Comparison of the Carrier Linguistic Committee and Carrier Syllabic Writing Systems

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Introduction....1
The History of Written Carrier....1
The Syllabics....3
How To Compare Writing Systems....3
Which is Most Useful at Present?....4
Technical Comparison....5
Ease of Use....10
Ease of Learning....10
Impact on Language Learning....11
Other Considerations....13
Summary....13

Introduction

Advocates of one or the other of the two main writing systems that have been used for Carrier[1], the Carrier Linguistic Committee writing system and the Carrier Syllabics, often hold strong opinions and claim that one system is far superior to the other. I here lay out the relevant considerations and the facts as fully and objectively as possible.

The History of Written Carrier

As is generally the case in the Americas north of Mexico, there is no record of writing pre-contact.[2] The first known writing of the language occurred on June 22, 1793 near Alexandria when the fur trader Alexander MacKenzie wrote down 25 words learned from one of his travelling companions.[3] This was followed by other lists of words written by fur traders such as Daniel Harmon and A. C. Anderson and later by Roman Catholic missionaries using ad hoc spellings of a language whose sounds they had not mastered using the spelling conventions of English and French. There is a report[4] of an attempt by Roman Catholic missionaries to write Carrier using a slightly modified version of the Cree syllabics but the attempt was abortive and no trace of this system remains.

1 I deal here only with Carrier in the narrow sense, excluding Babine and Witsuwit'en, whose sound systems are different and which do not use the CLC writing system.

2 I refer here to writing in the sense of a system that allows any utterance in a language to be represented and not pictorial systems with some standardized symbolism as found in rock art or restricted systems like those used in trail signs.

3 These words are discussed in my paper "The First Record of the Carrier Language" in *Working Papers in Athabaskan Linguistics*, vol. 4, Alaska Native Language Center, 2004. http://www.billposer.org/Papers/TheFirstRecordOfTheCarrierLanguage.pdf

4 Adrien-Gabriel Morice (1894) *Carrier Reading Book*. Stuart's Lake Mission. p. 5.

The first writing system to come into use in the community was the Carrier syllabics, known in Carrier as **dulkw'ahke**[5], inspired by the Cree syllabics, but entirely different in detail, created in 1885 by Father Adrien-Gabriel Morice. The syllabics spread rapidly and were soon in widespread use. Father Morice published 24 issues of an eight page newspaper every two months from October of 1891 to June of 1894, followed by a 366 page prayerbook. Carrier people used the syllabics to write letters, diaries, accounts, graffiti, inscriptions on drums, gravestones and messages on trees, and extended the system to represent non-native sounds such as /r/[6] and /p/ that Father Morice had not provided for. With most children spending the winter in residential school after 1922 and the abandonment of the use of syllabics by the Church in 1938, children ceased to learn them. Only a few people learned Syllabics after 1938.

Father Morice used a roman-based writing system[7] in his scholarly publications. It is this writing system that he used in the 1938 Third Edition of the Prayerbook. Many children learned to read the Prayerbook in this writing system at Lejac Residential School, and many older people also learned to read it. There is, however, no record of Carrier people themselves writing in this system, in part because it is what linguists call "sub-phonemic", meaning that it records predictable details of pronunciation, which are difficult for fluent speakers to bring to consciousness and write, and unnecessary for fluent speakers when reading. Although many people could once read this system, most people who could read it have passed on and only a few know it today.

Around 1970 a third writing system was introduced by the Carrier Linguistic Committee in Fort St. James in conjunction with the efforts of the Carrier Bible Fellowship to translate the New Testament. The CLC (later renamed the Carrier Linguistic Society) produced literacy materials in this writing system in multiple dialects and taught literacy classes. It also published a variety of literature in it. In 1995 the New Testament was published using it. Almost all language classes and teaching and reference materials have used this writing system either exclusively or as their main writing system.

By way of illustration, here is the word "auger" in all three writing systems[8]:

Syllabics	𑩐·Ↄᑊᐅˢ
Morice Roman	pê·telres
CLC	be'dulghus

Morice's roman system has no advocates, but in spite of the dominance of the CLC[9] system, a

5 Father Morice himself called the Syllabics **duchunk'ut** but there is no evidence of Carrier people adopting this term. All fluent speakers use **dulkw'ahke**.

6 For clarity we use some notation that may be unfamiliar. Sounds are written between slashes, letters between angle brackets. For example, we might say that the sound /f/ is spelled <ph> in the name <Phil>.

