ON THE ORTHOGRAPHY OF PLAINS CREE

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CONTENTS

0. **Introduction.** In Albertan primary and secondary schools located in Cree-speaking communities, Plains Cree language instruction is offered as part of the curriculum. There are two, more or less standard, orthographies, viz. "Cree syllabics" and "Roman orthography", both used to render Cree in script. However, due to dialectal, educational and other differences, these orthographies are quite unstable, and (regional) variation is the rule rather than the exception. In this paper, only one type of Cree syllabic writing is considered, while some defects of the Anglo-Latin alphabet are emphasized as well. It is shown that the Cree syllabary is neither educationally sound (logically consistent) nor practical, and the writer argues that the Latin alphabet is - in spite of its apparent shortcomings - more suitable for

writing and printing Cree than the stenography-inspired syllabary.

Plains Cree is spoken primarily in Alberta and Saskatchewan, but is also represented in British Columbia, where it abuts northeastern Shuswap. Its geographic proximity to the Salish speech area, which makes it a "neighboring language", earns Cree a niche in this volume. Also, it is the author's hope that the discussion of Cree orthography, lexical adaptation and other issues presented below will contribute to similar debates initiated by Salishists and Native Programs specialists. Lest the linguistically schooled reader take offense at the writer's occasionally simplistic or folksy style of writing, the author hastens to point out that this article addresses not only trained linguists, but native educators, curriculum developers and native language instructors as well.

1. **History and prehistory of writing systems.** "Writing began at the time when man learned how to communicate his thoughts and feelings by means of visible signs, understandable not only to himself but also to all other persons more or less initiated into the particular system." (Gelb 1962:11). It appears that writing evolved much later than oral language (which is as old as HOMO SAPIENS SAPIENS itself, i.e. possibly dating back to approx. 45,000 B.P.); the oldest known full writing systems originated in the Middle East: Sumerian (3300 B.P.), Egyptian (3200 B.P.), Proto-Elamite (3200 B.P.) (cf. Gelb 1962:60). "Full writing system" can be defined as "formalized recording system consisting of a finite number of visible symbols"; we disregard here such "forerunners of writing" as the Dakota winter counts (Gelb 1962: 41 ff.), Iberian petroglyphs and the Nigerian Nsibidi system (Gelb 1962:50) which consist in principle of an infinite set of symbols. In many cases, however, such pictographic systems evolved further, and yielded logographic systems (e.g. Chinese, early Egyptian) which, in turn, often preceded syllabic orthographies (like Cretan and Katakana); eventually, true alphabets were developed, most languages now being rendered in script by means of one alphabet or another. Of these, the Latin alphabet now prevails, but there are also the Greek, Cyrillic, Hebrew, Arabic, Ethiopian, Kartvelian, Armenian, Lao-Thai etc. alphabets. A specialized orthography, consisting of signs taken from a number of alphabets (plus a few invented ad hoc), and used by linguists to record languages in phonetic detail, is the International Phonetic Alphabet. Other newly developed alphabetic systems are braille (with a tactile rather than visual function), the Morse code (visual/auditory) and, for the deaf, gestural signs representing letters (sub-system of American Sign Language).

1.1. Logographic writing. In using pictography, one attempted to capture an entire thought or situation in as few pictures as possible. However, when record-taking became a regular (if somewhat specialized) activity, scribes must have felt the need to (1) work with a relatively small inventory of signs, (2) simplify (stylize) such symbols and (3) make economic use of their writing space. Consequently, logographic writing was developed, which made it possible to render a thought/event in terms of separate concepts (semantic singularities), each such entity ideally being represented by one sign (e.g. $sign_1$ = 'man', $sign_2$ = 'meat', $sign_3$ = 'eat'). These signs were as a rule arranged in linear order: (a) horizontally or vertically, (b) left-to-right or right-to-left, (c) top-to-bottom or bottom-to-top. Boustrophedon writing (direction changing from line to line, or column to column, in zigzag fashion) was not uncommon, and occasionally, the signs were aligned spirally.

1.2. Syllabic writing. Due to frequency of use, logographic signs were often formally reduced to such an extent that they were no longer recognizable as mirrorring real-life phenomena (consider e.g. the Chinese logogram 𠆤 = jen² 'person'). This, along with a gradual increase in the number of signs (as new concepts were being introduced), put quite a strain on the scribe's - and reader's - memory skills. (For example, written Chinese had ca 2500 distinct signs in the Shang period, and modern Chinese possesses tens of thousands of such characters.) Obviously, a less complex orthography was then called for. Now, in a logographic recording system, each sign ideally corresponds to one concept (semantically considered) or, from a grammatical point of view, a mono-morphemic (= devoid of affixes) word. Next, observe that in many languages, words can be divided further into syllables (cf. English "ten-den-cy", "i-deal", "free-dom", "e-clipsed" etc.); thus, if a given language written in a logographic system that is becoming increasingly complicated has a comparatively uncomplicated syllable structure, a shift from logographic to syllabic writing can be expected. Such a change has, in fact, taken place in some writing systems, such as Cretan and Hittite, where logograms were modified functionally so as to represent syllables of the type /pa/, /ti/, /ku/ etc. The number of required symbols was thence lowered drastically (while the process of configurational atrophy continued). In Chinese and Japanese, syllabaries evolved too (the "fan-ch^{c}ieh principle", resp. Katakana and Hiragana); for "syllabically simple" languages (where consonant clusters are virtually absent), a syllable-based writing system is indeed practical, insofar as relatively few signs are required to write the language in a phonetically adequate way, and the next logical step, popularization of alphabetic

writing, has here not been taken.

