

THE HSIHSIA, LOLO, AND MOSO LANGUAGES

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The correspondences between Hsihsia and the Lolo-Burmese languages, mainly Written Burmese, were outlined in my book *A Study of the Tosu-Chinese Vocabulary Tosu I - YU* (1973), and the relationship between Hsihsia and Ch'iang was discussed in a separate paper (Nishida 1976). By concentrating our efforts on the origins of lexical forms in Hsihsia, we gradually bring to light not only the forms which are close to Ch'iang or which are cognate with Tibetan and Burmese forms, but also the nature of the relationship with Tibeto-Burman languages such as Lolo and Moso. At present, however, it is still difficult to present a systematic comparison of Hsihsia and these languages. Therefore, in this paper, I only discuss the major aspects of the problem, focusing on a number of topics.

Hsihsia and Written Tibetan. First, the number of Hsihsia forms which can be considered cognate with those in Written Tibetan is larger than we are inclined to think. Some are clearly loan words, e.g. lo-tsa-ba 'translator', and others supposedly reflect widely-distributed areal words, e.g., 'hare'. But, numerous others show non-accidental relatedness.¹

			<u>Wr.T</u>
(R 1-L20-L17)	lu-tsa ^h -va ^h	'translator'	lo-tsa-ba
(R61-R42)	ɬɬ-ɣɔ ^h	'hare'	<u>ri-bong</u> ~ <u>ri-gong</u>
(L93)	tsiər	'doctrine'	chos
(L49)	kəh	'circle'	<u>hkhor-lo</u>
(R54)	tshə	'make, token'	mtshan
(R52)	liu	'body'	lus
(R33)	te ^h	'navel'	lte-ba
(L33)	me	'eye'	<u>mig</u> < myig
(L4)	ɣu ^h	'head'	<u>mgo</u>
(R11)	mb ^w i ^h	'eye-brow'	<u>smin-ma</u>
(R3)	ŋgiu ^h	'sinews'	<u>rtsa-rgyus</u> ~ <u>rgyung-ba</u>
(L48)	lo ^h	'to return'	<u>log-pa</u> ~ <u>ldog-pa</u>
(L62)	teN	'to be full'	<u>ltem-pa</u> ~ <u>ltams-pa</u>

In addition to these individual correspondences, we find pairs of words like the following:

¹ L and R indicate, respectively Level and Rising tones. The numeral given after these indicates the rime number. Hsihsia had 97 rimes for the Level tone and 86 for the Rising.

Wr.T.

(L83)	kar	'scale'	<u>skar-tshad</u>
(L83)	kar	'to weigh'	<u>skar-ba</u>

Furthermore, some examples enable us to postulate the correspondence Hsihsia ⁿdz-: Wr.T. gr-, kh-, zh-, exemplified below.

(R54)	ndzɛ	'boat'	<u>gru</u>
(R54)	ndzɛ	'to pass'	<u>hgru-ba</u>
(R37)	ndzɿen	'corner'	<u>gru</u>
(R28)	ndzɿ	'to bathe'	<u>hkhru-ba</u>
(R33)	ndzɛh	'other'	<u>qzhan</u>
(R34)	ndze	'to mount'	<u>zhon-pa</u>

Although the Written Tibetan forms have a wide regional distribution, cognates can also be found in other languages of the same family; thus, we can regard them as representative of Tibeto-Burman and be confident that Hsihsia is a member of the TB group.

Hsihsia and Written Burmese. A similar relationship exists between Hsihsia and Written Burmese. As I indicated in A Study of the Tosu-Chinese vocabulary, the two languages show clear correspondences not only in terms of the forms of morphemes but also in word-compounding processes. And, given the forms in Written Burmese, we can in most cases assume the existence of the corresponding forms in the Lolo languages.

Here, I would like to give some examples of the correspondences which can be summarized as Wr. B. l- : Hsihsia l-, ɿ-, hl-; and Wr. B. -ei < -iy: Hsihsia -ɿ-, -ɿ̄-.

Wr.B.

(L29)	lɿh	'air'	<u>lei</u>
(L29)	lɿh	'verb.particle'	<u>lei</u>
(L32)	l ^w ɿN	'to be heavy'	<u>lei²</u>
(L69)	hlɿ̄	'bow'	<u>lei²</u>
(L92)	ɿ̄r	'four'	<u>lei²</u>

The above examples imply that Written Burmese has merged once distinctive forms.

