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Re-examining the genetic position of Jingpho:
putting flesh on the bones of the Jingpho/Luish relationship[*]

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I. Introduction

This paper has a twofold aim: (a) to clarify the interrelationships among several key TB subgroups, especially as concerns Jingpho; and (b) to establish the Jingpho/Luish relationship on a firmer footing.

As one of the best studied minority Tibeto-Burman (TB) languages, with nearly a million speakers in northernmost Burma and adjacent regions of China and India, Jingpho[1] has long been recognized as being of key importance for understanding the internal relationships of the TB family. Several reasonable hypotheses have been proposed about Jingpho's closest relatives, and the time now seems ripe to evaluate them. This paper will briefly discuss five other subgroups of TB in connection with this problem: Bodo-Garo (= Shafer's "Barish"), Northern (or Northeastern) Naga (often referred to as "Konyak"), Nungish, Lolo-Burmese, and Luish. Thanks to copious new data on two Luish languages, it will now be possible to focus on that hitherto obscure branch of the family with much greater precision than before.

Any subgrouping enterprise in such a teeming linguistic area as E/SE Asia runs up against the eternal problem of distinguishing between similarities due to genetic relationship from those due to contact. All of our TB subgroups have been subject to pressure, ranging from slight to overwhelming, from coterritorial languages. We may recognize contact situations of two types:
(a) Extra-TB → TB, i.e. the influence of a non-TB language on a TB group.
This is often relatively easy to detect, e.g. the influence of Tai on Jingpho, Nungish, and Luish.[2]
(b) Intra-TB (TB [1] → TB [2]), i.e. the influence of one TB group on another.
In the present context we will have to deal with two major donor languages: Burmese (especially the dialect of Arakan State, known as Marma), and Jingpho itself. Burmese has had some influence on Nungish and Jingpho, but a particularly strong influence on Luish (both

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[1] Formerly known as "Kachin". The autonym Jingpho is also spelled "Jinghpaw" or "Jingphaw"; in India the language is known as "Singpho".
[2] See below 2.2, 3.1, 4.2.1.

Kadu and Sak/Chak). Jingpho in turn has exerted powerful pressure on Nungish (e.g. Rawang) and on Burmish (Atsi, Maru, Lashi, Achang, Bola).[3]

1.1. Benedict's unorthodox anti-Stammbaum

Recognizing the geographic centrality of Jingpho in the TB area, as well as the fact that it seems to have special areas of similarity with several other subgroups of TB, Benedict (1972:6; henceforth "STC") offered an unorthodox type of family tree, where all branches of the family (except Karenic) are seen to radiate out from Jingpho at the center. See Fig. 1.
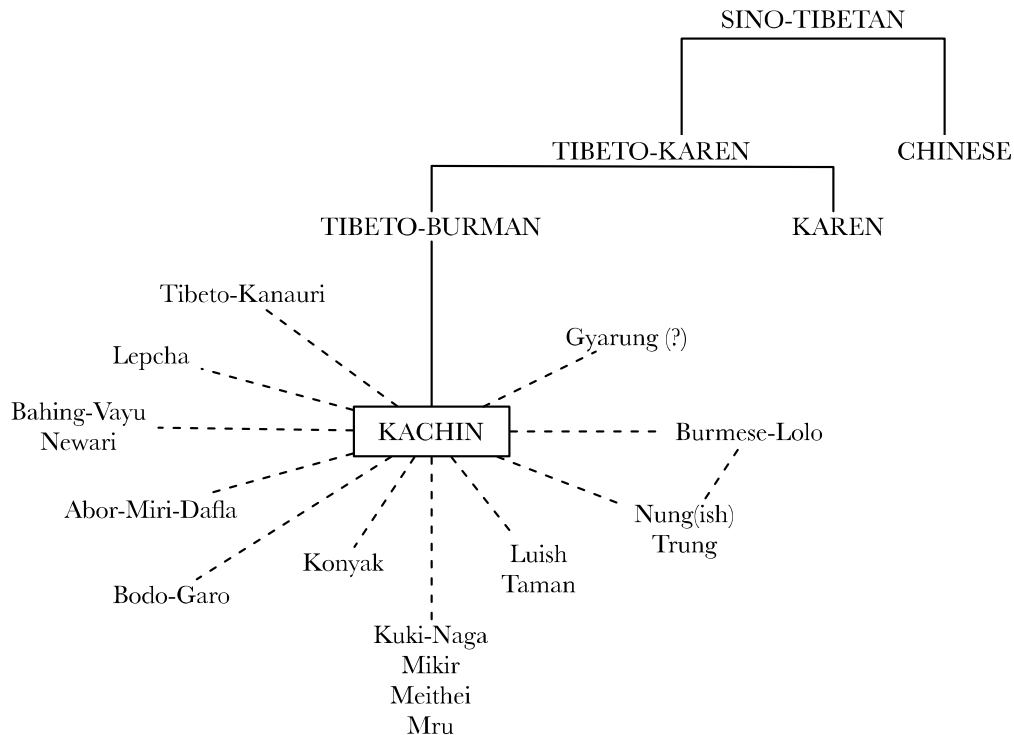