1.3. Alphabetic writing. Again, a syllable-based orthography is quite feasible for languages where consonant clusters such as the underlined sequences in "st<u>ri</u>ke", "<u>spl</u>inter", "si<u>xth</u>", "ela<u>psed</u>" (not to mention "<u>pst</u>!") do not abound. But it is rather more difficult to devise a syllabary for languages that have fewer phonotactic restrictions than Chinese or Japanese. Consider English, which (with 24 consonants and at least 11 vowels) has numerous word-initial CxV (Cx = from 1 to 3 consonants, V = vowel) sequences: in principle, $\underline{(24 + 30) \times 11 = 594}$ such groups exist (not all of these are found in the dictionaries, but we know that creative writers are busy adding new #CxV...# words to the list). Word-medial consonant clusters, too, can be lengthy ("extra" = /ek<u>str</u>a/, "di<u>skdr</u>ive" etc.), and word-finally, we find e.g. /...pst/ ("ela<u>psed</u>"), /...skt/ ("a<u>sked</u>"), /...nkst/ ("ji<u>nxed</u>").
We now understand why, and how, a syllabic writing system can be abandoned in favor of a phoneme-based (alphabetic) one: the near-final step in the development of a writing system is the division of syllables into their phonemic constituents (vowels vs. consonants). (And the final step would involve an optimal simplification of the graphemes, e.g. /k/ reduced to "<", /u & w/ = "U", /a/ = "C", /i & y/ = "J", /t/ = "+", so that e.g. "quite" = /kwayt/ would appear as "<UCJ+". Also, capitalization, being redundant, could be abolished in languages written in the Roman alphabet: "b" and "B" could both be written as "3", "g" and "G" could both be replaced by "Q", both "s" and "S" could be rendered as "6", "z" and "Z" could be replaced by "7", "six Bugs Bunnies" = /siks bagz baniz/ = "6J<6 3CQ7 3C⌀J7", etc. etc.) The number of graphemes is now reduced to a minimum, and reading/writing much facilitated.

2. Cree orthography. The diverse Cree dialects (Plains, Swampy, Woods and Moose Cree) were unwritten until the arrival of non-native traders, missionaries, linguists and anthropologists. The English and Cree phoneme inventories being quite dissimilar, early transcriptions of Cree utterances are expectedly clumsy, and odd-looking words such as "arbittough" (for /āpihtaw/ 'half') are rather frequent in the old records. The disparity between Cree and English phonetics, combined with the many inconsistencies of English orthography, probably accounts for the introduction, by a missionary, of a syllable-based orthography (for which see 2.2).
Since the advent of the Cree syllabary, accepted by many speakers of Cree, literacy began to blossom, and gospels, magazines, books, posters etc. were translated into Cree. Linguists, on the other hand, consider "Cree syllabics" awkward (and so do

many educators), and they prefer to write in/about Cree using the more familiar (and economic) Latin alphabet. Therefore, books dealing with Cree grammar and lexicon are usually printed in the Roman orthography.

2.1. **The Cree phonemes.** Plains Cree has ten consonants, to wit /p/, /m/, /w/, /t/, /c/, /s/, /n/, /y/, /k/ and /h/, and seven vowels: /i/, /a/, /o/ (short), /ī/, /ē/, /ā/ and /ō/ (long). In lento (= slow) speech, bi- and tri-consonantal clusters occur word-medially (e.g. /maskisin/ 'shoe', /maskwa/ 'bear'), and /mw.../, /kw.../ etc. begin words such as /mwēstasin/ 'late', /kwayask/ 'correct'; word-final consonant sequences are found in e.g. /tēpakohp/ 'seven', /mistanask/ 'badger'. In allegro (= fast) speech, unstressed /i/ is often elided, and (occasionally lengthy) consonant clusters ensue: LENTO /maskisin/ = ALLEGRO /masksin/, LENTO /niska/ 'goose' = ALLEGRO /nska/ (phonetically [nsxa]), LENTO /mistatim/ 'horse' = ALLEGRO /mstatim/, LENTO /kinisitohtawin-ciy/ 'do you understand me?' = ALLEGRO /kinstohtawn-ciy/, LENTO /masinahikan/ 'book' = ALLEGRO /masnaykan/ (note here elision of intervocalic /h/ as well), etc.