Loloish Comparisons. Several other correspondences are cited here, along with forms from Lolo languages:

	Wr.B.	Nyi	Ahi	Moso	
'stone' (L58)	lu	kyɔk < klɔk	lu 44 ma 44	lu 44	ry 33 (Li)
'worm' (L58)	lɔ	lɔk	ɬu 44	ɬu 22	liu 55 (Wei)

The rime of the Hsihsia word ^{ㄌㄨˊ} 'to be enough' is unknown, but we can assume it was hlɔ (L 58), based on the correspondence between Wr.B. lɔk 'to be enough' and Nyi-Lolo lu ^{ㄌㄨˊ} 'to be enough'.

		Wr.B.	Nyi	Ahi	Moso (Li) ²	Moso (Wei)
'nose'	-nɪh (R12)	hna	na 44 bɪ 33	no 22 bo 21	ɲi 55 mar 11	ɲi 55 mɔ̄ 21
'ear'	_hɲi-uh (L3)	na ²	na 55 po 44	no 44 pa 44	hɛ 33	hɛ 33 tsɿ 33
'to listen'	-nɪh (R10)	na-saɲ	na 44 ga 11	no 44	mi 33	kho 55 mi 55

Moso hɛ 33 'ear' is identical phonemically with the head morpheme of hɛ 33 -mɛ 33 'moon'. Bearing this in mind, we note the following correspondences, from which we conclude that proto-forms l-, n-; hl-, hn- were partially merged into h- in the Moso language.

	Hsihsia	Moso	Wr.B.
'moon'	hli (?)	hɛ 33 - mɛ 33	la ³
'ear'	hɲi-uh (L3)	hɛ 33	na ²
'wind'	lɪh (L29)	hɔ̄ 41	lei
'be red'	neh (L36)	hy 21	ni-

The following case is also interesting.

	Hsihsia	Wr.B.	Nyi	Ahi	Moso (Li)	Lolo (Lo)	
'thousand'	tɿ (L58)	tac-thɔ̄ng	thi 11	ty 55	to 44	ty 11	ty 33
'wings'	tɪh (R25)	a-tɔ̄ng	ty 33	le 22	to 22	ndɿ 33	dɿ 11

The initials of these two words are thought to have shared at a common stage of development the opposition of voiceless: voiced i.e. t- : d-. Hsihsia is like Nyi-Lolo and Ahi-Lolo in that they both went to t-, but Hsihsia differs from the Lolo (Nyi-Ahi), Moso and Burmese languages in terms of vowels. Therefore we can assume the development of these words is as follows:³

	Hsihsia	TB	BL	Wr.B.	Moso	Lolo
'thousand'	tu	<- *stɔ̄ng : *s-tɔ̄ng ->	thɔ̄ng	ty 11	to 44	high tone
'wings'	tɪh	<- ? : *dɔ̄ng ->	tɔ̄ng	ndɿ 33	to 22	low tone

As a side note, Hsihsia tɿ 'one thousand' should be considered to relate to

² Moso (Li) refers to the reading forms of Lichiang, which are taken from A Dictionary of Moso Heiroglyphics compiled by Li Lin-tsan, phoneticized by Chang Kun, according to the pronunciation of Ho Tsai, Memoirs of National Central Museum, series B no. 2. 1944.

Weihsi or Wei refers to the spoken forms of Weihsi dialect, which are based on Fu Mao-chi (Fu Maoji, 1943). Luquan (Lu) forms are taken from Ma Hsteh-liang (Ma Xueliang, 1948).

³ Another possible interpretation is this: Hsihsia -uh corresponds to Wr.B. -ɔ̄ng, Hsihsia -ɿ corresponds to both Wr.B. -ɔ̄ng and -ɔk (e.g. 'worm', 'stone', 'wings', 'thousand' i.e., in Hsihsia some forms which were identical with those which correspond to Wr.B. -ɔk also correspond in part to Wr.B. -ɔ̄ng. In Hsihsia we find many forms which correspond more directly to Proto-Lolo-Burmese than to Written Burmese.

khi 'ten thousand'.

	Hsihsia	Wr. T.	Moso
'one thousand'	tɿ (L 58)	stong	tɿ 11
'ten thousand'	khɿ± (R 28)	khri	kɯ 11

Here the personal pronouns and the numerals are cited as examples of lexical systems.

