The Alphabet and Spelling in 'Cho [1)]

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Outline of Paper

Introduction

'Cho (/'kxo(u) [2)]/) is also known as Müün (/müün/), or Ng'Meen (/ng'meen [2)]/) and is a Southern Kuki-Chin language of Southern Chin State Myanmar, with estimates of speakers ranging from 15, 000 to 30, 000. [2)] The main reference for this language is an unpublished dictionary and grammar compiled by Father Marc Jordan (1969). This work lacks tonal diacritics, vowel length distinction, and any means of marking preglottalization. The traditional spelling system developed between 1930 and 1935 by state school teachers also lacks tone and vowel length marking. [3)] To date 'Cho is without a standardized form of spelling based on modern linguistic analysis. It is hoped that this will be a small contribution to such a venture.

The current 'Cho alphabet is one which with a few simple modifications will be more capable of representing the important phonemic distinctions of the language. This can be done with due respect to tradition and the spelling system that is already in existence. In this article some additions and alterations will be discussed, and evidence for these changes as well as example sentences will be given. The primary goal of this

paper is to maximize the spelling system's efficiency while minimalizing unnecessary changes to it. For this reason information which can be predicted by systematic sound change, and that which is not easily confused with other forms, will be excluded. It must be noted that the system discussed here is not a fully phonemic system but is rather aiming to be a functional and practical method of writing the language.

Although the orthographical alternatives discussed here are only options, the language data suggests that the distinctions themselves must be made in some way or form if a more legible orthography is desired.

1. Traditional Symbols

The letters maintained from the original spelling system are as follows. There is no need to alter the current usage of these letters and they will be employed following tradition.

Vowels

Letter	Phonemic Value
i, ü, u	High vowels / i, ɨ, u /
e, ä, o	Mid vowels / ɛ, ə, o /
a	Low vowel / a /

Consonants

Letter	Phonemic Value
b, d	Voiced ingressive stops / ɓ, ɗ /
p, t, k, c	Voiceless unaspirated stops / p, t, k, c /
ph, th, kh	Voiceless aspirated stops / p', t', (post velar), k' /
v, z, g	Voiced fricative / v, j or ʒ, ɣ /
s, gh, h	Voiceless fricatives / ʃ, x, h /
ht, ch	Voicless affricates / tθ, kx /
hm, hn, hng	Voiceless nasals / m̥, n̥, ŋ̊ /
m, n, ng	Voiced nasals / m, n, ŋ /
pl, phl	Voiceless consonant clusters / pl, phl /
hl	Voiceless lateral approximant / l̥ /
l	Voiced lateral approximant / l /
'	Glottalized consonant / ʔ /

Consonant Finals

Letter	Phonemic Value
p, t, k	voiceless stops / p, t, k /
m, n, ng	voiced nasals / m, n, ŋ /
h	glottal stop / ʔ /

Diphthongs are *ai, ui, oi, äi, üi* and *ei*, in which the first element is always lengthened. The last of these, *ei* is oftened realized as /e / especially when found in closed syllables. Vowel sequences /au / and /ou / occur as a variant on some open syllables with /a /. The other sounds of 'Cho which will be the subject of discussion

here, are as follows.

Consonant Initials

Letter	Phonemic Value
pi, phi	/ pi, phi /
ki	/ kɣ /

2. Essential Additions

The rest of this paper is divided into two sections, the first is concerned with additions to the traditional spelling system that will help make the 'Cho orthography a closer representation of speech, and thereby easier to read. The last section is made up of miscellaneous notes on some of the specific difficulties of spelling in 'Cho.

2. 1 Tone Diacritics

In 'Cho there are many words which differ only in their tonal assignment, which is good evidence that its functional load is high. Tone will therefore need to be marked in the spelling system if easy reading is desired. The system discussed here only marks tone on content words (nouns, verbs, and adverbs) since all else is regular and predictable.

'Cho has four tones which have not been marked in the traditional orthography, but for which diacritics are beginning to be employed by some speakers e.g. in the revision of the 'Cho Old Testament and first draft of the 'Cho New Testament currently in preparation. The tones are as follows.

Tone No.	Description	Tone No. Diacritic
1.	High level	a (unmarked in this paper)
2.	Low (low level or low falling)	a^2
3.	Rising (low to high)	a^3
4.	Falling (high to low)	a^4

The fourth tone is found mostly on assimilated items e.g $ka\ ka^2 > ka^4$ (NEG +1st person subject agreement pronoun), or certain grammatical items e.g. $phih\ kiai^4$ 'either', ung^4 'if, when' etc. It is not found however in complimentary distribution with the other tones, and so it's lexically marked nature and low frequency mean that it need not be marked in normal writing[4].