Phonetically, Cree /m/, /w/, /n/, /y/ and /h/ are pronounced as their English counterparts, but /p/, /t/ and /k/ are always <u>unaspirated</u> (unlike e.g. English "<u>p</u>en", "<u>t</u>ea", "<u>k</u>eep"), and Cree /k/ is normally pronounced [g] or [ɣ] (voiced velar fricative) between vowels (e.g. /sīkāk/ 'skunk' = [sīgāˈk], /pasiko/ 'get up!' = [paˈsego]), while /sk(w)V/ is pronounced [sx(w)V] (as in /maskoc/ 'perhaps' = [māˈsxoc], /niska/ = [n(e)sxaˈ]), and /hk/ is always phonetically [x] (e.g. /sohki/ 'try hard!' = [soˈxe], /mahkēsīs/ 'fox' = [maxēˈsīs]). Cree /c/ and /s/ are perceived by Anglophones as either "ts" and "s", or as "ch/tch" and "sh"; in reality, Cree /c/ and /s/ are phonetically intermediate between English "ts" and "s" on the one hand, and "ch/tch" and "sh" on the other. As concerns the Cree vowels, note that /i/ is intermediate between the vowels of "s<u>i</u>t" and "s<u>e</u>t"; /a/ resembles the vowel of "b<u>u</u>t"; /o/ is similar to the short "oo" of "b<u>oo</u>k"; /ī/ compares to the vowel of "d<u>ee</u>p"; /ē/ is intermediate between the vowels of "s<u>ay</u>" and "s<u>ea</u>"; /ā/ is intermediate between the vowels of "r<u>o</u>d" and "b<u>a</u>d"; /ō/ is intermediate between "oa" and long "oo" (as in "b<u>oa</u>t" and "b<u>oo</u>t"). The Cree long vowels, in particular, are somewhat shorter and less diphthongal than English long vowels, and /ē/ coincides with /ī/ in the speech of many northern Albertan Plains Cree individuals, who usually pronounce /pēyak/ 'one' as [pīˈyak], /iskwātēm/ 'door' as [esxwaˈtīm], etc.

2.2. **Origin and characteristics of Cree syllabic writing.** First, it should be

pointed out that Cree syllabic writing has, unlike syllabaries such as Katakana, NOT evolved from older (logographic, pictographic) notational systems; rather, it is the brainchild of a single person, viz. the English missionary J. Evans, who invented it shortly after 1840: "Cree syllabics" has been in existence for a mere century and a half (Gelb 1962: 207). In "How to learn to read and write Cree syllabics", the Cree syllabic signs are tabulated as shown in the appendix at the end of this paper. The syllabary's underlying principles are simple and obvious: there are twelve distinct symbols representing the consonants /m/, /t/, /k/, /n/, /l/ (the latter is phonemic in Moose Cree), /s/, /y/, /c/, /p/, /w/, /v/ (sic), plus the sequence /w...w/; these signs are syllabic insofar as they represent /m.../, /t.../ etc. (where /.../ stands for one of four vowels, transcribed in the table as "ay", "e-i", "o-u" and "ah"). The value of /.../ is determined by the sign's orientation – thus, "L" = "mah", but when we rotate the same sign in the plain by 180°, it represents "may"; turn "L" upside down (causing it to look like capital gamma), and it stands for "me-mi"; when turned around its axis by 180°, it is "mo-mu". Similarly, "U" = "tay", "C" = "tah"; "<" = "pah", ">" = "po-pu", etc. The vowels "ay", "e-i", "o-u" and "ah" are themselves rendered by means of a triangle, which appears in four different positions. In addition, there are separate signs for (syllable-final) /h/ (also "th"), /m/, /t/, /k/, /n/, /l/, /s/, /y/, /c/, /p/, /w/ and (again!) /v/, plus a special sign for /r/. The total number of symbols contained in the table is 65 (relatively low). However, considering that Cree has seven vowels, one deplores the absence of three additional columns (or, ignoring /v/ and /l/, at least $3 \times 11 = 33$ signs missing from the table). On the other hand, other sources, such as Pinnow 1964 (page 137), mention the use of a superscript dot indicating distinctive vowel length, with which e.g. ">" = /po/ can be distinguished from "ʒ" = /pō/, "<" = /pa/ from "ʒ" = /pā/ and so forth. (IS THIS DOT, A HELPFUL DEVICE INDEED, USED BY CREE SYLLABARY INSTRUCTORS IN NORTHERN ALBERTA? A LOOK AT LOCAL CREE NEWSLETTERS AND OTHER READING MATERIALS, AS WELL AS INFORMATION SUPPLIED BY RELIABLE SOURCES, APPEARS TO INDICATE THAT IT IS NOT COMMONLY EMPLOYED.)

3. **Literacy vs. illiteracy in the Cree population.** Recent studies have shown that 50% of the adult population (i.e. 15 years of age and over) of a certain northern Albertan school jurisdiction is functionally illiterate. From a positive point of view, we conclude that 50% of this population is <u>literate</u> in English, i.e. is familiar with the Latin alphabet. As far as (lack of) mastery of the Cree syllabary is concerned, see below.

CREE/5

CREE/6

3.1. Familiarity with the Latin alphabet and Cree syllabary. On several occasions, and by a number of qualified individuals, the writer has been advised that a mere handful of Cree elders has a command of the Cree syllabary. When we consider again that half of one particular Cree population is versed in the Latin alphabet, we begin to wonder if perpetuating the Cree syllabary is feasible and/or desirable. The educational situation in aforementioned district, at least, seems to suggest that such a feasibility/desirability is non-extant: there, virtually the entire school population masters the Latin alphabet, while students receiving instruction in Cree syllabics do not appear to study, memorize and use the syllabary. However, these facts and figures alone should not permit us to conclude speedily that the Cree syllabary should be abolished, and for the sake of objectivity, we shall take a closer look at some defects of both orthographies.