7 His system consists of Roman letters, with only one additional letter, but with a variety of diacritics: circumflex, hachek, diaresis, grave accent, tilde, and subscript dot. There are actually two slightly different versions, an earlier version used in some scholarly publications and the later version used in the Prayerbook and in his book *The Carrier Language.*

8 For consistency, all of the Carrier examples in this paper are in the Stuart Lake dialect.

9 Some people refer to the CLC system as the "Dick Walker system", after the Bible translator who played a major role in creating it. It is occasionally referred to as the "International Phonetic Alphabet", which it is not. Our example of "auger" is **beʔdʌlɣʌs** in IPA, quite diferent from the CLC spelling. The IPA is a system used by linguists. It is intended to provide for all of the sounds of the world's languages, and therefore contains many symbols not found in the roman alphabet. Linguists working on Carrier have sometimes written notes in IPA and have published technical articles using it, but only a

few people strongly advocate a return to the use of the Syllabics. There has been a resurgence of interest in syllabics, but almost entirely for symbolic purposes, in tattoos and other artwork and on the occasional sign. We here compare the Syllabics and the CLC system as these are the only two real contenders today.

The Syllabics

Here is a brief introduction to the syllabics for people not familiar with them. Most of the symbols represent a consonant plus the following vowel, which is why the system is called "syllabic". The shape tells you what the consonant is. For example, ᑕ is /ta/, ᘓ is /ka/, and ᓴ is /sa/. The vowel is determined by the orientation of the symbol and whether it also contains a dot or a vertical bar. Here are: ᑕ /ta/, ᑖ /to/, ᑐ /tu/, ᑌ /too/, ᑎ /ti/, and ᑏ /te/. The vowels not preceded by a consonant are: ᐊ /a/, ᐃ /o/,ᐅ /u/, ᐁ /u/, ᐳ /i/, and ᐳ /e/, triangles with the same orientation and diacritics as the symbols for CV sequences.

Since Carrier has syllables that end in consonants, these symbols are not sufficient. There are also symbols used to write syllable-final consonants, such as ᐟᒡᔆᒃ, which represent final /t/, /n/, /s/, and /lh/ For example, here are: ᑐᐟ **but**, ᑐᒡ **bun**, ᑐᔆ **bus**, and ᑐᒃ **bulh**.[10] Some of the letters used to write syllable-final consonants are also used to write syllable initial-consonants followed by another consonant. Thus **sba** "for me" is ᔆᑕ <s-ba>, **lhba** "for each other" is ᒃᑕ <lh-ba>, and **mba** "for you" is ᒪᑕ <m-ba>. **njan** "here", which has /n/ at both ends, is ᓐᐯᒡ <n-ja-n>.

An exception to this system is the glottal stop, which is written with the isolated symbol used in syllable-final position even when it precedes a vowel. Thus **'a** "quickly" is ·ᐊ <'-a> , **'ul** "pine needle" is ·ᐅᑊ <'-u-l>, and **de'** "give me!" is ᑎ· <de-'>.

The Syllabics as developed by Father Morice and presented in the Prayerbook provided only for the consonants of pre-contact Carrier; it did not provide a means of writing sounds borrowed from English and French. Carrier people developed ways of writing /r/, /p/, and /v/.[11] The latter two occur only in English words such as names used in Carrier text, but /r/ has become integrated into the language.[12]

How To Compare Writing Systems

Writing systems can be compared according to different criteria:

a) How accurately does the writing system reflect the language?

handful of Carrier people have ever learned to write Carrier in it and it has never been used for communication within the community. The error probably comes from the description of the CLC system as being "phonetic", meaning that there is a one-to-one correspondence between the sounds of the language and letters. Writing that is "phonetic" in this sense does not necessarily use the IPA. Some people have apparently mistakenly equated "phonetic" with "International Phonetic Alphabet".

10 Fonts vary in whether the letters for the isolated consonants are raised, as here, or at mid-level, like this ᑐᒃ **bulh.** Father Morice's font put them at mid-level, but Carrier people themselves seem mostly to have written them raised, which has the virtue of setting them off and making the divisions between syllables clearer.

11 See my *Introduction to the Carrier Syllabics* for discussion of the additions to the Syllabics that I discovered by reading things written by Carrier people. https://www.billposer.org/SyllabicsIntro.pdf

12 There are currently 79 words containing /r/ in the Stuart Lake dictionary.

b) What audience does it reach?

c) What literature does it give the reader access to ?

d) How easy is it to use?

e) How easy is it to learn?

f) Does it make learning the language easier or harder?