FIGURE I. Benedict's "Schematic chart of ST groups" (STC, p.6)

1.2. The Sal hypothesis: Jingpho, Bodo-Garo, Northern Naga

Some sort of special relationship among Jingpho, Northern Naga, and Bodo-Garo has been posited ever since the *Linguistic Survey of India* (1903–38) lumped them together as "Bodo-Naga-Kachin". This closeness, whether due to genetic or contact factors, was noted in STC.[4]

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[3] These Burmish groups are still considered by Chinese linguists to belong to the Jingpho (or "Kachin") nationality.

[4] "The 'Naked Naga' (Konyak) languages of the northern Assam-Burma frontier region...are most profitably compared with Bodo-Garo, though some of the easternmost members of the group...show points of contact with Kachin. Chairel, an extinct speech of Manipur...is best grouped with Bodo-Garo and Konyak" (pp. 6–7). As we shall see, it now seems clear that Chairel belonged to the Luish group.

Benedict goes on to give the two most "striking" lexical examples of this special relationship, distinctive roots for SUN and FIRE: [5]

	Kachin (Jingpho)	Namsang (N.Naga)	Moshang (N.Naga)	Garo (Barish)	Chairel (Luish)
sun	dźān	san	śar	sal	sal
fire	ʔwàn	van	var	waʔl	phal

In 1983, R. Burling, a distinguished specialist in the Bodo-Garo group, developed this idea in detail, generalizing Benedict's example of the distinctive etymon for SUN by dubbing Bodo-Garo, Northeastern Naga, and Jingpho collectively "the *Sal* languages". Later, on the basis of classic data on Sak/Cak (L. Bernot 1967) and Kadu (Brown 1920), he suggested that Luish belongs in the "*Sal* group" as well, and observed that Sak's "special similarities to Jingphaw are obvious".[6]

However, a close re-examination of Burling's evidence[7] seems to show that while the Bodo-Garo/Northern Naga relationship is quite solid,[8] the connection of either of them to Jingpho is much more tenuous and distant. A large proportion of the putative *Sal*-specific etyma are actually general TB roots, with cognates in other branches of the family.[9] Burling himself was aware that this would someday be demonstrated: "I have no doubt that a fair number of the cognate sets that I offer, even those that now seem most solid, will finally turn out to have cognates outside the *Sal* group, but the collective weight of the examples I have collected seems to me to demand an explanation." (1983:15)

As for the "obvious" similarities between Jingpho and Luish, we shall try to make them more precise, thanks to copious modern data on the two principal surviving Luish languages; Chak (Huziwara 2008) and Kadu (Sangdong 2012).

II. The Position of Nungish

In Vol. VII of *Sino-Tibetan Linguistics*,[10] Benedict quotes the opinion of the Editor of the *Linguistic Survey of India* on the genetic position of Nungish: "Grierson (p.24) refers to Nungish as a language transitional between Kachin and Lolo, and this view in general has been confirmed." In STC (p. 5) the fifth among Benedict's "seven primary divisions or nuclei of Tibeto-Burman" is listed as #5 "Burmese-Lolo (perhaps also Nung)".[11]