3.2. Weaknesses of the Latin alphabet and Cree syllabary. The Latin (= Roman) writing system, having evolved from the Greek alphabet (itself derived from Phoenician writing), was perfectly suited for rendering Latin in script: each grapheme corresponded to one Latin phoneme (with a few exceptions), and there was little redundancy. As the Roman empire spread, this alphabet was adopted by speakers of other (Celtic, Germanic etc.) languages; eventually, old English, too, was written in the Latin alphabet. However, old English was quite different from the English that is spoken and written today (e.g. "knee" was still pronounced with initial /k/, "mouse" sounded like our "moose", there were fewer French- and Latin-based words than there are today, and so on), but its orthography has changed little through the ages. Consequently, students of English today are affronted by such anomalies as /bayt/ = "bite" vs. /nayt/ = "night", /nayt/ = "night" vs. /nayt/ = "knight", /kaf/ = "cough" vs. /brɔt/ = "brought" vs. /dow/ = "dough" vs. /plaw/ = "plough" vs. /θru̅/ = "through", etc. etc.

Legitimate objections against the use of the Cree syllabary are: (1) it consists of more signs than there are phonemes (this disadvantage, of course, characterizes any syllable-based writing system); (2) it cannot adequately render allegro speech (unless one would allow for a flexible spelling, letting e.g. the sign for /ki/ alternate with the one for /k/, not an elegant solution); (3) where the superscript dot is not used, confusion may ensue (for example, /nipiy/ 'water' vs. /ni̅piy/ 'leaf'); (4) there is much inconsistency in the shapes and positioning of the signs (some can be rotated, by 90° at a time, so as to face "north", "east", "south" or "west", while others can be "left- or right-handed", either in upright or upside-down posi-

tion); (5) regional differences are considerable, especially as regards /l/ and /r/.

3.2.1. Redundancies and inadequacies of the Anglo-Latin alphabet. It was shown above that, due to the lack of spelling reform, the Latin alphabet can no longer be considered as rendering spoken English in an adequate way: (a) the number of English phonemes (35) exceeds that of the signs of the alphabet (26); (b) certain letters and letter-combinations represent more than one phoneme (e.g. "c" = /k, s/, "g" = /g, dž/, "th" = /θ, ð/, "gh" = /g, f, Ø/, "i" = /i, ay/, "o" = /o, ow/; (c) certain phonemes may be rendered in print by one of several letters or letter combinations (e.g. /k/ = "c, k, ck, q", /f/ = "f, ph, gh", /e/ = "e, ea, ai", /o̅/ = "oa, ough, aw"). Consequently, the Anglo-Latin alphabet can hardly be seen as a role model, and for that reason alone would not deserve any transfer credits.

3.2.2. Disadvantages of the Cree syllabary. The major drawbacks of the Cree syllabary were summed up in 3.2 above. Of the objections listed, the first one cannot be emphasized enough: the difference between ca 65 (number of tabulated syllabic signs) and 17 (number of phonemes) is considerable, and shows that an alphabetic notation is more economic than, and therefore superior to, a syllable-based one. The second handicap (caused by elision of /i/), too, is a serious one: while a user of the syllabic system will be forced to introduce alternative spelling modes (e.g. "ta̅-ni-si, ta̅-n-si"), the alphabetic solution can be much simpler (for example, we can indicate allegro-style deletion of /i/ by writing "ta̅ní si", "ta̅n̲si" or "ta̅n'si"). The third problem (absence of superscript dot) can, of course, be avoided. Objection #4 (re shape and orientation of syllabic signs) seems rather pertinent to me: alleviating the "rotational problem" would require a type of orthographic reform rather more drastic than a switch to alphabetic writing. My last objection pertains to the lack of conformity across Cree-speaking regions in the treatment of /l/ and /r/: severe confusion is bound to ensue when one and the same sign stands for "r" in one area, but for "l" in another, and vice versa!

3.2.2.1. Lento and allegro speech, consonant clusters, phonetic variance. The phenomenon of /i/ elision – and subsequent formation of consonant clusters – in allegro Cree speech was shown to have nasty consequences for Cree syllabic writing in 3.2 and 3.2.2 above: here, an alphabetic orthography would benefit not only Cree authors and readers, but also beginning students of Cree, who should be taught to master the consonant clusters typical of rapidly spoken Cree.

Non-native students of Cree should also be made aware of phonetic variance in Cree: /p/ = [p, b], /t/ = [t, d], /k/ = [k, g, ɡ, x] (cf. 2.1). The phonetic latitude of /k/ is particularly striking, although the average speaker of English (untrained in linguistics) may have the impression that Cree [k] and [g] correspond to English /k/ and /g/; also, naturally being unable to perceive Cree [ɡ] as such, he will identify this sound (correctly, by the way) with Cree [g] ("his" /g/), whereas Cree [x] will either not be distinguished by him from Cree /h/ (also "his" /h/) or - alien as it is to him - be described as a "raspy", even "gross", sound, "the kind that can give you a sore throat", "only Germans and Dutchmen use it". In Cree syllabic writing, such interesting phenomena are not indicated at all, and that is why non-native students of Cree do not often make these finer distinctions. Though such differentiations are in fact not functional on the phonemic level, failing to make them in spoken Cree will cause the aspiring speaker of Cree to be labelled as "speaking Cree, but with an accent", and he may benefit from spellings like "p⁻a'sik⁻o" ("⁻" = lenition, "a'" = stressed /a/) and "nɩsk^xa'" ("^x" = fricativity) while receiving Cree language instruction. The phenomenon of phonetic merging (as in the case of /ē/ coinciding with /ī/), too, would be difficult to render in Cree syllabics, whereas an alphabetic solution could here easily be arranged: e.g. /pēyak, pīyak/ could be uniformly spelled as "pèyak".