These do not necessarily line up. A writing system that is easy to learn may not be in widespread use.[13] A writing system that accurately reflects the language may be hard to learn. A writing system that is easy to read may be difficult to write in.[14]

We also need to ask: for whom? A writing system that is good for fluent native speakers may not be as good for language learners.[15]

Which is Most Useful at Present?

If we ask which writing system is most useful at present, the answer is clearly the CLC system. Almost everything written in Carrier since 1970 is in the CLC system. There is now a CLC version of the Prayerbook, until recently available only in Syllabics and Morice's roman system. CLC transliterations and translations of the gravestones in syllabics are available.[16] Learning to read the Syllabics is only useful if you want to read certain older materials.

If you want to write in Carrier, the CLC system is again the obvious choice. Virtually everyone literate in Carrier can read it. On the other hand, hardly anyone can read Syllabics. No fluent speaker is known to write routinely in syllabics, and only a very few can read them. If what you are interested in is which writing system to learn to read and write the answer is clearly the CLC system because that is the system that is in general use.

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13 A good example is the writing system known colloquially as *bopomofo* after the first four letters (ㄅㄆㄇㄈ), but officially called *Zhuyin fuhao* (注音符號), which is used in Taiwan to teach children the pronunciation of Chinese characters. It is a perfectly satisfactory sound-based system for writing Chinese and is mastered by virtually all children by the end of Grade 1. If Chinese people chose to abandon Chinese characters, they could use bopomofo instead. It is, however, not very useful on its own because even in Taiwan it is not the usual kind of writing, and it is little known outside of Taiwan. The great majority of Chinese speakers, in Mainland China, do not learn it. If you learn only bopomofo, you will be able to write down anything you like in Chinese, and other people who know it will be able to communicate with you in written Chinese, but you will not be able to read most of the material written in Chinese, and anything that you write will be incomprehensible to the great majority of Chinese speakers who did not grow up in Taiwan.

14 Father Morice's roman system is an example of a writing system that is easy to read but diffcult for fluent native speakers to write. Fluent speakers can easily learn to ignore distinctions that are predictable, e.g. the distinction between <a> and <ã>, but are hard put to decide which letter to write since they are not consciously aware of the difference.

15 Korean provides a nice example. In Korean, when a syllable ends in /k/ and comes directly before a nasal sound like /m/, the /k/ changes into /ng/. For example, "Korea" is **hangook** (using Carrier spelling), but when **mal** is added to make "Korean language", the result is **hangoongmal**, which is spelled 한국말 <han-gook-mal>. Fluent speakers of Korean implicitly know that /k/ becomes /ng/ before /m/ and so automatically pronounce this correctly. For them, the "abstract" spelling is useful because it reminds them that the word consists of 한국 "Korea" plus 말 "language". For a foreigner who does not know Korean well and is trying to sound this out, this is not as good a spelling because he or she will mispronounce it as /hangookmal/ unless he or she knows and remembers the unfamiliar rule that /k/ becomes /ng/ before /m/.

16 See my *The Gravestones in Carrier Syllabics* for a compilation, with photographs, transcriptions, transliteration into the CLC system, and translations. https://www.billposer.org/SyllabicGravestones.pdf

Technical Comparison

One important property of a writing system is how accurately it represents the language, that is, how well does it distinguish distinct utterances. If the writing system does not provide distinct ways to write all of the sounds, the reader cannot be sure, at least without context, which word is intended, and having to resort to context can slow the reader down and lead to mistakes. This is especially true of people learning a language as well as of people fluent in the language but who are not experienced readers.

English spelling, for example, does not distinguish the sound at the beginning of “thin” (IPA /θ/) from the sound at the beginning of “this” (IPA /ð/). This does not affect fluent readers very much because they know that there is no English word prounced like “thin” but beginning with the ð sound and that there is no English word pronounced like “this” but beginning with the θ sound, but this can throw off people learning English or who are not experienced readers.

Even fluent native speakers of English may be left in the dark by something like “they read it”, where without further context it is impossible to know whether it means that they already read it, where <read> is pronounced like <red>, or whether it means that they customarily read it, where <read> is pronounced like <reed>.