Personal pronouns

	Hsihsia	Moso (Li)	Moso (Wei)	Lolo (Lu)	TB
'we'	hngah (R14)	ŋʌ 11	ŋa 21	ŋɿ 55	*nga
'you'	nah (R17)	nʌ 11	no 21	na 11	*na
'he/she/it'	thah (R17)	thɯ 44	thɿ 33	thi 55	*khi

Numerals

'one'	ləw (L43)	ɕɯ 33	ɕɿ 33	tha 11
'two'	nɿN (L32)	ŋi 33	ŋi 15	ni 55
'three'	sɿ (L70)	sɯ 11	so 33	sɿ 11
'four'	ɿɿ (L92)	ro 33	lo 33	ɿi 33
'five'	ŋɿɿh (L27)	wa 33	ŋua 33	ŋu 33
'six'	tʂhɿew (L46)	tʂhwa 55	tʂhueN 55	tʂhu 55
'seven'	ʂa (L64)	ʂar ɿɿ	ʂa 33	ɕi 55
'eight'	ʔyar (L82)	ho 55	xo 55	ʔheN 55
'nine'	ŋɿʷɿN (L32)	ngy 33	ŋku 33	kɯ 33
'ten'	ʔa (R56)	tʂhe 11	tʂhe 21	tshe 33
'hundred'	ʔyir (R72)	ɕi 33	ɕi 33	ʔhuN 11

Although not rigorously verified, except for 'one' and 'ten', there seems to be no problem in assuming the numerals to be cognate. The origins of Hsihsia 'one' and 'ten' are still not very clear.

An initial ʔh- in Luquan Lolo corresponds to Cr-, r- in Burmese.⁴

	Luquan	Wr.B.
'rain'	ʔhuN 33	rwa ² - < *Crwa
'house'	ʔhəN 33	im < *Crim
'horse'	ʔhuN 11	mrang ²
'to stand'	ʔheN 55	rap < *Crap
'eight'	ʔheN 55	hrac < *Crac
'hundred'	ʔhuN 11	ra < *Crya

Other. In addition to these we find some examples in which **sbr-** and **zh-** in Written Tibetan correspond to this ʔh-of Luquan Lolo.

⁴ In the Lolo languages there is a general tendency to nasalize final vowels after an initial h-. This tendency seems to be especially strong in the reading of texts of Luquan Lolo in Yunnan and Dading Lolo in Guizhou.

	Luquan		Wr.T.
'cap'	ʔhuN 11		zhwa < *zhu-ba
'fly'	ʔhəN 11 my 33		sbrang-ma, Wr.B. yang < *Crang
There is one special case:			
	Luquan		Wr.B.
'bat (the animal)'	ʔhaN 33 nɔ 33		lang ² -no ³

The Four Seasons. The following examples deal with the four seasons.

	'spring'	'summer'	'autumn'	'winter'
Lolo (Lu)	nɔ 33	ge 33	tghu 22	tshy 33
Moso (Li)	nɔ 11	zo 11	tghy 55	tshu 44
Hsihsia	n ^w ɪ (R28)	ʔtʂhieN (?)	tshɿ (L68)	tsur (L75)

With regard to these, we notice that the four forms as a whole in each of these three languages show very close relationships to each other, whereas a correspondence between Burmese and Hsihsia is found only in the words for 'spring' and 'autumn' (Nishida 1973:268).

'Fire' and 'Blow'. In the Lolo-Burmese languages 'fire' and 'blow' generally resemble each other.

	'fire'	'blow'
Wr.B	mi ²	hmut
Moso (Wei)	mi 44	mu 21
Nasu	mu 33 tu 44	mu 32
Nyi	m̄ 11 tɿ 55	m̄ 44
Ahi	m̄ 44 tɿ 55	m̄ 44
Hsihsia	m̄ɪN (L31)	m̄ɪN (L31)

'Fire' and 'blow' have the same phonemic form in Hsihsia and Nyi and Ahi Lolo.

However, the vowels -i in 'fire' and -u in 'blow' reflected in both Wr.B. and Moso (Weihsi), are considered to be the original Lolo-Burmese vowels. Cf. Wr.T. *me* 'fire', *hbuɪ-pa* 'blow'.