2. 1. 1 The Three Main Tones

The following are some examples of items that are distinguished only by the three main tones.

High	Low	Rising
bit ci pluck	*bit² ci* to plug up	*bit³* a sparrow
ghu ci wipe	*ghuu² ci* gather vegetables	*ghu³* miscarry
khong ci attach straps	*khong² ci* to lead	*khong³* log trap
lam road, path	*lam²* an arm span	*lam³ ci* bland
pum ci amass	*pum² ci* overflow	*pum³ ci* big & round

pung picture, photo	*pung² ci* multiply	*pung³ ci* strike, hit
'pang ci grab, hold	*'pang²* wall	*'pang³* the back
phui ci transplant	*phui² ci* carry on head	*phui³* Place name
ta ci possess, have	*taa² ci* hinder	*ta³* abandon (aux)
ton ci fall down	*toon² ci* touch, poke	*ton³* fragment, short
thaa fat	*thaa² ci* be oily	*'tha³ ci* lazy

Many more examples can be given of distinctions between either three contrasting items as above, or of the more prevalent word pairs that differ only in tone. The following are just a few sentences which could not be distinguished if tone were not to be marked in the orthography.

Shing'ghüng³ cuh² ka² phui tee ci².
tree Abs I   transplant Pst Rl
'I transplanted the tree'

Shing'ghüng³ cuh² ka² phui³ tee ci².
tree Abs I   carry on head Pst Rl
'I carried the tree on my head'

Ka² 'pang³ na ci²
my back ache Rl
'My back aches'

?Ki² 'pang² na ci²
my wall ache Rl
?'My wall aches'

Ghuu³ neh, 'am ung ka² ghon³ ci².
gather SS veges pot into 1p-agr put Rl
After gathering vegetables, I put them in the pot.

Ghu³ neh, 'am ung ka² ghon³ ci².
miscarry SS pot into Ip-agr put Rl
After miscarrying, I put it in the pot !

Undoubtedly many more such examples could be thought up to illustrate the high function load of tone in 'Cho, and the necessity of it in the spelling system.

2. 1. 2 Tone and Function Words

In a phonemic script tone would ideally be marked on all items. This is not the case in the recent drafts of the Old and New Testaments, in which a tacit decision has been made to add it only where absolutely necessary, and so as to disambiguate otherwise identical forms. In this way tone can be left off function words. Their grammatical positions are fixed, and any existent homophones can thus be distinguished readily (unlike the nouns and verbs in the above list).

Examples of function words are the grammatical postpositions *noh²* 'Ergative', *am²* 'Dative', *on²* 'Instrumentative', pronouns *keimi³* '1st Person Plural (unbound morpheme)', *ka²mi* '1st Person Plural Subject Agreement Pronoun', *ning³* '2nd Person Singular Object Agreement Pronoun', *a²ni* '3rd Person Dual Subject Agreement Pronoun', the plurality particle *gui²*, and other discourse based particles such as the emphatic *en²*. Omitting tonal diacritics on these would result in the following spelling.

*Kei **ka** ng'ming² Tam ah kia ci².*
me my name Tam Prt Cop Rl
'My name is Tam.'

Ning³ 'hmat ci ang ?
2p-agr-ob fevered Rl Q
'Do you have a fever ?'

A kiä hmang³ zop ci².
S/he body spotted all over Rl
'His / Her body is covered with spots.'

Following some conventions of writing 'Cho, an *-h* final will be added to the grammatical postposition *a²* (possessive postposition, relative clause marker etc.), to distinguish it from the singular third person pronoun *a²* and grammatical postposition *a²* which are entirely homophonous. In this way the grammatical particle will be identical with the other open syllable postpositions that are also written with a glottal final (e.g. *cuh, noh, phih*). An example of the two grammatical particles follows.

*Na lo ba² khai laih laih **ah**, **a** kia **ah** ka ning hmyoo ci²*
2p-agr come back Irr always Prt, Prt Cop Prt 1p-agr 2p-agr hope Rl
'I always am hoping you'll be coming back.'

It must be noted that the glottal final here is more likely the result of phrasal pausing than a lexically encoded element. The distinction of pronoun and preposition *a²* as a, and postposition *a²* as ah, allows the following grammatical differences to be clearly marked.

