

DRAFT PROPOSAL: UNICODE CODING OF THE LIMBU SCRIPT

Introduction

Limbu is a Tibeto-Burman language of the East Himalayish group, spoken by about 200,000 persons mainly in eastern Nepal, but also in the neighboring Indian states of Sikkim and West Bengal (Darjeeling district). Its close relatives are the languages of the East Himalayish (Shafer 1966-1973) or "Kiranti" group in Eastern Nepal. It is only very distantly related to the Lepcha (Rong) language of Sikkim, whose script is currently proposed for the BMP, and to Tibetan.

Names: the name "Limbu", used in Nepal and in Nepali (the Indo-Aryan national language of Nepal and *lingua franca* of Darjeeling district and Sikkim), is of uncertain origin. In Limbu, the Limbu call themselves *yakthuy*. Individual Limbus often take the surname "Subba", a Nepali term (of Arabic origin) for "headman". *Kirāta* is a Sanskrit term referring to (?some variety of non-Aryan) hill-dwellers. It is currently used in Nepali (1) as a general term (*kirāti*) for Limbus and "Rais" (numerous Tibeto-Burman speaking groups in eastern Nepal) and (2) as a term for the dynasty which is presumed to have preceded that of the Licchavi (?4C.) in the Kathmandu valley.

Since the late 1970's, Limbu, in the Limbu script, has been offered in the English-medium state schools of Sikkim as a vernacular language subject in areas populated by Limbus. Over 4000 pupils study Limbu for one hour daily, taught by more than 300 teachers. Course books are available for classes 1-12. In Nepal, Limbu script is taught more sporadically on private initiative. A Limbu newspaper, *Ta:nychoppa* ["Morning Star"], has been published somewhat irregularly from Kathmandu since 1995. There is some literary production in both Nepal and Sikkim.

The Limbu script is often called "Sirijonga" ("Srijunga"/"Srijanga") after the Limbu culture-hero Sirijonga, who is credited with its invention. The oldest known Limbu writings were collected in Darjeeling district in the 1850's. The script in which these were written is the ancestor of the modern script. It differs primarily in not representing voiced occlusive consonants (/b, bh, d, dh, g, gh, j/). There is, in fact, no phonological opposition between voiced and voiceless occlusives in Limbu phonology. The inherent vowel in the old script is *a* and not *open o* as in the modern script.

The modern version of the script was developed beginning in 1925 in Kalimpong, Darjeeling district. It is a revival of the older script, with the addition of voiced consonants and some changes in the shapes and functions of the letters. Voiced consonants may have been added to accomodate loan words, or with a view to using the script for neighboring languages, or simply to make it more like Devanagari. The signs for length and glottal stop have been added in recent years.

Virtually all Limbu speakers are bilingual in Nepali, and far more Limbus are literate in Nepali than in Limbu. For this reason, many Limbu publications contain material both in Nepali and in Limbu, and in some cases the Limbu appears both in the Limbu script and in Devanagari. In some publications, literary neologisms are glossed in Nepali or in English.

A preliminary draft proposal for Unicode encoding of the Limbu script appeared in Unicode Technical Report #3 (1992, review period ending 15 August 1993), based on a draft by Lloyd Anderson, along with a "Kirat (Limbu) Names List, draft 92/10/20". These efforts do not appear to have been pursued. The authors lacked information on the current use of the script.

Description of the script

The Limbu script is of the Indian type.

Syllable initial consonants

The CONSONANT LETTERS (and clusters) represent syllable initial consonants (and clusters) followed by the inherent vowel, short *open o* (/ɔ/).

SUBJOINED CONSONANT LETTERS are joined to the bottom of the consonant letters, extending to the right, to indicate "medials" in syllable-initial consonant clusters. There are very few of these clusters in native Limbu words. The script provides for subjoined *y*, *r*, and *w*.