	LB	Wr.B	Moso	Hsihsia	Nyi,Ahi	cf. O.Jap.
'fire'	* mi	mi ²	mi	mɪN	m̄-	ɸ'
'to blow'	*Qmut	hmut	mu	mɪN	m̄	ɸuk-ɸu

Luquan Lolo mɔ 33 corresponds to Wr.B. mi² 'fire' and tshɔ 21 corresponds to Wr.B. chi 'oil'.

'Fat', 'ride', etc. Observe other forms whose vowel -ɔ corresponds to Wr.B. -i.

	Wr.B.	Lolo (Lu)
'place'	chi	dʒɔ 11
'to ride on'	ci ² -sañ	dʒɔ 11
'to rise'	khyi ² -sañ	tghɔ 55
'to be big'	kri ² -sañ	ɣwɔ 33 ⁵

⁵ Hsihsia and the Lolo-Burmese languages show the following correspondences for

'woman'	min ² -ma	ʔa 11 mɔ 33
'cloud'	tim	tɔ 33
'tail'	mri ²	mɔ 33

Although it could be argued that Nyi Lolo **tshz 33** 'to be fat; coarse animal oil' corresponds to Wr.B. **chi** 'oils and fats', Ahi Lolo **tsho 44** 'to be fat' to Wr.B. **chu** 'to be fat'. I suggest considering that, except for the cases where -ɔ corresponds to Burmese -i as in Luquan Lolo, there were two stem forms: one with the vowel -i and the other with -u, which contributed to the semantic distinction between ***chi** 'lump of oil' and ***chu** 'to be fat' at the Lolo-Burmese stage.

	Wr.B.	Wr.T.	Hsihsia	Moso (Li)
'oil'	chi	tshil		
'lean'		tshil-med		
'fat, not melted'		tshil		
'fat, greasy'		tsho-ba	tshu (L1)	
'fat'		tshil-can		
'fat-flesh'				tshar 11

As indicated earlier, Luquan **dzɔ 11** corresponds to Wr.B. **ci²** 'to ride (on a horse)'. Other related morphemes exist.

Wr.T. **hchib-pa ~ hchibs-pa** (resp.) 'to mount' corresponds to Wr.B. **ci²**. In Tibetan there is another common form **zhan-pa** 'to ride'; **rta-la zhan-pa** 'to ride on a horse'. Moso (Li) **ndzɛ 44** 'to ride (on a horse)' **zwa 44 ndzɛ 44** 'to ride on a horse' is thought to correspond to the latter forms.

Hsihsia has the following three forms, the last two distinguished by tone. The noun is indicated by a level tone (L) and the verb by a rising one (R).

tʃhi ^h (L29)	'to ride' (on a horse)
ŋdze (R34)	'to ride' (on a horse)
ŋdze (L37)	'riding'

The above form **tʃhi^h** is cognate with Wr.B. **ci²** and Wr.T. **hchib-pa**. **ŋdze**, which is cognate with Moso **ndzɛ 44**, corresponds to Wr.T. **zhan-pa**.

Tonal Differentiation. In Hsihsia we find a few other cases where the tone distinguishes between a noun and a verb.

	Hsihsia	Moso (Wei)	Moso (Li)
'shoulder' (N)	<u>wa</u> (L63)	khui 33 phi 21	
'to carry on' (V)	<u>wá</u> (R56)	mpo 15	mbo 11
'equality' (N)	<u>kaf</u> (L17)		
'to equate' (V)	<u>ka</u> (R56)		

'Sun' and 'Day'. In Written Tibetan **nyi-ma** 'sun' and **nyin-mo** 'day' are distinct, but Burmese and Moso have the following forms:

'to be big' and 'to know'.

	Hsihsia	Wr.B. Nyi	Ahi	Nasu	Luquan	Wr.T.
'to be big'	lɛ (R54)	kri ² -jɛ 11	ʔa 21	uɔ 33	ʔwɔ 33	che-ba
'to know'	sɛ (R54)	si ³ -sa 55	sa 55	sə 55	sə ^h 55	shes-pa

	Wr.B.	Moso (Wei)	Moso (Li)
'sun'	nei	ɲi 33 me 33	ɲi 33 me 33
'day'	nei ³	ɲi 33 nua 21	ɲi 33
'today'	i-nei ³	tshɿ 33 ɲi 33	tshu 33 ɲi 33

Another form bi 33 'sun', known to be an older form, is used in Moso when chanting a sutra.

'Sun' and 'day' are generally distinguished in the Lolo languages.