*'Phiu² **ah** ng'mei pit ci²*
snake Pss tail sever Rl
'The snake's tail was severed.'

*'Phiu² **a** ng'mei pit ci²*
snake 3p-agr tail sever Rl
'The snake it's tail was severed.'

*Ani **ah** hta³ hteit ba² ci*
S/he Pss child go back Rl
His child went back

*Ani **a** hta² hteit ba² ci*
S/he 3p-agr child go back Rl
He, the child went back

The above changes will be implimented in example sentences hereforth.

2. 1. 3 Tonal Disassimilation in Postpositions

There are several functional items in 'Cho that exhibit tonal disassimilation with the tone of the preceding item. These occur in accordance to tone sandhi rules and conditions of discourse. [5] So far the following items have been identified: *cuh* Absolutive, *phih* Comparative, *bäng* 'only, just', *neh* Same Subject, *hleih* Different Subject, *ci* Realis, *boh* 'some(body / thing)', *lo* Inchoative. These items are realized as a high tone when the previous syllable is low (or falling), but low otherwise (after high and rising tones). The behavior of these items is predictable and known to the native speaker, and so no overt tonal diacritic is necessary in the common orthography.

Examples of *ci* can be found on all previous sentences of this paper. An example of the topic postposition *cuh*, and two more of the realis particle *ci* follow.

Pa³ **cuh²** *hteit ba²* **ci**	*'Htu²* *'thai²* **cuh** *ka* *'hleih* **ci²**
father Abs go back Rl	shirt new Abs 1p-agr buy Rl
My father went back.	I bought a new shirt

These will be written as follows.

Pa³ **cuh** *hteit ba²* **ci**	*'Htu²* *'thai²* **cuh** *ka* *'hleih* **ci**
father Abs go back Rl	shirt new Abs 1p-agr buy Rl
My father went.	bought a new shirt

2. 2 Vowel Length

Vowel length in 'Cho is phonemic and distinguished only on high and low tones. It is necessary to distinguish vowel length between many vocabulary items such as those that follow.

Short	Gloss	Long	Gloss
ang	Question particle	*aang ci*	gape
'ban² ci	take a short cut	*'baan²*	arm
hla ci	wear on lower body	*hlaa ci*	long, tall
khong ci	attach carry straps	*khoong ci*	opened up (pathway)
kiü² ci	afraid	*kiüü² ci*	prize open
lo ci	come	*loo ci*	devour
long² ci	it into	*loong²*	flow
pung	picture, photo	*puung*	horn
Mang	Personal Name	*Maang*	Personal name
m'song² ci	make separate	*m'soong²*	a kind of tree
si² ci	die	*sii² ci*	ready soil forplanting

The following are examples of sentences which would not be able to be distinguished if vowel length were not to be written.

Ka kiü² tee ci	*Ka kiüü² tee ci*
1p-agr afraid Pst Rl	1p-agr lever Pst Rl
I was afraid.	I levered it open.

Zanta³ kami si² ci	*Zanta³ kami sii² ci*
yesterday 1p-pl-agr die Rl	yesterday 1p-pl-agr
We died yesterday.	We sowed yesterday.

Zanta³ kami sii ci
yesterday 1p-pl-agr bleed Rl
We bled yesterday.

2.2.1   Diphthongs

As in other Kuki-Chin languages, 'Cho diphthongs consist of a long first vowel and

shorter second one. Since this is regular, unambiguous, and part of the native speaker's understanding of his / her language, it is not necessary to reduplicate vowels.

Dai	The Daai people, language	*hlui^2 ci*	squeeze out / wear
ei^2 ci	eat	*khui^2 ba^2*	pull out from liquid
tai	be high up (stem 2)		

This is consistent with the traditional spelling system of 'Cho.

2. 3 The Glottal Initial

'Cho has three presyllables, /m /, / ng /, and the preglottal / ʔ /, the last is involved in several sound changes. A preglottal letter therefore should be included in the spelling system. It has been written in this paper with an apostrophe, which being a diacritic rather than a letter has the additional benefit of reflecting iconically the non-syllablic nature of this presyllable. A variant spelling in usage is / k' /, e.g. *k'Cho*. Both the apostrophe and / k' / are sufficient however for notating the sound, and a decision between them will be left to the necessary authorities.

Preglottalization is responsible for important sound changes to the preceding syllable. That is, it becomes a velar stop *k* when preceded by a vowel, and closes that syllable. It also modifies preceding nasals into stops. We look at examples of these now. When the glottal initial follows an open syllable it is realized as a / k /.