3.2.2.2. Non-indication of distinct vowel quality and quantity. As shown in 2.1, Plains Cree has seven (six) distinct vowels, but in 2.2 we found that the Cree syllabary (lacking the superscript dot) distinguishes only four such sounds. Thus, the underlined sequences of /macīniw/ 'bogey man' and /māskoc/ 'perhaps' are both rendered as "L", and /niyanān/ 'we' is spelled in the same fashion as /niyānan/ 'five', although these words have completely different meanings. "No problem," a syllabary instructor may retort. "The average student, already fluent in Cree, will develop a SIGHT VOCABULARY." However, the development of a "sight vocabulary" is incompatible with a flexible spelling (for which see 3.2.2).

3.2.2.3. Lack of signs required to render foreign words and names. We noticed earlier (2.1) that certain phonemes existing in English are not found in Cree: some of these are /f/, /š/, /z/, which are logically not represented in the table of Cree syllabic signs. At the same time, however, we observe that some concessions have been made: the sign for /h/ can apparently also stand for /θ/ (or /ð/?), there are five characters involving /l/ (which is otherwise absent from "pure" Plains Cree),

and /v/ and /r/ are also included in the table shown (which differs, however, from other - local - variants in several respects); see further 2.2.

When asked "When writing an essay about, for instance, a field trip to Slave Lake (where a science fair has been organized by somebody called Fred Thuring), how would you transcribe the non-Cree sounds?", proponents of Cree syllabic writing often respond "If we don't have a sign for it, we pick the one closest to it." The reader will then learn that a voyage to S-LĒ-P LĒ-K was made, that so-and-so was introduced to one P-R-I-T (if not P-LI-T) TO-R-I-N (or SO-LI-N, or what have you), and that everybody really enjoyed a SA-YI-N-S PĒ-R/L. Certainly, similar approximations are often seen in newspapers, where e.g. Gorbačov's name is spelled as "Gorbachev", and distinctive tone in Chinese names is as a rule not indicated. Such shortcomings do not, of course, bother the average reader, since he, being unfamiliar with the languages spoken by the foreigners referred to, cannot be expected to concern himself with phonetic details in the first place; secondly, he "knows" who "Gorbachev", "Walesa", "Mao Tse Tung" etc. are (were); finally, one may argue, he is not likely to ever establish personal contact with such people (and if he does, he will soon learn to pronounce his guest's or host's name correctly, or nearly so). But in the case of Cree-style approximations of non-Cree names of people and places, serious confusion is more apt to ensue, since (1) Cree, as well as non-Cree, individuals living in one's own community have English names, and (2) places like Slave Lake are much closer to one's home than Moscow or Beijing (and chances of meeting aforementioned Mr. Thuring quite greater than an encounter with Edvard Shevardnadze). Should you believe your son, when he tells you that the new librarian (I know, but you don't, that her name is SHIRL) has a different name than the shop teacher (a man called CYRIL)? (You read about these people the other day, and they were both referred to as SI-R-I-L. And you thought "Funny, sounds just like my cousin SHAROL's name.") Next, imagine that you are going to Fairview, where a course is offered in computer literacy (three weeks). It is important for you to complete this short course: you, the school secretary, have been guaranteed a salary increment of 30% upon successful completion of the course and return to your position, and you (single mother of seven children ranging in age from five weeks to fifteen years) need the money. The local college representative is currently in the hospital (nervous breakdown), but he has left a message for you in the, equally local, newsletter advising you to contact CO-N SI-PI-R immediately upon your arrival on campus. "No sweat," you think, "I'll talk to that fellow." So, having reached your destination, you go to the office and ask the clerk "Can you help me please? I need to see John

Sipper."

"Who?"

"John Sipper!"

"I'm sorry, there's nobody here by that name."

"Are you sure?"

"I'm positive."

"Could you double-check that please, I really have to see him."

"Welllll, let me see .... (click bleep bleep click click click beeeeeeep) .... See? NO? Okay, I'll print this out for you .... (clicker clickety click beeeeeeeeeeeeeep naaaayyyyp naaaayyyyp naaaayyyyp naaaayyyyp naaaayyyyp naaaayyyyp pkhkhkhkhkhkhkhkh!) There, all college personnel whose last name begins in S. See for yourself."

"Thank you .... Erh, umm, SAPIR, THOM, are you sure it's not SAPIR, JOHN?"

"Yes, I'm quite convinced Thom is Thom."

"Uuuhh .... How about this one: SHATER, JOHN, shouldn't that be SHAPER, JOHN?"

"No way, there's no such person working for US."

"But I was TOLD to talk to this guy right away, so I HAVE to see him - IMMEDIATELY!"

"Hold your horses now, dear, I'm sure we can solve this little problem. Let's go through this list together .... Could it be this one: SCHOEFFER, JOAN?"

"That sounds like a WOMAN to me."

"Were you expecting a man?"

"Yeah, exactly! His name is JOHN, isn't it?"

"If you say so, however, this is all I can come up with. What did you have to see this JOHN about, if I may be so free as to ask?"

"He's supposed to fill me in on this computer letter C course."

"LETTER C???"

"COMPUTER LETTER C!!!"

"Oh, I see. Well, I don't mean to disagree with you, but as far as I know, Ms. Schoeffer does teach the type of course you mentioned."

"Positive?"