Ideally, a writing system provides a symbol for every distinct sound in the language, so that the reader always knows which sound is meant, and provides only one symbol for every sound, so that the writer always knows what to write.

The CLC system and the Syllabics provide for the same set of six vowels so we will only look further at the consonants. Here is a list of the consonants, in CLC alphabetical order, also showing how they are written in syllabics, both before vowels and when “isolated”, that is, not before a vowel, meaning either at the end of a syllable or, in a few cases, preceding another consonant itself followed by a vowel. The “before vowel” column shows how they are written in combination with the vowel /a/, e.g. ᗡ is equivalent to CLC <ba>. Where a consonant cannot appear in a particular position, the cell is blacked out. For example, /ng/ never occurs at the beginning of a syllable and /k’/ never appears at the end of a syllable.

Sound (CLC)	Example	Meaning	Syllabics Before Vowel	Syllabics Isolated
'	**'**a	quickly	·ᐊ	·
b	**b**at	mittens	ᗡ	ᒪ
ch	**ch**unih	marten	ᘣ	
d	**d**aget	spear	ᑕ	
dl	**dl**idada	fever	ᑦ	
dz	**dz**oot	coat	ᑔ	
<u>dz</u>	**<u>dz</u>**ulh	mountain	[none]	

Sound (CLC)	Example	Meaning	Syllabics Before Vowel	Syllabics Isolated
f	luga**fi**	coffee	[none]	[none]
g	**g**oh	rabbit	ᗴ	
gh	'u**gh**a	hair	ᐸ	ᑊ
ghw[17]	n**ghw**oo	your (1) teeth	ᑊᗧ	
gw	**gw**ada'	quarter (25 cents)	ʼᗧ	
h	**h**oonliz	skunk	ᐺ	ʰ
j	**j**eyo	bull moose	ᘐ	
k	oo**k**e	his feet	ᗷ	ʼ
k'	**k'**a	rifle cartridge	ᗹ	
kh	**kh**e	grease	ᐹ	ʺ
kw	**kw**un	fire	ˋᗧ	[none]
kw'	**kw'**usul	beads	ˇᗧ	
l	**l**ata**l**ba	yarrow plant	ᘿ	ˡ
lh	**lh**i	dog	ᘾ	ˬ
m	**m**usdoos	cow	ᕮ	ᶜ
n	**n**oostel	wolverine	ᑕ	ᶯ
ng	'ut<u>s</u>u**ng**	meat		ᵘ
ny	**ny**un	you (one person)	ᶯᘐ	
r[18]	luga**r**at	carrot	rᐊ/⁺ᐊ	⁺
s	**s**a	sun	ᗦ	ˢ

17 In Father Morice's time there were syllables that began with /ghw/. Most if not all current speakers pronounce such words with just /w/, but some older speakers whom I worked with still sometimes said /ghw/.

18 The /r/ sound is not native to the language and was not provided for by Father Morice. However, it entered the language in loans from French and English, and Carrier people quickly extended the Syllabics to provide for it. In syllable-final position it seems always to have been written <⁺>; before vowels it is written both this way and with <r>.

Sound (CLC)	Example	Meaning	Syllabics Before Vowel	Syllabics Isolated
s	**s**e	belt	[none]	ᐢ
sh	**sh**un	song	ᐣ	ᐠ
t	**t**alo	salmon	ᑕ	ᑊ
t'	**t'**es	charcoal	ᑖ	[redacted]
tl	**tl**entl'us	mud	ᒪ	[redacted]
tl'	**tl'**o	grass	ᒫ	[redacted]
ts	**ts**a	beaver	ᐤ	ᑐᔅ [19]
ts'	**ts'**i	canoe	ᐦ	[redacted]
ts	**ts**e	rock	[none]	[redacted]
ts'	**ts'**al	diaper moss	[none]	[redacted]
w	**w**adla**w**	sandpiper	ᐧ	[none]
wh	**wh**udzih	cariboo	ᐨ	[none]
y	**y**a	sky	ᐩ	[none]
z	**z**a	only	ᒐ	ᙆ
z	oo**z**e	his mouth	[none]	ᙆ

One defect is common to the two systems: neither system provides a distinct letter for the consonant /ny/ (as in English **nyaa-nyaa**). Most speakers distinguish, for example, between **nyun** "you (one person)", which begins with the single consonant /ny/ and consists of a single syllable, and **nyun** "your land", which consists of two syllables, one consisting of syllabic /n/, the second consisting of **yun**. This sound occurs in several second person singular morphemes, e.g. the possessive prefix **nye**- as in **nye'oosa'** "your pail", and the object marker **ny**- as in **nyoozusts'ai** "I am listening to you". Since the syllabics has no symbol for the consonant /ny/, both words are written as if the /n/ and the /y/ were separate sounds: ᐠᐩᐣ n-yu-n. The same is true of the CLC system: <ny> represents both the single consonant /ny/ and the sequence of syllabic /n/ followed by /y/.