Written Form	Phonemic Realization	Gloss
gha lei 'phli^2	/ gha **leik** phli^2 /	(the number) 14

When it follows a nasal *m, n, ng* it closes these to become *p, t, k* respectively.

Written Form	Phonemic Realization	Gloss
Ning 'hmat ci ang ?	/ **nik** hmat ci ang /	Do you have a fever ?
A 'chim^2 'tah ci	/ **ak** chip^2 tah ci /	He sharpened his knife.
Khaan 'zoong^2	/ **'khaat** zoong^2 /	Things which fly in the sky.

Since these sound changes are predictable by the presence of the glottal stop, there is no need to alter the orthography to reflect the changes. All that is needed is the presence of the preglottal letter.

It should be noted that these sound changes are similar to those associated with the realis particle ci. Namely, a previous short syllable is closed with *k* (see section 3.1), and nasal finals are stopped. [6] However, they differ in that the latter is optional, the former obligatory.

mei 'khaang / khaak ci	*Na pa^3 om / op ci ang ?*
fire shine Rl	Your father exist Rl Q
The light shines	Is your dad there ?

Piein^3 / pieit^3 ci

say   Rl

S/he said it.

3. Miscellaneous Notes on Spelling

In the following section some other less pressing issues which need to be given attention when thinking about writing in 'Cho are introduced and optional changes offered.

3. 1 Epenthetic k[7]

One of the processes of resyllabification that is of concern here is the closing of short open syllables with a velar stop. In the Jordan dictionary this has been confused with lexical final velar stops, especially in verbs. This sound change must be distinguished from the assimilation of preglottal stops to velar stops discussed above.

When a velar stop or affricate initial follows a short open syllable, the result is a geminate consonant. Verbs in the first stem are often followed by the particles ci Realis, and $khai$ Irrealis. The former is realized as / ci / after all bilabials and alveolars (m, p, n, t), as below[8].

Written Form	Phonemic Realization	Gloss
om ci	/ om ci /	exist, be
ip ci	/ ip ci /	sleep
ton ci	/ ton ci /	fall down
bit2 ci	/ bit2 ci /	plug up

It is realized as / ki / elsewhere.

Written Form	Phonemic Realization	Gloss
lok³ ci	/ lok³ ki /	levy taxes
ng'ling ci	/ ng'ling ki /	hot
gaih ci	/ gaih ki /	laugh
loo ci	/ loo ki /	devour
hloi³ ci	/ hloi³ (ki, ci) /	cascade down

However, The k initial of prevocalic occuring / ki / is doubled following short open syllables and it closed the preceeding syllable.

Written Form	Phonemic Realization	Gloss
bi ci	/ bik ki /	work, do, beat
si³ ci	/ sik³ ki /	die
m'hlu ci	/ m'hluk ki /	wash (clothes etc.)

This k is found only when the item is preceded by velar initials ci or $khai$, but not with other sounds, e.g. when followed by the past tense auxilliary tee. Thus it is not *bik tee ci, but rather bi tee ci, and similarly so with all non-preglottalized and non-velar consonants. As noted, this sound change is similar to the behavior of the glottal

presyllable mentioned above, which assimilates to a velar stop and closes open syllables, as well as modifying nasals into stops. In fact in the closely related language Daai, the cognate particles are preglottalized i.e. *k'ti* realis, *k'khai* irrealis. [9] In 'Cho however they are not preglottalized, and transformation of nasals into stops is only optional at best.

Written Form	Phonemic Realization	Gloss
vok om ci	/ vok (om, op) ci /	There is a pig.
hlen² ci	/ (hlen², hlet²) ci /	It is red.
khaang ci	/ (khaang / khaak) ci /	It shines.

There is more evidence however that the *k* closing of short syllables is a general sound change in that it is not limited to verbs. Above we have seen this sound change triggered by *ci* when it is realized as / ki /. The same behavior however is found with the irrealis sentential final particle *khai*, and as below on other velar initials. [10]

Example	Realization	Gloss
i chü²	/ ik kxü² /	How many
i cha²	/ ik kxa² /	How
a i ah ho cha²	/ a i a hok kxa² /	In what manner

In summary then, *k* final is found occurring before / k / *ci*, / k' / *khai*, and / kx / *cha*, *chü* as would be expected by a general sound change.