	Ahi	Nyi
'day'	ni 44, ni 44 ɲa 11	ɲ 33
'sun'	li 55 tɕi 22, tɕi 22 (zo 21)	lo 11 tsʒ 33 ma 33

In Luquan Lolo a distinction is made between tha 11 ni 11 'today' and dzi 11 'day'. The latter form dzi corresponds to Ahi tɕi 22 and Nyi tsʒ 33, while ni 11 in the former is clearly cognate to Ahi ni 44, Nyi ɲ 33.

On the other hand 'sun' is mu 33 tshu 44 in Nasu and ɕ 33 tshɕ 55 in Hani. These forms correspond to Luquan tshu 55 'sunlight' and are thought originally to have had the meaning 'the sun's heat'.

In Hsihsia we find m₁ ~ mb₁ (R7) 'sun', n₁N (L32) 'daytime', neh (L36) 'day', sɕh (R42) 'sun'. M₁ ~ mb₁ corresponds to Moso bi, n₁N to Wr.T. nyin, neh to Wr.T. nyi- and Wr.B. nei and sɕh to Lolo *tshɕ and Moso so 11 'early morning'.

'Tree', 'Wood', and 'Liver'. 'Tree', 'wood', and 'liver' present clearly parallel correspondences.

	Hsihsia	Wr.T.	Wr.B.	Nyi	Ahi	Moso (Wei)	Moso (Li)
'tree, wood'	sɕh (L11)	shing	sac	sʒ 44	si 44	sʌ 33	sʌ 33*
'liver'	-sɕh (R10)	mchin-pa	a-sa ^h	sʒ 11	kɛ 22	sʌ 55	sʌ 55 *'brush'

By comparing another example with 'tree':

'tree'	-phu (R1)	sdong-po	sac-pang	sʒ 44	tse 22	ntsʌ 21	ndzʌ 11
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we see that 'tree' in Hsihsia is cognate with Chiang phu (which is related to Wr.B. pang) and in Moso (Li) the original meaning of 'tree' changed to 'brush' and the old voiced form was preserved for 'tree, wood'. The Weihsia dialect of spoken Moso is characterized by the change of this voiced initial into a voiceless one with prenasalization.⁶

Voiced and Voiceless Prenasalized initials. Another morpheme shows an important correspondence between the voiceless prenasalized nts- of Spoken Moso and the voiced prenasalized ndz- of Written Moso: Moso (Weihsia) ntso 21: Moso (Li) ndzo 11 'bridge'. The correspondence in tone is also considered to be regular: Moso (Weihsia) 21: Moso (Li) 11 → Low. Hsihsia son (L50) and Wr.T. zam-pa. These forms also correspond to Luquan ntse 11, a form in opposition to ntshe 11 'bridge' and to ntshe 33 'to cross (a river)'. It could be assumed that ntsh- in both of these forms were originally voiced and underwent a

⁶ Cf. O. Jap. ki 'tree' : ki-mo 'liver'.

process to make it voiceless i.e. *ndz- > ntsh-, or vice-versa. To ntshe 33 'to cross (a river)' corresponds to Hsihsia ṽdzīah (L21) 'to cross (a river)'. In Lolo there exists gw 55 'to cross', which is cognate with Hsihsia ṽgiuh (L3) 'to cross'.

Another morpheme which is voiced in Written Moso, Written Tibetan, and Hsihsia (on the one hand), and (on the other hand), voiceless in Spoken Moso and Lolo is: Moso (Li) ndzur 44 : Moso (Wei) ntso 41 Hsihsia ṽzur (R76). (The correspondence in tone is Moso (Li) 44 : Moso (Weihsi) 41 ---> High. The rising tone in Hsihsia might also be a regular correspondence.)

These forms are cognate with Wr.T. zil-pa 'dew, dew-drop', (zil-dkar hoar-frost). On the other hand, in the Lolo languages we find Nyi tsz̥ 55 'dew', tsz̥ 55 ʒ 33 'dew-drop', Ahi tçi 55 zo 21 'dew-drop', tçi 55 tho 22 'hoar-frost', Luquan tsz̥ 55 'dew', tsz̥ 55 thy 33 'hoar-frost', all cognate with Wr.B. chi² 'frost' (chi²-hnan 'dew'). These forms contrast as follows:

Moso (Li) ndzur 44 : Hsihsia ṽzur ; Wr.T. zil-pa TB *dzil ~ *dzur
 Ahi tçi 55 : Nyi tsz̥ 55 ; Luquan tsz̥ 55 Wr.B. chi² LB *chi²

Written Moso and the Weihsi dialect display the same kind of pattern for 'snow':

Moso (Wei) mpe 33, Moso (Li) mbɛ 44 , Hsihsia wi (L67), Lolo
 Luquan vu 33, Ahi wo 21, Nasu vx 21, Wr.B. mo²pwang³.