The Syllabics lack any way to write the sound /f/,[20] which is now found in at least one word in all

19 /ts/ is very rare at the end of syllables, due to a sound change by which all instances of syllable-final /ts/ became /z/. This can be seen when comparing Carrier in the narrow sense to languages such as Babine-Witsuwit'en. For example, Babine **'ats** "outside", **tsits** "firewood" and **hots** "over there" correspond to Stuart Lake **'az**, **tsuz**, and **whuz**. There are, however, now a few words with syllable-final /ts/ due to borrowing from other languages, such as **'oots** "oats", and a few native words that imitate sounds that did not undergo this sound change, such as y**ulkw'uts** "(s)he gulped it". I am not aware of any examples of syllable-final /ts/ in material written in Syllabics either by Father Morice or by native speakers but since the system provides letters for both isolated /t/ and isolated /s/, the combination could be used.

20 There is no symbol for /f/ in the chart in the Prayerbook, and /f/ is not written in the text of the Prayerbook, Father Morice's newspaper, or his Primer. Curiously, Father Morice did use a symbol for /f/ in the Latin hymns included in the syllabic editions of the Prayerbook, namely **ɥ**, which, oddly, he used for both Latin /f/, as in *filio*, and Latin /v/, as in *ave*. There is no record of Carrier people ever using this symbol. This is described in my paper "Father Morice's Rendering of

dialects, namely **lugafi** “coffee”.[21] The CLC writing system uses the roman letter <f> for this sound.

The CLC system distinguishes the “fronted” consonants **s**, **z**, **ts**, **dz**, and **ts’** from their unfronted counterparts in all positions. The syllabics make a distinction between “fronted" and plain /s/ and /z/ in syllable-final position, e.g. **yus** "wolf" ᘽˢ and **yus** "snow" ᘽˢ but no such distinction is provided in pre-vocalic position. There is, for example, no distinction between /sa/ and /sa/. No distinction is provided between fronted and plain /ts/, /dz/, and /ts'/. This is arguably not very important since few speakers today even have these distinctions, but it is desirable to be able to represent it if people wish to use the syllabics to write in a historically accurate manner, and in reading it reduces ambiguity in a way useful to learners.

Morice provides no way to write syllable-final /wh/. Morice did not recognize syllable-final /wh/ as a sound. He wrote it as <ooh>, e.g. **lhawh** "many (abstract)" ᑫᐁʰ <lha-oo-h>. This makes it impossible to distinguish between syllables ending in /wh/ and words whose final syllable is /ooh/. Experienced readers fluent in the language can handle this ambiguity, but others may find it a problem.

Morice provided no symbol for syllable-final /w/ because he treated such words as having two vowels, the second of them /oo/. For example, he wrote the word "not", written in the CLC system as **'aw**, as ·ᐊᐁ <'-a-oo>. There are two problems with this. One is that it makes it impossible to distinguish between syllables in which /w/ follows a vowel and sequences of two vowels, the second of which is /oo/. The other is that it requires the writer to analyze words differently from the way the Carrier Linguistic Committee writing system does. This makes using syllabics more difficult for the great majority of people literate in Dakelh, who are most familiar with the CLC system. This second problem would not be an issue for people who used only Syllabics.

The Syllabics lack any way to write syllable final /kw/, as in words such as **duch’ukw** “porcupine” and **ndukw** “it is short”. There is no separate letter for /kw/. Syllable-initial /kw/ is written using the isolated /k/ symbol followed by the w-series CV letter. For example, **kwun** “fire” is written ᑊᗒᑐ <k-wu-n>. Since there is no symbol for isolated /w/, it is not possible to add it after the letter for isolated /k/.

Carrier has a pitch accent system, meaning that words that are otherwise identical may differ in their tonal pattern. The CLC system provides a way to write tone, with an acute accent. There is no way to write tone in Syllabics. This is not a huge difference since tone rarely makes a difference and is rarely written by users of the CLC system, but it does mean that tone cannot be marked in the Syllabics when it is desirable to do so.

