's, by which time English was predominant around Kamloops [21]). This is the really interesting feature of this body of data: The same uncertainty accounts for the two possible readings of the first {C} in [fe~iliks]. "Ed(d)ie" is an exception because it seems identifiably of English origin only, and "Julienne" shows signs of powerful English influence, in having /u/ rather than French /ü/ in the first syllable, and {C} (probably <e>) instead of /a/ in the final syllable. (We also know for certain that this is a feminine name rather than say "Julian", because the same person wrote in English, "Miss Julienne George" close by.)

5 Conclusion

This group of names is further illustration that the reader must, independently of the shorthand alphabet, be acquainted with both the context (semantic and social) and the writer's intention in pronouncing the letter {C} when it represents a vowel. In the case of LJ 1924, the romanizations provide the requisite clues. Otherwise, as shown, it's sometimes impossible to avoid confusion between e.g. masculine and feminine names having distinct pronunciations, or a French and an English pronunciation of one name, each being (all else equal) as likely as the other and as well represented by the identical sequence of shorthand letters. In short, what there is to {C} is a fascinating exception to an otherwise approximately phonetic alphabet: a cover letter for both of the nonlow front vowels and glide in Chinook Jargon. This is a surprising economy but one which by and large took little away from the communicative efficiency of this shorthand. For, aside from some personal names, context easily disambiguates words from one another even within the bounds of such a relatively small lexicon.

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[20] The native language of LJ and of many other Oblates in British Columbia, who likely baptized the region's Catholic Indians.

[21] Cf. the numerous advertisements and other KW text in English, including even titles of chapters and articles within pages otherwise written entirely in Jargon.

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