"You betcha."

4. Conclusions: the ideal orthography.

As I showed above, a consistent use of the Cree syllabary can lead to annoying situations. There are two ways to prevent such irritation: we must either (1) add new signs to the Cree syllabary, or (2) abandon "Cree syllabics" (and WHEN IN ROME, DO LIKE THE ROMANS DO). Now, either solution does not appear very attractive. Updating the Cree syllabary entails the creation

of (a) a device indicating voicedness (so that /b/, /d/, /g/ and /z/ can be adequately rendered), (b) signs for /f/ and /θ/, (a+b) signs reflecting the voiced fricatives /v/ and /d̵/, (c) a means to indicate palatality of /č/ and /š/, (a+c) signs for /dž/ and /ž/ (the latter is rare: "genre", "azure"), (d) a way to render "ng" (as in "sing"), (e) a method to express the distinct qualitative and quantitative features of English vowels in the Cree syllabary. (For details see 4.2 below.) The alternative, viz. introduction of an alphabetic orthography, has consequences of an equally serious nature: there appears to be a strong socio-cultural and emotional attachment to the Cree syllabary, comparable to the adamant resistance offered in the recent past against the metric system. Also, as demonstrated in 3.2 and 3.2.1, the example set by the orthography of English may be discouraging enough to warrant a continued usage of the Cree syllabary.

4.1. Phonemics: 1 grapheme = 1 phoneme.

Ideally, one's language should be written in such a way that there is a one-to-one relationship between grapheme and phoneme, that is, each individual <u>speech sound</u> should be represented by one <u>letter of the alphabet</u>. The converse should also hold true: each <u>letter of the alphabet</u> should represent one, and only one, <u>speech sound</u>. There are a few languages where this ideal is almost realized, such as Finnish, Czech and Norwegian. Where in such languages certain phonemes cannot be rendered by known letters of the alphabet, <u>diacritics</u> are used (e.g. Norwegian "å"), or <u>digraphs</u> (such as Finnish "ii"); <u>redundant letters</u> (such as "q" and "x"), on the other hand, are simply <u>removed</u> from the alphabet. Plains Cree, too, could be written alphabetically, and here, "b", "d", "f", "g", "j", "q", "r", "u", "v", "x" and "z" are not needed (and the rare "l" occurs only in borrowings from French and English), EXCEPT FOR WRITING FOREIGN WORDS AND NAMES; the diacritic "⁻", however, is required to indicate distinctive vowel length, unless such length is shown by doubling ("aa", "ee", "ii", "oo").

4.1.1. Cree vs. English letter values.

In 2.1, the Plains Cree phonemes were listed, and their phonetic properties were described. We saw that Cree /p/ ≠ English /p/, that Cree /k/ has a greater phonetic range than English /k/ (see also 3.2.2.1), that Cree /s/ is neither English /s/ nor /š/, and that the vowels of Cree are different from, and less numerous than, the vowels of English. "And that will be one more reason for us NOT to adopt the Latin alphabet!" the Cree syllabics teacher may now proclaim. He should, however, keep in mind that no two phoneme inventories are identical, and that "letter values" often differ from one language to another (even

if such languages are written in the same alphabet). For example, English "ch" differs from French "ch" (which sounds like English "sh"), English "ee" ≠ Dutch "ee" (the latter is similar to English "ay"), English "u" is as a rule not pronounced in the same way as Swedish "u" (which Anglophones find very hard to reproduce), "c" (= English /s/ or /k/) stands for "ts" in Slavic languages and Hungarian, etc. etc.

4.2. Consequences of maintaining the Cree syllabary. If we wish to avoid the type of confusion and embarrassment described in 3.2.2.3, we must find ways to transcribe foreign phonemes in the Cree syllabary. It appears, then, that one would have to design a rather large number of new signs (see 4); however, one doubts if that would be a desirable solution, since such signs would generally not be used with great frequency. Rather, one might prefer to introduce a number of <u>diacritical marks, placed in the immediate vicinity of signs that are already available</u> (see below).

4.2.1. Improving the current system. In 4, I enumerated those English phonemes that have no equivalents in Cree, having shown that it is sometimes necessary to render these sounds precisely in the Cree script. At the same time, we do not wish to introduce a large number of signs that will be seen in print only occasionally: 13 additional <u>rows</u> of syllabic signs would be needed to transcribe those English consonants that are alien to Cree, while expressing all of the 11 vowels of English in the Cree syllabary would entail the addition of 7 <u>columns</u> of signs to the syllabary. Here, it would be more feasible to design a few diacritics that can be added to certain Cree syllabic symbols already in existence. Thus, if one wishes to maintain the Cree syllabary and, at the same time, to be able to reproduce non-Cree phonemes, one could:

(1) create a diacritic (such as subscript ",") indicating voicedness of /b/, /d/, /g/ and /z/, so that, for instance, "(The) Bay" can be rendered as "Ý";

(2) mark fricativity of /f/ and /θ/ by combining /p(...)/ and /t(...)/ with " " " (already in the syllabary), such a device enabling us to write e.g. "Faye" as "V̈" (and /v(...)/ = /p(...)/ + subscript "," + superscript " " ", while /ð(...)/ /t(...)/ + subscript "," + superscript " " ");

(3) indicate palatality of /č/ and /š/ by writing the sign "⁺" over /c(...)/ and /s(...)/ (and /dž(...)/ = /c(...)/ + subscript "," + superscript "⁺"), so that e.g. "page" = "V̇ᴛ⁺";

(4) transcribe "ng(...)" as /n(...)/ + superscript "°", so that one could write e.g. "King" as "P̣°".