[5] These forms actually represent general TB roots, although their "semantic center of gravity" is elsewhere (see ***tsyar** and ***b-war**, below 4.3.3.4). The most widespread TB etyma for these concepts are ***nəy** and ***mey**, respectively.
[6] Burling 2003:178.
[7] See *Appendix I.*
[8] A particularly good reason for positing a special connection between Bodo-Garo and Northern Naga is their characteristic pair of etyma for HAND and FOOT, which differ only in that HAND ends in a velar while FOOT is an open syllable. (Scattered languages elsewhere, e.g. in Tani, have this too.) See Burling 1983:10 and *Appendix I*, below.
[9] For more on the issue of "general TB roots", please see the *Conclusion.*
[10] R. Shafer and P.K. Benedict, 1937–41. *Sino-Tibetan Linguistics, Vol. VII: Digarish-Nungish*, pp. vi–vii.
[11] In a more modern formulation, Benedict would probably have distinguished between the relatively conservative "Burmish" branch of Lolo-Burmese and the phonologically much more eroded "Loloish"

However, Nungish has usually been linked more closely to Jingpho than to Lolo-Burmese. The Rawang, who live in the far north of Kachin State, are considered to be "Kachin" by the Burmese government. In Matisoff 2003 (HPTB:5) I posited a "Jingpho-Nungish-Luish" group as one of the primary branches of TB, without any explicit justification.[12] Fortunately I have been set straight on this matter by Randy LaPolla, the leading authority on Rawang: "My view has been that Rawang is not really close to Jinghpaw, there are just a lot of loanwords and calque structures because all Rawang people are considered Kachins and almost all speak Jinghpaw. Jingphaw seems to me a lot closer to Luish."[13]

LaPolla emphasizes the internal diversity of Nungish, a relatively small group numerically, but boasting "70 or more language varieties in at least six major clusters." The profusion of overlapping Nungish language names testifies to this complexity. According to LaPolla, there is no clear difference among Nung, Dulong/Trung, Rawang, and Anong, since these names are rather indiscriminately applied to what is really just "a crisscrossing dialect chain". No doubt it is because of this unruly diversity that no one has yet ventured to reconstruct Proto-Nungish, or to create a conventional Stammbaum to diagram its internal relationships.

At any rate one thing is clear: Nungish definitely doesn't belong in the "Sal" group; its word for SUN is **nam** (LaPolla 1987 #53).

The Nungish languages are rather conservative phonologically, preserving such features as final liquids (e.g. Rw. **war⁵³** 'fire/burn', **muɫ³³** 'body hair') and voiceless sonorants, usually from previous combinations of the ***s-** prefix and the root-initial (e.g. Anong **hwar** 'fire/burn', **n̥o³¹iɯŋ⁵⁵** 'remain/stay', **m̥i⁵⁵ŋu³¹** 'begin', **n̥ɯ⁵⁵ŋu³¹** 'weave', **ŋɛ³¹ŋu³¹** 'scales'). It is worth noting that neither of these features is preserved in Jingpho, where final *liquids have become **-n**, and where voiceless sonorants are absent, undoubtedly partially because the ***s-** prefix has been protected by schwa, so that it is realized as a minor syllable /šə-/ ~ /dźə-/.

2.1. Variational patterns in Nungish

(a) Between medial -i- and -u-

Nungish seems to be a stronghold of this type of variation, which is pervasive through much of TB,[14] e.g.:

name	Rawang **bɯŋ³¹** / Anong **biŋ**
sleep	Trung **yɯp⁵⁵** / Trung **ip⁵⁵**
warm	Dulong **lum⁵³** / Nung (Rawang) **lim**
year	Anong **n̥ɯŋ³¹** / Dulong **niŋ⁵⁵**

(= Yi) branch. Nungish resembles Burmish much more than it does Loloish. The loose ethnonym "Kachin" has been applied to Burmish groups like the Atsi (=Zaiwa), Maru (=Langsu), and Lashi (=Leqi) by both the Chinese and Burmese governments. For more discussion of the relationship between Nungish and LB, see 2.3, below.

[12] I am grateful to Carol Genetti for pointing this out to me (p.c., Feb. 2012), since her observation was the motivation for writing the present paper!

[13] E-mail p.c., Aug. 16, 2012. More on the Jingpho/Nungish relationship, below 2.4.

[14] See Matisoff 2003:493–505. This variation is also highly typical of Bodo-Garo.