Compound-formation. It is important in the comparative study of languages to find correspondence between languages not only in terms of morphemes but also in the formation of compounds. For example, in comparing Wr.B. na phu² 'forehead' and Nyi tçi 44 phy 22 'forehead', what corresponds is the second morpheme; the first morphemes are different from each other. In contrast, the following example displays a clear correspondence in word-formation as well. Wr.B. na phu² 'the forehead' : Luquan na 2 by 11 (written language for sutras).

The first two morphemes in Hani nɔ 55 xu 33 lu 55 'forehead' are thought to be cognate with the above morphemes, but there is an additional morpheme lu 55 in Hani. This lu 55 is cognate with the first morpheme in Moso (Weihsi) lu 55 pu 21 'forehead' and is supposed to be related to the second morpheme in Hsihsia nŷe (R68) la (L64) 'forehead'. Hsihsia nŷe means 'face' and Wr.B. na-, Luquan na²- and Hani nɔ- 55 might also have meant 'face'. (Cf. Nyi-Lolo to 11 ne 44 'eyelid').

Thus compound-formation in each of these languages can be summarized as follows:

'forehead'	Wr.B.	na	phu ²
	Luquan	na 2	by 11
	Nyi-Lolo tçi 44		phy 22
	Hani	nɔ 55	xu 33 lu 55
	Moso (Wei)		lu 55 pu 21
	Hsihsia	-nŷe	la

'Die' and 'kill'. In many of the Tibeto-Burman languages 'to die' and 'to kill' are related to each other.

		Moso	Moso			
	Wr.T.	(Li)	(Wei)	Hsihsia	Wr.B.	Nasu Nyi
'to die'	shi-ba < hchi-ba	ɣu 44	ɣl̥ 33	sɿ (L30)	sei-saŋ̃	çi 44 s̥z̥ 33
'to kill'	gsod-pa < gsad-pa	sy 55	sy 55	saŋ (L20)	sat-saŋ̃	si 55 xa 11

As is reflected in the Wr.T. forms, both the opposition of initial consonants (**sh-** : **s-**) and that of vowels (**-i** : **-ad**) were originally utilized to indicate the semantic difference, but in many Lolo languages only the vowel opposition remains.

'Medicine', 'color', and 'to dye'. Wr.B. **chi²** 'medicine' has cognates throughout Lolo, including in Moso and Hsihsia.

		'medicine'		'to take medicine'
Nyi		na 33 tshz 11		
Ahi		nou ³ -ts'e ⁴		
Luquan		tshi 33		
Moso (Li)		tshar 44		
Moso (Wei)		tshar 55 ɣu 55	tshar 55 ɣu 55	thl̥ 21
Wr.B.		chi ²	chi ²	ca ² -saŋ̃ (lit. to eat medicine)
Hsihsia		tsɿ (L68)		

Apart from this group of forms, Luquan Lolo has another form **me 22**, corresponding to Wr.T. **sman**. The noun and the verb forms are distinguished by tone in Luquan Lolo. **me 22** seems to be a remnant of the old form which had been preserved in the chanting of sutras.

		Luquan	Wr.T.
'medicine'		me 22	sman
'to take medicine'		me 11	
'to eat medicine'			sman za-ba
'to drink medicine'			sman hthung-ba

For comparison with the Hsihsia form meaning 'medicine', we might note a phonemically-identical form meaning 'color'. We also see a clear correspondence between Hsihsia, Written Burmese and Moso with regard to a related form meaning 'to dye'.

	Hsihsia	Wr.B.	Moso (Wei)
'color'	tsɿ (L68)	chei ²	tshar 55 ɣu 55
'medicine'	tsɿ (L68)	chei ²	(za 55) tshar 21
'to dye' ⁷	tshɿuf (L3)	chei ² cho ² -saŋ̃	

Hsihsia has another word **law (L22)** 'to dye'. This leads us to think of the existence of a LB verb ***rɔŋg-saŋ̃** 'to dye', which is associated with Wr.B. **a-rɔŋg** 'color', which would probably be the origin.