SMALL LETTERS are used to indicate syllable-final consonants. (See below on vowel length for further details.) The following SMALL LETTER consonants are found: *k*, *ng*, *t*, *n*, *p*, *m*, *ɲ*, *r*, *l*, corresponding to the syllable finals of native Limbu words. These letters are independent forms which, unlike the conjoined or half-letter forms of Indian scripts, may appear alone as word-final consonants (where Indian scripts use full consonant letters and the sign *virāma*). The syllable finals are of course pronounced without a following vowel. (Final occlusives in Limbu are phonetically unexploded and pronounced with a simultaneous glottal closure.)

The assignment of separate codepoints to SUBJOINED and SMALL consonant letters is discussed below.

Vowels

To indicate a syllable with a vowel other than the inherent vowel, a VOWEL SIGN is added over, under, or to the right of the initial consonant letter or cluster.

Although the vowel *open o* is the inherent vowel, the Limbu script has a combining vowel sign which may optionally be used to represent it. Many writers (e.g. Subba 1991) avoid using this sign, considering it to be redundant.

Syllable-initial vowels are represented by the VOWEL-CARRIER LETTER with the appropriate vowel sign. Used by itself, the vowel-carrier letter represents the "inherent vowel" *open o* (/ɔ/) in syllable-initial position.

The initial consonant letters have here been named "KA", "KHA", etc., although they are in fact pronounced with *open o*, and do not represent the Limbu syllables /ka/, /kha/, etc. This is in keeping with the usage of learned Limbus in writing the letter-names in Devanagari. It would have been confusing to call the vowel-carrier letter "A", however, so it is here called simply the VOWEL-CARRIER LETTER, avoiding a pronounceable name. (See Note on Limbu vowels below.)

Vowel length

Long vowels in open syllables are indicated by writing the LIMBU SIGN KEMPHRENG, which looks like the dieresis or umlaut sign, over the initial consonant or cluster.

In closed syllables, there are two different ways of indicating vowel length: (1) Vowel length is not indicated by *kemphreng*; instead, the final consonant is written as a full form, marked by the LIMBU SIGN SA-I. This sign thus marks vowel length in addition to

functioning as *virāma* in suppressing the inherent vowel. (2) Vowel length is indicated by *kemphreng*, as for open syllables, and the syllable-final consonant appears in "small" form without SA-I. Writers who follow this practice use SA-I only for final consonants which do not have small forms, regardless of vowel length. These occur essentially in loan words, and in some fast speech phenomena where a vowel is syncopated and the preceding initial consonant becomes the final of the preceding syllable. The second method has been advocated recently by certain writers in Nepal.

The sign SA-I is sometimes referred to in Limbu sources (even in sources in which it is used only in long syllables) as a "shortness" marker, as the consonant pronounced without the inherent vowel is regarded as shortened.

Glottalization

The LIMBU SIGN MUKPHRENG represents glottalization. For the purposes of the present proposal it may be considered as representing a final glottal consonant. (This is not quite satisfactory as a phonological analysis.) Mukphreng never appears as a syllable-initial. Although some analysts consider that word-final nasal consonants may be glottalized, this is not currently indicated in the script; *mukphreng* is not currently written after final consonants. (No other syllable-final consonant clusters occur in Limbu.)

Codepoint issues

The main issue here is the assignment of separate codepoints for medials (SUBJOINED LETTERS) and finals (SMALL LETTERS).

The question is whether a *halant* or *virama* should be used, as has been done in the UNICODE Devanagari coding, to mark the absence of the inherent vowel on consonants which appear as syllable finals or as the initial element of clusters. In my view this would lead to confusion in Limbu. The reason is that the Limbu sign SA-I is itself clearly based on the Indian halant or virama, but for a majority of current writers it has a different semantics, since it indicates vowel length on closed syllables. Although some authorities (Bairagi Kaila, in press) advocate the elimination of this function of SA-I (see above), it seems desirable to respect the two orthographic traditions. Introducing a second version of *virama* (in addition to SA-I) would further complicate matters.