Finally, this velar closing is not to be confused with the lexically marked velar stop final verbs of the first stem: which retain their form in all environments e.g. *bek tee ci* 'S/he measured it with his / her finger'. Other sample verbs follow.

Verb	Gloss	Verb	Gloss
ak³	wedged; choked	*bek*	measure with finger
chääk	track, watch for	*kolok*	bent, twisted
mäk	insolent	*m'cak*	light, ignite

Nor is it to be confused with those verbs which have a velar stop final only in the second form. [11]

1st	2nd	Gloss	1st	2nd	Gloss
'chu	*'chuk*	cut down	*kyu*	*kyuk*	fall down
gu	*guk*	write	*o*	*ok³*	drink
la	*lak³*	fetch, take	*vo*	*vok³*	burn land for agriculture

3. 2 Retaining *aw*

In strict terms, the symbol *aw* is not necessary for 'Cho since it is pronounced identically to / o /. However, if retaining it is desired for any reason, *aw* can be limited to represent the long vowel / oo /.

Short	Gloss	Long	Gloss
lo ci	come	*law ci*	devour
long² ci	fit into	*lawng² ci*	flow
Mong²	Personal Name	*mawng²*	story, history, about

Since there is no short versus long distinction for the rising tone and because it is longer than the short vowels, the aw could be used for all rising tone items as well.

Rising	Gloss
ngawn³	kill
Bawi³	Lord, master
ng'naw³	go to jungle (i.e defecate)

The aw symbol may also be used in diphthongs because as we have noted above, the first vowel is lengthened in open syllables.

Rising	Gloss
gawi	dual particle
m'gawi²	cook vegetables well

However, since closing syllables with a glottal stop shortens them, *oi* should be used in these cases.

Rising	Gloss
boih	probably
zoih	sell (stem 2)

The decision of whether to keep *aw* or not will be left to the relevant authorities.

3. 3 Consonant Clusters

The spelling of the letters, *ki, pi,* and *phi* with the vowel *i* to represent an affricate in the former, and or palatal approximant for the latter two, allows confusion in an orthography that marks vowel length. That is, pii / pii / would be identical with / pyi /, phi / phi / with / phy /, and kii / kii / with / kyi /. Similarly, it causes trouble with dictionary ordering, since *ki* and *kii, pi* and *pii, phi* and *phii* become confused as in the Jordan dictionary. It is therefore proposed that for simplicity of legibility, a change is introduced as follows.

Letters	Example	Gloss
ky	*A kya ah ng'ling ci*	It's very hot.
py	*Sin cu ka 'pyu³ ah kya ci.*	This is my hut.
phy	*'Phyu² ka hngu ci*	I saw a snake.

This is by no means obligatory, and the decision is once again deferred to the authorities.

136

3. 4 Ordering the Alphabet

Alphabetical order in the revised Jordan dictionary underway will be as follows.

a, b, c, ch, d, e, g, gh, h, hl, hm, (hn), hng, ht, i, k, kh, ky, l, m, m', n, ng, ng', o, p, ph, pl, phl, phy, s, t, th, u, v, z

Glottal initial words will be found after the identical unglottalized consonant, e.g. *i, 'i, k, 'k, kh, 'kh* etc.. Vowels will be listed in the following order.

a, ä, e, i, o, u, ü

Similarly, long vowels will follow short vowels, and tones will be ordered, High, Low, Rising, Falling respectively.

3. 5 Sample Passage in the Revised Orthography

Below is an example passage printed in the revised orthography offered here. It is taken from the recent draft of the New Testament. A loose back translation follows.

Luke Chapter 8:1-6

1 A 'chaang² gha lei gawi cuh a kong² ät ah 'chüü² gui netah, ngami am kho² 'nget a van m'chüt nak³ a tako² lah aana ni, gawi pyam² nak³ gui m'gü³ m'gai³ nak³ hnging cuh pe gui ci. 2 Cun kon² ah 'Khaanpu²ghi³ ah khaw² ah mawng² ami pyein³ vai ah ni, 'chaang² gui ami m'gai³ ba² vai ah, tüi² gui netah, 3 Ngami am a pyein³ cuh, lam ah kavai ah a i phih kä nami hteih püi vai. Ng'saw³ htung ah phih kyai, ng'za³ ah phih kyai, m'htut ah phih kyai ngui² ah phih kyai, ng'thoon nak³ vai ah 'htu² ah phih kyai, kä nami hteih püi vai. 4 A i im ung phih, nami luh ah kyak³ ung, a cun ung om vä. Cun ung kah kä lut ein² lo vä 5 Ngami kä ning daw² ci gui ah kyak³ ung, cun ah pigaw² ung kah, nangmi hteit ba² u neh, ami hmat vai ah, nami kho'pha² ung kah m'vut hngaw, hmut³ ghüt vä. 6 Ngami cuh hteit u neh zei² tu vai ah mawng² pyein³ u neh ami gok nak³ päng ah gawi pyam² nak³ gui m'gü³ m'gai³ u neh pigaw² ak'zo ak'däm gui ah ng'hlei ci gui.