'To wash', 'six', 'year', and 'waist'. The well-attested correspondence between Wr.B., Moso and Hsihsia exemplified by 'medicine' and 'color' is not paralleled by 'to wash':

Hsihsia sɿew (L46) : Wr.B. chei²-saŋ̃ : Moso (Li) tshar 33

⁷ The Wr.B. means 'to dye a color'. Note also that the Hsihsia characters 'color' and 'to dye' share a semantic component.

On the other hand, the Hsihsia numeral 'six' with a level tone 46 rime shows a different pattern:

Hsihsia tšh^Yew (L46) : Wr.B. khrɔk /tšhau?/ : Moso (Li) tšhwa 55 :
 Moso (Wei) tšhu^N 55 : Wr.T. drug /ɔuk/ : Nyi khu 22 : Ahi tšhu 44 :
 Nasu tɕu 44 (tɕhu 44?)

The same can be said of the forms meaning 'year' and 'waist', both of which have a level tone 45 rime in Hsihsia.

	Hsihsia	Wr.B.	Moso (Wei)	Moso (Li)	Nasu	Luquan
'year'	kiəw (L45)	khu ³ -hnac	khu 55	khɤ 55	khu 44	khu 55
'waist'	ɳdʒiəw (L45)	kha ²	tʃɿ 55	tʃu 55	dʒu 55	

'Foot' and 'dog': 'open-mouthed' and 'closed-mouth' rimes. The forms meaning 'foot' and 'dog' show the distinction between **kai khou** 'open-mouthed' rimes and **he khou** 'closed-mouthed' rimes.

	'foot'	'dog'
Hsihsia	khɿ (L30)	kh ^w ɿ (L30)
Wr.B.	khrei < khriy	khwei ² < khuy ²
Nyi	tshɿ 11 be 44	tshɿ 11
Ahi	tɕhi 22 bie 22	tɕhi 21
Nasu	tɕhi 44 pha 21	tɕhi 33
Moso (Wei)	kh ^w 33	kh ^w 41
Moso (Li)	kh ^w 44	kh ^w 44

These indicate that many of the Lolo languages have lost the distinction between **kai kou** rimes and **he kou** rimes.

Hsihsia's complicated rime system. It is not entirely clear why Hsihsia has a complicated rime system, but the major reason may lie in the loss of the final consonants from former -VC forms and the creation of new -VW forms. Let us compare some Written Tibetan forms with Hsihsia forms:

	Hsihsia	Wr.T.		
'figure'	-su (R1)	gzugs	-ugs	: -u
'form, character'	-tu (R1)	tshul	-ul	: -u
'to rub'	šiu (L2)	shud-pa	-ud	: -u ⁸
'to be able'	-niɸ (R10)	nus-pa	-us	: -iɸ
'to sink'	ni (L67)	nub-pa	-ub	: -i
'pig'	-vaɸ (L17)	phag	-ag	: -aɸ
'needle'	-Yaɸ (L17)	khah	-ab	: -aɸ
'to take'	-hli ^w iɸ (L11)	len-pa	-en	: -iɸ
'endless'	-siɸ (L11) ⁹	zin-med	-in	: -iɸ
	-meh (L36)		-ed	: -eɸ etc.

⁸ cf. Wr.B. sut-sañ 'to wipe'.

⁹ The following correspondence is observed in expressions accompanied with forms of negation.

	Hsihsia	Wr.T.	Wr.B.
'number'	-ŋziər (R78)	grangs	
'innumerable'	-ŋziər meh	grangs-med-pa	
'continually'	-miɸ (L11) -paɸ (R17)		ma-prat

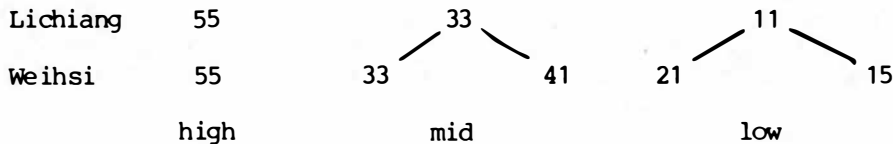
With the examples above, the loss of the final consonants -d, -gs, -l, -b, -n etc. can be dealt with in a simple way. However, examining the correspondences in a wider context, we discover that the change from -VC to -VV in Hsihsia was not a mere series of simple changes; rather, the language underwent a complicated process¹⁰ in which mergers and splits were repeated to form the complicated rime system of the 11th century. This is clearly reflected in the fact that several Hsihsia morphemes which might be expected to have forms identical with those in closely-related languages actually have quite distinct forms.