There is phonological justification for considering initial and final consonants as separate inventories.

As for the initial consonant clusters, there is no native tradition of *viram* notation for these. Similar subjoined letters are assigned codepoints in Unicode Tibetan script.

Eliminating the subjoined and small letters would be contrary to the native concept of the script and would in any case only save a small number of codepoints as compared to the situation in Devanagari, where combining forms are very numerous. The resulting system would be less transparent, and more difficult to render. For these reasons, the assignment of separate codepoints is proposed.

A few codepoints have been reserved for letters that are currently obsolete but would be necessary for publishing older texts.

Codepoints have been reserved for the following signs found in 19th Century manuscript sources. The semantics of the last three is not entirely clear to the present proposal writer, so no name is proposed.

LETTER NYA (*ñ*)

SIGN LO for the exclamatory (among other uses) particle *lo*.

SIGN DOT ABOVE (probably equivalent to *anusvara*).

a small-letter final nasal of uncertain use. The old alphabet has two finals in the form of small circles, one like the current final *ng* both in form and in position, the other placed below the initial. It appears that the former represents nasalization of some kind and the latter final *ng*.

an extra vowel symbol (?resembling Devanagari short *i*).

Codepoints are reserved for two additional letters found in early versions of the modern script, from The Limbu Primary Book (1929) to I. S. Chemjong's dictionary (1960):

LETTER JHA

LETTER SSA (*ṣ*).

Limbu equivalents for Devanagari conjoined characters (*tr*, *kṣ*, and *jñ*) found in early modern sources are not assigned codepoints.

Collating order

There is no universally agreed alphabetical order for Limbu script. Modern sources essentially follow Devanagari in most respects. The order of the alphabet in the old script is radically different.

In Nepal, it is common to sort Limbu in the usual Devanagari alphabetical order, with the GLOTTALIZATION sign often considered as the last of the consonants (after HA), and long vowels sorted after their short partners. The added Limbu vowels OPEN O (when it is written with a vowel sign) and OPEN E, appear, in that order, after the other vowels in the sort order. (Note that although *e* precedes *o* in Indian alphabets, Limbu *open o* precedes *open e* in most sources.)

In Sikkim, a somewhat different order is used: the letter NA is placed before TA, and the letter GHA is placed at the end of the alphabet.

Glyph placement

The vowel signs *a*, *open e*, and *i* appear over the initial, *u* appears under the initial, *e* and *ai* appear to the right of the initial, and both *o* and *au* appear both over and to the right of the initial. (The vowel sign *o* is simply *a + e*; *au* is *a + o*.) The LIMBU SIGN KEMPHRENG (vowel length) is written over the initial consonant or vowel-carrier, often slightly to the right, in any case after any superscribed vowel sign. It is placed over the horizontal portion of the vowel signs *a* and *i*.

The SMALL LETTER syllable-finals *k*, *n*, *p*, *m* and *l* occupy the upper half of the height of full initial consonants (the typographer's "x-height"). The final *ng*, the subjoined medials *-y-* and *-w-*, and the glottalization sign *mukphreng* occupy the lower half of this space. The finals *t* and *r* and the sign SA-I occupy the same vertical space as the vowel *u*, under the space occupied by full initial consonants. The subjoined medial *-r-* appears at this same level, after the initial consonant.

Punctuation

The main punctuation mark used is the double vertical line, here called DOUBLE DANDA ("stick") as in Devanagari Unicode. (The name "viram" ["pause"] is avoided here to

avoid confusion with the virama sign described above.) The Limbu question mark (especially) and exclamation point have shapes peculiar to Limbu, especially in Sikkimese typography. The former is assigned a codepoint to facilitate the use of both Limbu and Devanagari scripts in the same documents.

Subba 1991 proposes 9 punctuation marks for Limbu. It is not clear to what extent these have been adopted; most can be supplied from Devanagari or other fonts.