By (re-)introducing the superscript dot (see 2.2), we can distinguish maximally 8 vowels in the Cree syllabary. But (a) English has 11 distinct vowels, and (b) the superscript dot may interfere with superscript " " ", "⁺", "°". The vowels of English are /i/ ("sit"), /ī/ ("bee"), /e/ ("pen"), /ey/ ("day"), /ae/ ("hat"), /o/ ("lock"), /ō/ ("hawk"), /ow/ ("boat"), SHWA ("cup", "letter"), /u/ ("book"), /ū/ ("root") (and in British English also /ā/ ("rather"), which there differs from /ō/); six of these are phonetically short, and five are long. Now, the Cree syllabary (minus the superscript dot) can accomodate four English vowels, viz. /ey/, /i/, /u/ and SHWA (which are reasonably close to Cree /ē/, /i/, /o/ and /a/), but we must find a way to render the remaining seven in Cree writing, that is, without introducing more diacritics, because these could collide with the sub- and superscript symbols proposed above. Here, one might suggest we (I) indicate vowel length by <u>doubling</u> (i.e. "Lee" = "li-i", "Paul" = "pa-a-l", "Sue" = "so-o") or by <u>adding "w"</u> (and "Pope" = "po-w-p"), and (II) <u>use "h"</u> to mark shortness of /e/, /ae/, /o/ ("Ken" = "ki-h-n", "Mack" = "ma-h-k", "Lotty" = "lo-h-ti").

Nevertheless, problems remain. First: who should decide on the exact shape of the new diacritics, and their position relative to the syllabic signs? Second: where would we draw the line as far as phonetic accuracy is concerned? For instance, should we faithfully reproduce /mixayi'l/ (Gorbachev's first name) as such, i.e. "mi-h-ka-yi-l" (for "hk" = [x] see 2.1), or would we prefer to copy the newsreader's pronunciation, and spell "mi-kē-l"? Additional complications are discussed in the following section.

4.2.1.1. Special signs for foreign phonemes and phoneme sequences, alphabetic inserts, or all-native writing? There is in spoken Cree an ever-increasing number of words referring to originally non-native concepts, such as "telephone", "computer", "Nintendo game", "crossword puzzle", "skateboard", etc. If such borrowings will be transcribed as are, we can use such devices as proffered in 4.2.1, and write "ti-h-li-pʰo-w-n", "ka-m-p-yo-o-ta-r", "ni-n-ti-h-n-t,o-w", "k-r-o-h-s-wa-r-t,", "s-kē-t-p,o-w-r-t,", etc. (The other solution, translating these concepts into Cree, and subsequent standardization of the new words, may take some time.) So far so good, but how do we deal with such common abbreviations as "vee-cee-ar" (VCR), "tee-vee" (TV), "gee-ess-tee" (GST), "pee-aitch-dee" (PhD)? How about "mister" (Mr), "Your

Honor", "The Honorable ...", etc. (not to mention "etc.")? Should these be tran-
scribed, "as are", phonetically or alphabetically, that is, should e.g. "PhD" be
rendered as "pi-i-ē-c⁺-t,i-i" or as "p-h-t,"? And would it be desirable to intro-
duce capitalization? (How could this be accomplished in the Cree syllabary?) We
realize, of course, that English "etc.", "PhD", and the like, are themselves of non-
Anglosaxon (French, Latin, Greek) origin; the only reason why they do not pose a
problem in English is that they are written in the same alphabet as those English
words that are originally Germanic. As a result, words like "mister" (from old
French) do not look (or sound) more alien than e.g. "misty". (Somewhat similarly,
we have become quite accustomed to writing and reading "0 1 2 3 4 5 6 7 8 9", not
always stopping to think that these symbols are of non-European origin.) Translat-
ing new concepts into Cree often entails the introduction of lengthy words (and I
guarantee that the Cree word for "computer" consists of more than three syllables).
Consequently, speakers of Cree often adopt words from English (while listening to
native TV and radio programs, one will notice that numbers are often expressed in
English, so that e.g. "eighteen" is substituted for /ayinānēyosāp/). Word-borrowing
is, of course, not restricted to Cree: consider e.g. English "teepee" from Dakota
/tipi/, German "Kaiser" from Latin "CAESAR", Russian "bocman" from Dutch "bootsman",
Dutch "pierewaaien" from Russian "pirovat'", etc.

Should we always attempt to render borrowed words in our own alphabet, and in con-
formity with our spelling principles? (This has been done in "teepee", "Kaiser" and
"bocman" mentioned above.) Or should we maintain the original spelling (in which
case the borrowed item remains identifiable as such)? (The latter principle is ob-
served in e.g. English "queue" (where "qu" ≠ /kw/) and "jai alai" (where "j" = /h/
rather than /dž/).) For Cree, this would amount to choosing between (1) using the
Cree syllabary (plus or minus diacritics) to transcribe borrowings, and (2) writing
the borrowed word AS IS. In the latter case, we would have to insert words (spelled
Roman style) in texts that otherwise consist of Cree syllabic signs. Indeed, this
can be done (such as when a Russian author quotes from a German source), but I doubt
that it is a preferable solution for Cree (for details see 4.2.2).