The CLC system allows ambiguity in certain situations in which a sequence of two letters may be either a sequence of two sounds or a single sound written with a digraph. If a syllable ending in

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Latin in Carrier Syllabics” *Northwest Journal of Linguistics* 2.4:1-9 (2008). https://www.sfu.ca/nwjl/Articles/V002_N04/PoserLatinHymns.pdf

21 I currently count 17 words containing /f/ in the Stuart Lake dialect. Of these, 12 are names like **Fraswe** and **Filumun**. The five that are not are: **fizigab** “musket”, **deluglaf** “telegraph/baling wire”, **lugafi** “coffee”, **lizwif** “Jew”, and **lufinel** “flannel”.

/s/ precedes a syllable beginning in /h/, if the two are written together, as they would normally be within a word, the sequence /s/-/h/ cannot be distinguished from the single sound written <sh>. The same is true if the first syllable ends in /l/ since there is also a Carrier sound written <lh>. Such situations are rare but do arise. An example is “they smile a subdued smile”, which, with syllables separated, is **bus-hu-nin-z̲un**. Written naturally as a single word this is **bushunin̲zun**, which will naturally be read as **bu-shu-nin-z̲un**. To prevent sequences like <sh>, <lh>, and <ts> from being read as single consonants, a space or hyphen can be inserted, but this usage may not agree with the way in which spaces and hyphens are otherwise used. No such problem arises using Syllabics since there are no such digraphs and the second consonant of a cluster will always be written as part of a CV unit. For example, “they are smiling a subdued smile” is written ᗪˢ ᐳᐧᐦᑐᐦ <bu-s-hu-ni-n-zu-n>, whereas the hypothetical bu-shu-nin-zun is written ᗪᐷᐧᐦᑐᐦ <bu-shu-ni-n-zu-n>.

We may summarize these issues as follows:

Defects of the Syllabics	Defects of the CLC System
lack of symbol for /ny/	lack of symbol for /ny/
lack of symbols for /s̲/, /z̲/, /ts̲/, /dz̲/, and /ts̲’/ before vowels	
lack of symbol for /f/	
lack of symbol for final /wh/	
lack of symbol for final /w/	
lack of symbol for final /kw/	
lack of marking of tone	
	ambiguity of <sh>, <lh>, and <ts>

In sum, in their current form, the CLC system is technically superior to the Syllabics in coming much closer to distinguishing all of the distinct sounds of the language.

These defects in the Syllabics could in principle be remedied by expanding the system. The lack of means of writing final /w/ and /kw/ could be addressed by adding a symbol for isolated /w/ such as ᐤ (Unicode character U+1424), which is used in the sylllabic writing systems of some other aboriginal languages of Canada.

If the fronted consonants , /ny/, /r/, and /f/ are treated like other consonants, with separate symbols for each CV combination, a total of 48 new CV symbols would be required, namely for:

nya	nyo	nyu	nyoo	nyi	nye
fa	fo	fu	foo	fyi	fye
ra	ro	ru	roo	ri	re
s̲a	s̲o	s̲u	s̲oo	s̲i	s̲e
z̲a	z̲o	z̲u	z̲oo	z̲i	z̲e
ts̲a	ts̲o	ts̲u	ts̲oo	ts̲i	ts̲e
dz̲a	dz̲o	dz̲u	dz̲oo	dz̲i	dz̲e
ts̲’a	ts̲’o	ts̲’u	ts̲’oo	ts̲’i	ts̲’e

If a separate symbol were created for final /kw/, four new isolated consonant symbols would be required. If the decision were made to write final /kw/ as a sequence of isolated /k/ followed by isolated /w/, only three new isolated consonant symbols would be needed. (New symbols for syllable-final /ts̲/, /dz̲/, and /ts̲'/ would not be needed since these cannot occur in syllable-final position.) The total would then be 51 or 52. If the added consonants were treated like glottal stop and written separately from the following vowel, only 10 or 11 new symbols would be needed.

In sum, fairly modest modifications to the Syllabics would be needed if the additional consonants are treated as isolated consonants, contrary to the spirit of the Syllabics, even fewer if the distinction between fronted and unfronted consonants is ignored. To modify the Syllabics to handle the fronted consonants, /f/, /ny/, and /r/ in the spirit of the Syllabics, with new CV characters, a large number of new characters would be needed.