Digits

Digits have distinctive forms and are assigned codepoints because Limbu and Devanagari (or Limbu and "Arabic") numbers are often used in the same document.

Implementations

There are a number TrueType implementations of the Limbu script in circulation in Nepal. The one used here is "Sirijonga". The copyright status of these fonts is unclear.

Srijunga. (c) 1994 Karun Thapa. Sat Oct 01 15:12:03 1994.
(Srijunga.ttf. saved 05 Sept. 1996 09:47)

Sirijonga. K.Yarang, J.R.Pandhak, Y.Lawoti, Y.P.Yakwa. (Fontmonger)
(Sirijng.ttf. saved 11 Feb. 1999 08:55).

Yakthung. K.Yorong & G. Ijam. (Fontmonger)
(Yaktng.ttf. saved 12 Jan. 1997 23:01.)

Authorities

Two widely respected native authorities on Limbu script, representing current Nepalese and Sikkimese usage, respectively:

(1) Mr. Til Bikram Nembang, former member of the Royal Nepal Academy and editor of the completed but still unpublished Royal Nepal Academy Dictionary of Limbu. Mr. Nembang writes under the pseudonym of "Bairagi Kaila". He has published a number of books of Limbu "mundhum" (traditional rituals) in Limbu, in both Limbu and Devanagari scripts, with Nepali translations.
mail address: GPO Box No. 3290, Kathmandu, Nepal.
email: nembang@wlink.com.np

(2) Mr. B. B. Subba (Muringla Nugo), Joint Director, Department of Education, Government of Sikkim. Mr. Subba has published a dictionary of Limbu, which he now considers obsolete, and numerous textbooks used in Sikkim. His design of a Limbu font won the President's award in India in 1981.
address: Joint Director, Education Department, Government of Sikkim, Gangtok, Sikkim, India.

The Limbu cultural association, Kirat Yakthung Chumlung, publishes *Tanchoppa*.
website: <http://www.msnepal.org/partners/kyc/index.htm>.
address: P.O. Box 4548, Mahalaxmasthan, Lalitpur, Kathmandu, NEPAL.
email: chumlung@wlink.com.np
tel: 977(1)520349
Email : chumlung@wlink.com.np

Notes on Limbu vowels

Limbu has a seven-vowel system, /i, e, ε, a, ɔ, o, u/, with phonological length on all vowels except /e/ and /o/, which are generally phonetically long and often so written in Limbu orthography. The absence of a schwa timbre may explain the adoption of *open o* as the inherent vowel. The original Unicode proposal for Limbu proposed the name EE for *open e* and OO for *open o*. These names have the advantage of offering a transliteration, as long as they are not misinterpreted as indicating length. .

In Devanagari transcription of Limbu, the Limbu inherent vowel is transcribed as the Devanagari inherent vowel. In fact, the vowel represented by the inherent vowel in Limbu is rather different in function from that of Indo-Aryan languages, although it may be close in pronunciation. The Devanagari inherent vowel represents *a*, the short partner of *ā*, but with a less open, schwa-like pronunciation in many languages. (In Bengali it may even be pronounced "o".) The Limbu inherent vowel represents *open o* (/ɔ/), which has both long and short varieties in full opposition with long and short /a/. In Devanagari transcription, Limbus use the DEVANAGARI SIGN VISARGA to indicate length, placing it after the unvoiced consonant to indicate the Limbu vowel /ɔ:/, after the DEVANAGARI VOWEL SIGN AA (*ākārā*) to indicate Limbu /a:/, etc. Thus the opposition between the Limbu vowels /a/ and /ɔ/ is (or can be) preserved. Other problems in the Devanagari transcription of Limbu need not be discussed here.