(b) Between homorganic final stops and nasals

black	Dulong na?⁵⁵ / Anong ɲi³³xa⁵⁵naŋ⁵⁵
braid	Dulong blat⁵⁵ / Anong ban⁵⁵sɛ³¹
branch	Dulong aŋ³¹kə?⁵⁵ / Rawang dəgaŋ³¹
bury	Dulong lɯp⁵⁵ / Anong lɨm⁵⁵
carve	Dulong gap⁵⁵ / Nung ?gam⁵⁵
cloud	Dulong ɹɯ³¹mɯt⁵⁵ / Anong io³¹mɯn⁵⁵
teach	Dulong sɯ³¹lap⁵⁵ / Anong sɻ³¹lam⁵⁵
thresh	Rawang am³³thap / Nung tham⁵⁵u³¹

(c) (Diachronic) Change of initial nasal to a stop

name   PTB *r-miŋ > PNungish *b(r)iŋ ≍ *b(r)uŋ
(e.g. Trung aŋ³¹bɹɯŋ⁵³, Dulong aŋ⁵⁵bɹiŋ⁵³)

A similar development has occurred in loans from Tai:

insect/worm Rw. bəlɯŋ³³ (cf. Si. məlɛɛŋ)

(d) (Synchronic and diachronic) Variation in position of articulation of nasal initials

corpse	PTB *s-maŋ > Nung maŋ³¹ / Rawang ənaŋ
ear (of grain)	PTB *s-nam > Dulong aŋ⁵⁵nam⁵⁵ / Anong mɛn⁵⁵
eye	PTB *s-mik > Dulong mjɛ?⁵⁵ / Rawang nɛ³³, Anong ñi dzɯŋ⁵⁵
mind/temper	PTB *m-yit > Anong mit ~ nit
nail	PTB *m-tsin ≍ *m-tsyen > Rw. nyin (Jg. ləmyīn)

(e) (Diachronic) Intrusive medials via metathesis

In at least two cases, LaPolla (1987) explains the development of a liquid glide in Dulong/Trung in terms of metathesis from the PTB *r- prefix:

dream PTB *r-maŋ > Dulong (Dulonghe) mlaang⁵⁵, Dulong (Nujiang) mlang⁵⁵ (#82)
name   PTB *r-miŋ > Proto-Nungish *b(r)iŋ ≍ *b(r)uŋ (#179) [See (c) above]

2.2. Nungish and Tai

Judging from the 130 or so Nungish classifiers listed in such sources as LaPolla's Rawang Glossary (2003), Sun et al. ("ZMYYC", 1991), and Dai and Huang ("TBL", 1992), there seems to be a great profusion of classifiers in Rawang. This is a Tai-like characteristic, and very unlike Jingpho, where classifiers are rare.

Among the lexical items borrowed from Tai into Nungish, we may mention:

fish	Trung ŋa⁵⁵plaʔ⁵⁵ /This is a TB/Tai hybrid (PTB ***ŋya** 'fish' + Tai (cf. Si. **plaa**) 'fish'./
fruit	Rawang **nəm-si** /The 1ˢᵗ syllable is from Shan 'water' (cf. Si. **ná(a)m**); the immediate source of the Rawang form is Jg. **nàm-sì** (2ⁿᵈ syll. < PTB ***sey** 'fruit'). The connection between FRUIT and WATER is also found in Chinese *shuǐguǒ* 水果 ./
garden	Rw. **son³³** (cf. Si. **sǔan**)
insect/worm	Rw. **bəluɯŋ³³** (cf. Si. **məlɛɛŋ**)
wear on head/hat	Dulong **mɔʔ⁵⁵** (cf. Si. **mùak**)

There is one interesting case where an apparent Tai loan is actually a native lexical item:

rain	Trung **năm⁵³zaʔ⁵⁵** /Here the 1ˢᵗ syllable is not from Tai 'water', but is rather from the native Nungish root **nam** 'sun; meteorological phenomenon'. (LaPolla 1987:#53)/

2.3. Nungish and Lolo-Burmese

LaPolla is dubious about any close connection between Nungish and LB, given the phonological conservativeness of Rawang (and the lack of it in Lolo-Burmese),[15] and also because of the complex and apparently ancient morphological patterns in Rawang.[16]

Nevertheless there are tons of Nungish/LB cognates, which indicate to me that Nungish and Lolo-Burmese, while definitely belonging to different TB subgroups, are fairly close to each other in the context of the whole family.