Ease of Use

When the CLC system was introduced around 1970 it had the great advantage that it could be typed on an ordinary typewriter and could easily be set in type for printing. In contrast, the Syllabics could not be typed and could not be set in type without the creation of a new set of type. (The type used by Father Morice was no longer in existence.)

With current technology this advantage is much smaller. Computer fonts and input methods for Syllabics are available, so syllabics can easily be typed and printed. The CLC system has the small advantage that the letters are available by default on all computers and cell phones whereas a special efort may be required to install input methods and fonts for Syllabics.

The CLC system is a little bit easier to write by hand as the letters are simpler.

Ease of Learning

When the Syllabics were introduced in the late19th century, people reportedly learned them very quickly. Father Morice only taught them a few times in or near his base in Fort St. James. Thereafter they were spread from one person to another. Father Morice reported 84 subscriptions to his newspaper in 1891, a mere six years after the introduction of the syllabics. The Barkerville Gaol Text, written in S̲aik'uz̲ or Lheidli dialect by two Carrier people on the wall of the Richfield

jail in 1885, probably in December, only a few months after the introduction of the Syllabics in Fort St. James, indicates how rapidly the ability to write in Syllabics had spread. According to Morice "...Indians of common intelligence have learnt to read in one week's leisurely study before they had any Primer or printed matter of any kind to help them on. We even know of a young man who performed the feat in the space of two evenings."[22] People who learned them as children similarly reported finding it easy. The late Mac Squinas of Ulkatcho told me that he learned to read and write in Syllabics from his aunt in evenings on the trapline in about a week. Reports such as these have given the Syllabics the reputation of being easy to learn.

What is not clear is that they are easier to learn than the CLC system. For those who know how to read and write in English, the CLC system also appears to be easy to learn. It requires learning no new symbols, and in many cases, the letters have approximately the same sound in Carrier as in English. Since Carrier has many consonants that English does not have, generally written using sequences of two or three letters, it is necessary to learn that certain letter sequences represent non-English sounds. Proponents of Syllabics argue that the use of the same letters as in English for different sounds is confusing. There is no information on the extent to which this presents a problem. Since everyone who has learned the CLC system was already acquainted with written English, we have no information on how hard it is to learn from scratch.

The fluent speakers who learned the CLC system in the 1970s and 1980s appear to have learned it as easily as did the fluent speakers who learned the Syllabics decades earlier. There is however no objective data on the comparative ease of learning the two systems as they have been learned by different people, with different linguistic and educational backgrounds, in different circumstances.

Some kinds of "evidence" fail to sort out the different factors that influence how easy a system is to learn or use. I once saw a presentation in which the speaker showed Stuart Lake Carrier written in the CLC system, Babine written in its own writing system, which is different in some respects from the CLC system, and Stuart Lake Carrier written in Syllabics, to an audience consisting mostly of speakers of Carrier in the narrow sense (that is, excluding Babine-Witsuwit'en) and asked for a show of hands as to who could understand each each of them. Most people raised their hands for the CLC text, only a few for the Babine text, and only two for Syllabics. The speaker claimed that this showed that the CLC system is superior to the other two. In reality, all it showed was that most of the audience knew how to read Carrier in the CLC system, only a few knew how to read Babine, since only a minority of the audience were speakers of Babine or Witsuwit'en, and only two had studied the Syllabics. It showed nothing about how difficult these systems are to learn and use. The show of hands merely reflected which language people knew and which writing system they had studied.

Impact on Language Learning

A related argument made by proponents of Syllabics is that the use of Syllabics makes language learning much easier. There is no objective evidence for or against this, as experiments have not been done in which groups of people with comparable backgrounds were taught the language

22 Adrien-Gabriel Morice (1890) *The New, Methodical, Easy and Complete Dene Syllabary*. Stuart's Lake Mission, p. 4.

using the same curriculum and methods, for the same amount of time, with one group using Syllabics and the other the CLC system.

The claim that the Syllabics greatly facilitate learning the language is undermined by the fact that the small number of students who have studied using Syllabics do not show outstanding progress. No student is known to have attained any functional ability in Carrier through study exclusively using Syllabics, but this does not mean much since the only students who have studied exclusively using Syllabics had only a short, elementary course. There is no way to know what is due to the choice of writing system and what is due to the curriculum, teaching techniques, and time devoted to classes. By the same token, the claim of some proponents of the CLC system that using the Syllabics is crippling is not supported by any objective evidence.