Free Translation

Calling the twelve together he gave them the power and authority to overcome all bad spirits, and to heal the sick. Then he sent them to speak of the things of God's kingdom and heal people. He said to them, you must not take anything for the road with you. You musn't take with you a walking cane, a bag, rice cakes, money, or a coat to change into. Going into any house stay there. From there do not go out. If it is that they don' t receive you, then go from that village, and so that they know it, wipe off from your feet even the dust from the village. They went, and proclaiming the good story everywhere healed the sick and traveled around.

Conclusion

In this paper we have considered several issues concerning spelling in 'Cho and have given examples as necessary. Evidence has been given for the necessity of including tonal diacritics, vowel length marking and a preglottal letter. Other topics

such as the status of the letters *aw*, and *ki*, *pi*, *phi* have been considered, and decisions left to those in charge. There are, however, other issues such as rules for word compounding which need to be considered in full at some stage but which have not been addressed here. It is sincerely hoped however that this paper can stimulate evidenced discussion for refining the wonderful spelling system of 'Cho.

Abbreviations

Abs	Absolutive Postposition *cuh*	Aux	Verbal Auxilliary
Cop	Copula	DS	Different Subject Particle
Irr	Irrealis	Pl	Plural
Prt	Grammatical Particle *a²*	Pss	Possessive
Q	Question particle *ang*	Rl	Realis
SS	Same Subject particle		
1p-agr	1st Person Subject Agreement Pronoun		
2p-agr	2nd Person Subject Agreement Pronoun		
2p-agr-ob	2nd Person Object Agreement Pronoun		

Notes

1) This paper was written to be sent to a convention in Min² dat², Burma in which spelling revisions for use in the 'Cho bible translations will be decided. I would like to thank Francis Kyüü ² Ghüüng ² Maang for his enthusiastic supply of data, example sentences, and linguistic insight into his native language.

2) The former figure is from So-Hartmann, Helga. 1988. 'Notes on the Southern Chin Languages'. *Linguistics of the Tibeto-Burman Area*. Volume 11: 2. P. 98, the latter from the Ethnologue. *Languages of the World*, 14th Edition. 2001. SIL International. http://www.ethnologue.com/show_language. asp?code=MWQ.

3) Jordan, Father Marc. 1969. *Chin Dictionary and Grammar: Southern Chin Hills People's Language*. Monograph. (Grammer Section, 2).

4) For more details see Nolan, Stephen. 2000. 'An Initial Description of Tone in 'Cho'. *Proceedings of the 33rd International Conference of Sino-Tibetan Language and Linguistics*, Ramkhamhaeng University, Bangkok. 69-79.

5) ibid..

6) See also Hartmann-So, Helga. 1989. 'Morphophonemic Changes in Daai Chin'. *Linguistics of the Tibeto-Burman Area*. 12: 2. 51-66. p. 55.

7) There also exist epenthetic z / y / and v: e.g. *na'daih ung* / nak daih zung / 'If you stab me', or *Pa ³ ah zih* / pa³ va zih / 'father's blanket,' as well as *a i a kia hleih ci ung* / a i a kia hleih ci vung / 'because ..', *a u ang* / a u vang / 'who ?', and *doo² ah 'chim²* / doo² vak chim²/ 'the knife which was received' (examples from Jordan grammar 1969:8). It is not necessary to write these since they are predictable, and since doing so confuses the obiquitous grammatical particle *ah* with the perfect aspect marker *zah*.

8) Diphthongs can occur with either. However, no other factors contributing to a favoring of either *ki* or *ci* have been discovered to date.

9) Hartman-So (1989). pp. 62-63

10) To date examples with / ky / in the right environments have not been observed. However, it is predicted from the above that identical behavior that there will be such cases.

11) See Nolan, Stephen. 2001. 'Verb Alternation in 'Cho: A Phonological Outline of Verbe Stems'. Unpublished Paper.