References

- Bairagi Kaila, ed. in press. Limbu-Nepali-Angreji Sabdakos. [Limbu-Nepali-English Dictionary.] Royal Nepal Academy. Kathmandu. [Includes an introduction describing the script.]
- Chemjong, Iman Singh. 1965. Limbu-Nepali-English Dictionary. Kathmandu, Royal Nepal Academy. [in Devanagari script.]
- Driem, George van. 1987. A Grammar of Limbu. Mouton de Gruyter. [Appendix: Anthology of Kiranti scripts, pp. 550-558; see comments in Sprigg 1989.]
- Shafer, Robert. 1966-1973. Introduction to Sino-Tibetan. 5 parts. Wiesbaden. Otto Harrassowitz.
- Sprigg, R.K. 1959. Limbu books in the Kiranti Script. Akten des XXIV Internationalen Orientalisten-Kongress, Munich, 1957. Wiesbaden, DMG. [The modern script described in this work is now outdated.]
- Sprigg, R.K. 1989. review of van Driem 1987. BSOAS 52:1.163-165 [corrects errors concerning the old Limbu script].
- Subba, B. B. 1979. Limbu Nepali English Dictionary. Gangtok, Govt. of Sikkim, Directorate of Education. [Limbu and Devanagari scripts.]
- Subba, B. B. ?1991. Yakthuŋ huʔsiŋlam ["Limbu Self-teaching method"] / Limbu akṣar gāiḍ ["Limbu letter guide"]. Gangtok. Kwaliti Stores. [Nepali and Limbu]
- Yoñhañ, Khel Rāj. 2052 B.S. [1995]. Limbū Nepālī śabdakoś. ?Lalitpur. [in Limbu script.]

Example texts

The following are supplied as examples of current printed documents in Limbu script:

- (1) Tanchoppa ("Morning Star") newspaper, year 5 no. 7. 20 July 2000. Kathmandu, Nepal. [Front page in Limbu (Limbu script) and Nepali (Devanagari). The lead story is about the publication of a new Limbu textbook for 3d grade -- see illustration. Computer print.]

- (2) Gulliver-re lamdik. (Gulliver's travels). Abridged translation by B. B. Subba (Muringla Nugo). 1989, re-edition 1996. Dept. of Education, Govt. of Sikkim. Gangtok, Sikkim. viii + 88 pp. [Page 1; offset ms.]
- (3) Sumhalung. No. 2. 2054 B.S. [1997-1998]. Phekden, Panthar, Nepal. [Limbu literary review in Limbu and Nepali] [p. 113, a poem by Bhavani Tawahang. The Limbu question mark appears at the end of line 2. Computer print.]
- (4) Tongsing tokma mundhum ["Tongsing Ritual"]. Bairagi Kaila. 2052 B.S. [1995-1996]. ix + 389 pp. Royal Nepal Academy, Kathmandu. [One of a series of editions of Limbu rituals with translations, notes, and vocabulary by the same author. The illustrated page, p. 35, is the first page of annotated text. The two upper sections on each page are in Limbu (Limbu and Devanagari scripts); the lower section is a Nepali translation. Computer print.]

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NAMES LIST

The list below is a complete inventory, including some letters only used in older versions of the script. There is space for additions.

Column 1 is the codepoint; 2: the glyph (combining marks are represented with a majuscule O); 3: the pronunciation of the glyph as written; 4: the native name of the glyph, if different from 3; 4 the proposed Unicode name.

INITIALS (VOWEL-CARRIER AND CONSONANTS)