In contrast to Hsihsia, the Lolo languages lost the final consonants much later and in a rather regular way. This is thought to be the reason why complicated rime systems such as in Hsihsia were not created.

In general terms, the CVC forms in common LB developed into Hsihsia forms in one direction, into Moso forms in another direction and into the forms in other Lolo-Burmese languages in the other directions, according to the peculiarities of the various languages. After several stages of development, Hsihsia had reached the most complicated CVV forms by the 11th century. Thus the problem is to what degree can we establish, through comparing the developmental courses of later stages, the common -VC forms which convincingly explain the realization of the various forms.

In short, to a surprising extent the history of the Lolo languages has been a process of reducing and simplifying phonemic shapes (Nishida 1980).

Moso and Spoken Weihsia correspondences. The reading forms based on the Lichiang dialect of Moso and Spoken Weihsia forms show fairly regular correspondence. The basic pattern of tonal correspondences is as follows:



The voiced consonants with prenasalized initials in Lichiang correspond to voiceless consonants with prenasalized initials in Weihsia.

	(1)	(2)	(3)	(4)	(5)	(6)
Lichiang	mb-	nd-	ŋg-	ndz-	ndz-	ndz-
Weihsia	mp-	nt-	ŋk-	nts-	nts-	ntc-

		Lichiang		Weihsia
(1)	'urine'	mbi 33		mpi 33
	'kidney'	mbv 33 lv 33		mpy 33 ly 33
	'snow'	mbɛ 33		mpɛ 33
	'bee'	mbɹ 33		mpɛN 41
	'mosquito'	mbur 33 tsʌ 11		mpɛN 33 tsʌ 33
	'light'	mbo 33		mpo 41

¹⁰ Such processes are also assumed to have included the combination of a stem and a suffix. 'ear', mentioned above, and a verb form -*ɪh* serve as examples. For a discussion of the B type verb form -*ɪh*, see (Nishida 1976b, 1977).

	'fly'	mbur 33 rar 55	mpo 21 lo 55
	'to carry on'	mbo 11	mpo 21
(2)	'to fall down'	ndo 55	nto 55
	'foolish'	ndo 11	nto 21
	'drum'	nda 33 khA 11	nta 33 ku 21
(3)	'nine'	ngv 33	ŋku 33
	'sinews'	ngv 33	ŋku 41
	'thunder'	mu 33 ngv 33	mu 41 ŋku 21
	'sick'	ngo 11	ŋko 21
(4)	'to eat'	ndzu 33	ntsɿ 33
	'to sit'	ndzu 11	ntsɿ 21
	'to sing'	ndzA 33	ntsA 55
(5)	'mud'	ndzɹ 11	ntsɛN 15
	'to brew'	ndzAr 33	ntsɔɹ 41
	'to fall'	ndzo 11	ntso 21
	'leopard'	ndzu 33	ntsɔɹ 33
	'dew'	ndzur 33	ntsɔ 41
(6)	'to roast'	ndzi 55	ncçi 55
	'to walk'	ndzi 33	ncçi 41
	'vegetables'	ndzo 33	ncçio 33

In the following example it is not clear whether this is an exception to the correspondence pattern or an erroneous description of the sounds.

'to sweep'	bɹ 33	mpɛN 21
'to weave'	da 11	nta 15

In fact, there are a fairly large number of cases where we question the description of sounds. For example, if the correspondence of Lichiang **-ur** and **-o** to Weihsi **-ɔ** and **-o**, respectively, is regular, represented by

'to write'	pur 55	pɔ 55
'to have'	po 55	po 55
'pig'	bo 11	bo 15
'to see'	do 11	do 21
'knife'	zur 33	zɔ 41

then we are tempted to suspect that the Weihsi dialect forms which appear in 'a comb' Lichiang kv 33 pur 55, Weihsi po 55 and 'fine-toothed comb' Lichiang pur 55 tsa 33, Weihsi po 55 tsɿ 21 might have had pɔ 55 with the more open vowel in their actual form. However, there is no way at present to verify this.