For people learning how to analyze words and how to create words by assembling them from their basic components, which is arguably necessary for adults learning the language beyond the most basic level, the CLC system is advantageous because it allows us to talk about individual consonants more easily. For example, the 2nd person singular possessive prefix is /n/ for most nouns, as in **nluk** “your dog” and **nzadzi** “your clock”. If the noun begins with /b/, this prefix becomes /m/, as in **mbat** “your mitts”. Using the CLC system this is easy to describe: **n** becomes **m** before **b**. In Syllabics, however, there is no symbol for /b/ before a vowel,so this generalization is hard to express. We have to say that ᐧ becomes ᐦ before ᑕ, ᗅ, ᗪ, ᘁ, ᗫ, and ᗷ.

Similarly, using the CLC system it is easy to explain that “the /n/ in **dunulhgus** tells us that the thing that is black is round”. Saying the same thing of the ᐧ in ᑐᑎᓪᓯˢ is obscure since ᑐᑎᓪᓯˢ does not contain the letter ᐧ. In the Syllabics as they are, with no letter for isolated /wh/, it is simply impossible to explain that “the /wh/ of **whudulhgus**” tells us that it is an area that is black”. We can write **whudulhgus** ᕼᑐᓪᓯˢ but there is no way to refer to /wh/ by itself.

Here is one more example, longer but illustrative of how difficult it would be to teach students about verbs using syllabics.[23] Suppose that we want to explain to students how the object of verbs is marked when the object marker is followed by a vowel, as in the verb “to ask someone”. In the CLC system, it is straightforward to explain that **oodalhkut** is "he asked", where the person asked is not marked on the verb, as in **'uloo oodalhkut** "he asked mother", and to this we add the object markers **s**- “me”, **ny**- “you (one person), **y**- “him, her (one person)”, **ney**- “us”, **noh** “you (two or more), and **hub**- “them”, resulting in forms like these:

soodalhkut	he asked me
nyoodalhkut	he asked you (one person)
yoodalhkut	he asked her
neyoodalhkut	he asked us
nohoodalhkut	he asked you (two or more people)
huboodalhkut	he asked them

23 The only language courses that teach the structure of the verb have used the CLC system.

Here are the same forms in syllabics:

ᗑᑕᒪᐱᵀ	he asked me
ᒧᐅᑕᒪᐱᵀ	he asked you (one person)
ᐅᑕᒪᐱᵀ	he asked her
ᑎᐅᑕᒪᐱᵀ	he asked us
ᖁᐯᑕᒪᐱᵀ	he asked you (two or more people)
ᐳᗅᑕᒪᐱᵀ	he asked them

What the prefixes are is not as clear since they are merged in writing with the following vowel. We can't immediately see that the prefix meaning "me" is **s**-, for example, because the first syllable is **soo**, which consists of the prefix meaning "me" plus the first vowel of the rest of the verb. If we insert a hyphen to separate the prefixes from the rest of the verb, things are perhaps a little clearer, but introducing the hyphen makes the spelling different from when the words are written normally. Furthermore, in three cases it isn't even possible to do this because there are no syllabic characters for isolated /ny/ and isolated /y/.

ˢ-∇ᑕᒪᐱᵀ	he asked me
ʔ-∇ᑕᒪᐱᵀ	he asked you (one person)
ʔ-∇ᑕᒪᐱᵀ	he asked him
ᑎ**ʔ**-∇ᑕᒪᐱᵀ	he asked us
ᖁʰ-∇ᑕᒪᐱᵀ	he asked you (two or more people)
ᐳᵻ-∇ᑕᒪᐱᵀ	he asked them

It is is much more cumbersome to show how Carrier words are put together in Syllabics than in the CLC system.

Other Considerations

Many people consider the Syllabics prettier than the CLC system and attractive for use in artwork. This is of course a matter of personal taste.

Though created by a French priest, they are also distinctively Carrier, whereas from a purely graphical point of view the CLC system looks much like English.

Summary

Criterion	Advantage
Technical Accuracy	CLC
Present Usefulness	CLC by a large margin
Ease of Use	CLC by a small margin
Ease of Learning	No clear evidence but for people literate in English probably CLC due to the familiarity of the letters from English.
Impact on Language Learning	CLC if the approach involves the analysis of words.
Aesthetics	Syllabics (but subjective)
Distinctiveness	Syllabics