00	ᳵ	o	om	LIMBU VOWEL-CARRIER LETTER
01	ᳶ	ka		LIMBU LETTER KA
02	᳷	khə		LIMBU LETTER KHA
03	᳸	ga		LIMBU LETTER GA
04	᳹	ghə		LIMBU LETTER GHA
05	ᳺ	ŋa		LIMBU LETTER NGA
06	᳻	ca		LIMBU LETTER CA
07	᳼	chə		LIMBU LETTER CHA
08	᳽	ja		LIMBU LETTER JA
09		jhə		(reserved for) LIMBU LETTER JHA
0A		nya		(reserved for) LIMBU LETTER NYA
0B	᳾	ta		LIMBU LETTER TA
0C	᳿	thə		LIMBU LETTER THA
0D	᳠	da		LIMBU LETTER DA
0E	᳡	dha		LIMBU LETTER DHA
0F	᳢	na		LIMBU LETTER NA
10	᳣	pa		LIMBU LETTER PA
11	᳤	pha		LIMBU LETTER PHA
12	᳥	ba		LIMBU LETTER BA
13	᳦	bha		LIMBU LETTER BHA
14	᳧	ma		LIMBU LETTER MA
15	᳨	ya		LIMBU LETTER YA
16	ᳩ	ra		LIMBU LETTER RA
17	ᳪ	la		LIMBU LETTER LA
18	ᳫ	wa		LIMBU LETTER WA
19	ᳬ	sha		LIMBU LETTER SHA
1A		ssa		(reserved for) LIMBU LETTER SSA
1B	᳭	sa		LIMBU LETTER SA
1C	ᳮ	ha		LIMBU LETTER HA

COMBINING VOWEL SIGNS

20	ᳯ	a	amma	LIMBU VOWEL SIGN A
21				(reserved) (for old extra vowel sign)
22	ᳱ	i	iksu	LIMBU VOWEL SIGN I
23	ᳲ	u	uksu	LIMBU VOWEL SIGN U
24	ᳳ	e	ettu	LIMBU VOWEL SIGN E

25	○ᵒᵒ	ai	ainu	LIMBU VOWEL SIGN AI
26	○ᵒ	o	tumo	LIMBU VOWEL SIGN O
27	○ᵒᵒ	au	tumbo	LIMBU VOWEL SIGN AU
28	○ᵒ	ɔ	titcɔ	LIMBU VOWEL SIGN OPEN O
29	○ᵒ	ɛ	petcɔ	LIMBU VOWEL SIGN OPEN E

SUBJOINED CONSONANTS

2A	○ᵒ	-yɔ	e:ktum yɔ	LIMBU SUBJOINED LETTER Y
2B	○ᵒ	-rɔ	e:ktum rɔ	LIMBU SUBJOINED LETTER R
2C	○ᵒ	-wɔ	e:ktum wɔ	LIMBU SUBJOINED LETTER W

SMALL CONSONANTS

30	○ᵒ	-k	cuk -	LIMBU SMALL LETTER K
31	○ᵒ	-ŋ	cuk ŋɔ	LIMBU SMALL LETTER NG
32				(reserved) (for old extra ?nasal final)
33	○ᵒ	-t	cuk tɔ	LIMBU SMALL LETTER T
34	○ᵒ	-n	cuk nɔ	LIMBU SMALL LETTER N
35	○ᵒ	-p	cuk pɔ	LIMBU SMALL LETTER P
36	○ᵒ	-m	cuk mɔ	LIMBU SMALL LETTER M
37	○ᵒ	-r	cuk rɔ	LIMBU SMALL LETTER R
38	○ᵒ	-l	cuk lɔ	LIMBU SMALL LETTER L

OTHER SIGNS

39	○ᵒ	ʔ	mukphreŋ	LIMBU SIGN MUKPHRENG
3A	○ᵒ	:	kembhreŋ	LIMBU SIGN KEMPHRENG
3B	○ᵒ		sɔ-i	LIMBU SIGN SA-I
3C				(reserved for) LIMBU SIGN DOT ABOVE
3D		lo		(reserved for) LIMBU SIGN LO

PUNCTUATION

3F	ᵒ		sensibe	LIMBU PUNCTUATION QUESTION MARK
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DIGITS

46	0	0	hop	LIMBU DIGIT ZERO
47	ᵒ	1	thik	LIMBU DIGIT ONE
48	ᵒ	2	netchi	LIMBU DIGIT TWO
49	ᵒ	3	sumsi	LIMBU DIGIT THREE
4A	ᵒ	4	lisi	LIMBU DIGIT FOUR
4B	ᵒ	5	ŋasi	LIMBU DIGIT FIVE
4C	ᵒ	6	tuksi	LIMBU DIGIT SIX
4D	ᵒ	7	nusi	LIMBU DIGIT SEVEN
4E	ᵒ	8	yetchi	LIMBU DIGIT EIGHT
4F	ᵒ	9	phaŋsi	LIMBU DIGIT NINE