If one wishes to continue using the Cree syllabary, and if phonetic adequacy is also
desired (when borrowed words are included in a Cree text), then one will have to
accept the consequence that the number of complicated-looking words will in due time
be quite numerous (consider e.g. the cumbersome "Gorbachev", which would require
four diacritics when written in the Cree syllabary).

4.2.2. Introducing special typewriters, daisywheels, computer disks. Most type-
writers and word processors have 45-46 keys, 26 of which accomodate the Latin alpha-
bet; twelve keys are reserved for the one-digit numbers 0 through 9 and - = (lower
case) and ! @ # $ % ¢ & * ( ) _ + (upper case); the remaining keys accomodate punc-
tuation marks and \ } [ ] / (and on this machine, ± ° < ¶ > § ' ' as well). With
many typewriters and word processors (such as this one), the actual printing is done
by a device called "daisywheel" or "printwheel", which can be removed, and replaced
by another such wheel; thus, one can switch alphabets at any time. Linguists often
use phonetic characters, and a special daisywheel, designed for mathematicians and
other scientists, contains the following symbols:

It should also be possible to manufacture a Cree syllabics daisywheel (or does such
a wheel already exist?), but one wonders what should be (c.q. has been) done with
"left-over" keys (which should total approx. (45 x 2) - 65 = 25). Note here, that
puctuation is not commonly used in syllabically printed Cree, and Arabic numerals,
as well as @ # $ % ¢ & * ( ) _ - + = \ }, are conspicuously absent, too. Not having
seen a Cree syllabics typewriter (or daisywheel) as yet, I am awaiting comments on
this issue; otherwise, the apparent absence of punctuation marks and other signs
must be considered another negative feature of the Cree syllabary. It is fortunate
that changing the daisywheel on one's word processor is not often necessary; "wheel-
switching" can be a nuisance, particularly when it has to be done in the middle of a
text, whether during the typing-in stage, or as a text is being printed out. On the
other hand, switching daisywheels may become a regularly occurring chore for the
Cree syllabics typist, e.g. whenever (1) an item's price is quoted, (2) the exact
time is mentioned (e.g. 9:45 am), (3) a mathematical formula is called for, etc.
When instead of typewriters, computers are used, we encounter similar complications:
if we insist on typing and printing a text in the Cree syllabary, and if we want
this text to be on the same level of sophistication as the average English text, we
must either make alternate use of, say, "MOUSEWRITE" and "CREEWRITE" disks (with
familiar consequences) or obtain a rather complex (and costly) word-processing pro-

gram (+ laser printer) enabling us to switch orthographies without having to inter-
rupt the typing-in or printing-out of a text.

I conclude: until such time as the many complications caused by a continued use of
"Cree syllabics" are alleviated, one has a choice between

(1) ACCEPTING THE SEVERE LIMITATIONS PLACED ON THE SOPHISTICATION OF A TEXT PRINTED
     IN THE CREE SYLLABARY (and wilfully restricting one's literary potential to the
     genre of story-telling) and

(2) ABOLISHING THE CREE SYLLABARY, AND ROMANIZING CREE ORTHOGRAPHY (thus enabling
     oneself to write Cree texts on the same intellectual level as that of English).

One may reject the latter solution by claiming that it amounts to giving up part of
one's native heritage. However, (a) we must acknowledge the obvious need for ortho-
graphic reform, (b) the Cree syllabary as such is NOT a native invention, (c) new
(phoneme-based) orthographies have been adopted in other countries (such as Turkey
and Indonesia, where the Latin alphabet has replaced the Arabic script, and a number
of former Soviet republics, where the Cyrillic alphabet is used). Furthermore, a
change in orthography does not necessarily mean that all books printed in the Cree
syllabary should be thrown overboard. Rather, these writings (which often reflect
older stages of spoken Cree) have great linguistic-historical value, and if a new
orthography will be adopted, one of the first priorities will be to rewrite the old
(as well as not-so-old) Cree records in the Latin alphabet.

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APPENDIX: SWAMPY CREE SYLLABARY

▽	ay	Δ	e-i	▷	o-u	◁	ah	"	h-th
⅂	may	Γ	me-mi	⅃	mo-mu	L	mah	‹	m
∪	tay	∩	te-ti	⊃	to-tu	⊂	tah	⟋	t
٩	kay	Ρ	ke-ku	ᑯ	ko-ku	ᑲ	kah	⟍	k
ᴠ	nay	σ	ne-ni	ᓅ	no-nu	ᓇ	nah	›	n
ᴧ	lay	ᴖ	le-li	ᕀ	lo-lu	⊆	lah	}	l
ˎ	say	⟋	se-si	⟋	so-su	ˋ	sah	ᴧ	s
ᐊ	yay	ᐝ	ye-yi	ᐺ	yo-yu	ᐢ	yah	⁺˙	y
ᐅ	chay	Γ	che-chi	ᒍ	cho-chu	Ɫ	chah	‑	ch
⋁	pay	∧	pe-pi	›	po-pu	‹	pah	ˈ	p
▽˙	way	Δ˙	we-wi	▷˙	wo-wu	◁˙	wah		
▽˙°wayw	Δ˙° wew-wiw	▷˙° wow-wuw	◁˙°wahw	˙°	w
∪	vay	∩	ve-vi	⊃	vo-vo	⊂	vah	ϲ	v
٤	= r								