	0x0	0x1	0x2	0x3	0x4
0	𑄀	𑄁	𑄂	𑄃	
1	𑄄	𑄅		𑄆	
2	𑄇	𑄈	𑄉		
3	𑄊	𑄋	𑄌	𑄍	
4	𑄎	𑄏	𑄐	𑄑	
5	𑄒	𑄓	𑄔	𑄕	
6	𑄖	𑄗	𑄘	𑄙	𑄚
7	𑄛	𑄜	𑄝	𑄞	𑄟
8	𑄠	𑄡	𑄢	𑄣	𑄤
9		𑄥	𑄦	𑄧	𑄨
A			𑄩	𑄪	𑄫
B	𑄬	𑄭	𑄮	𑄯	𑄰
C	𑄱	𑄲	𑄳		𑄴
D	𑄵				𑄶
E	𑄷				𑄸
F	𑄹			𑄺	𑄻

Character code table for Limbu script.
 Codepoints 09, 0A, 1A, 21, 32, 3D, 3F are reserved for currently obsolete signs.
 The font illustrated is "SIRIJONGA".

APPENDIX: Spelling out loud in Limbu

The names of the glyphs are pronounced in series, followed by the pronunciation of the whole syllable.

1. Vowel signs (shown with initial k).

Z	kɔ	"kɔ" (?the inherent vowel is sometimes called "ɔm")
Ẓ	ka	"kɔ amma ka"
Ẑ	ki	"kɔ iksu ki"
Ḑ	ku	"kɔ uksu ku"
Zʹ	ke	"kɔ ettu ke"
Zʰ	kai	"kɔ ainu kai"
Ẓʹ	ko	"kɔ tumo kɔ"
Ẑʰ	kau	"kɔ tumbo kau"
Ẓ̣	kɔ	"kɔ titɔ kɔ" ((tijo in Subba 1979))
Ẓ̂	kɛ	"kɔ pɛtɔ ke" ((pejo in Subba 1979))

2. Final consonants

kɛdumba sɔk ["conjoined letters", cf. *tumma* "to meet"] or *cuk sɔk* ["small letters"] (? properly *cu:k sɔk*, cf. Limbu *cu:k-pa* "small").

Z ^c	kɔk	"kɔ cu:k kɔ kɔk"
Z ^o	kɔŋ	"kɔ cu:k ŋɔ kɔŋ"
Z ^o	kɔn	"kɔ cu:k nɔ kɔn"
Z _~	kɔt	"kɔ cu:k tɔ kɔt"
Z _ʰ	kɔp	"kɔ cu:k pɔ kɔp"
Z _ʰ	kɔm	"kɔ cu:k mɔ kɔm"
Z _~	kɔr	"kɔ cu:k rɔ kɔr"
Z ^u	kɔl	"kɔ cu:k lɔ kɔl"

3. Medial (subjoined) consonants

ektumba sɔk ["after-conjoined letters" (cf. *ek* "back")]

Z _~	kyɔ	"kɔ ektum yɔ kyɔ"
Z _~	krɔ	"kɔ ektum rɔ krɔ"
Z _ɛ	kwɔ	"kɔ ektum wɔ kwɔ"

Prosodies

kuse:k sɔk (translated "phonic symbols" in Limbu sources).

Z _~	kɔʔ	"kɔ mukphrɛŋ kɔʔ" (glottalization or glottal stop)
Ẑ̄	kɔ:	"kɔ kembhrɛŋ kɔ:" (length)
ZZ	kɔ:k	"kɔ kɔ sɔ.i kɔ:k" (<i>virāma</i> with length of the preceding vowel)