Following are some of the more interesting Nungish/LB comparisons:

	Lolo-Burmese	Nungish
bean	***s-nuk**ᴴ	Trung a³¹nɔʔ⁵⁵; Anong ɑ³¹nu⁵⁵
bird/sparrow	***n-tsya¹** (WB **ca**, Lh. **ja**) /Cf. Spanish *pájaro* 'bird' vs. Fr. *passereau* 'sparrow'./	Anong/Nung **tɕhɑ⁵⁵**, Rawang **sa** 'bird'
black/deep	***s-nak**ᴴ 'black' (Lh. **nâʔ**); ***ʔnak**ᴸ 'deep' (Lh. **ná**)	Trung (Dulong) **nɑʔ⁵⁵** 'black', **na⁴³** 'deep'

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[15] We should distinguish here between the Burmish and Loloish branches of LB, since Burmish is much more conservative phonologically.

[16] LaPolla has discussed these patterns in a long series of insightful articles, including LaPolla 2004, 2008a, 2008b, 2008c, 2010.

blind Lh. **mɛ̂ʔ-cú** Rw. **nɛ³³ dəzɯʔ**
/ Lh. **mɛ̂ʔ** and Rw. **nɛ³³** mean 'eye'; Lh. **cú** 'tightly closed; puckered'. (The Lahu high-rising tone implies a glottalized initial and a final stop.) There is also an apparent cognate in Kadu: **mík cē**./

cat Lh. **mɛ́-ni** Nung (TBL) **mɯ³¹n̩i³¹**

chaff ***pway²** (WB **phwâi**, Lh. **phɨ̂**) Rawang **am³³phal³¹**; Dulong **wɑʔ⁵⁵pi⁵³**
/Rawang provides evidence for ***-l** in this root./

charcoal Lh. **ší-g̈ə̀ʔ** [cf. Jg. **n̩-ràʔ**] Dulong **mɯ³¹ɹap⁵⁵**; Nung **n̩i³¹xi⁵⁵**
/Cf. ***g-rap** 'fireplace', but that etymon became Lh. **g̈ò̀ʔ** 'hearth; household; fireplace rack'. The Lahu voiced velar fricative seems to favor the centralization and raising of -a- to -ə-, so these could well be internal Lahu allofams: **g̈ə̀ʔ ⋇ g̈ò̀ʔ**. The nasal prefix appears in its fullest form in Dulong **mɯ³¹-**; it is reduced to a syllabic nasal in Jg. **n̩-**, and is probably also represented by Nung **n̩i³¹**. As in the Lahu compound **mû-qhô** 'smoke', the morphemic source of this syllable is ***məw** 'sky; atmospheric phenomenon'. The 1ˢᵗ syllable of the Lahu form seems to be related to the 2ⁿᵈ syllable of the Nungish form (Lh. **ší-g̈ə̀ʔ** / Nung **n̩i³¹xi⁵⁵**); since the Lahu and Nung tones are very similar, it is possible that this syllable has been borrowed by both languages from a common source./

foot ***krəy¹** (WB **khre**; Lh. **khɨ**) Trung **xrai⁵⁵**; Anong **xɛ³⁵**

gall ***ʔgrəy¹** (WB **khre**; Lh. **kɨ**) Trung **tɕi³¹xɹi⁵⁵**

garden/fence ***kram¹** (WB **khram**; Lh. **kho**) Nung (TBL) **dʑa³¹ham³⁵**

morning/tomorrow Lh. **šɔ́-pɔ̄** 'tomorrow' Dulong **sɯ³¹raang⁵⁵**;
  Rw. **əʃaŋ⁵³** 'morning'
/We can here reconstruct a Loloish/Nungish binome, ***syaŋ-braŋ**, where the 1ˢᵗ syllable < PTB ***syaŋ** [17], and the 2nd syllable < PTB ***b-raŋ** 'dawn; morning'. STC (n. 224) posits a prefixed form ***s-raŋ** to account for Trung **sraŋ**, but these data show that a full compound is involved, not merely a prefixed root./

pair ***dzum³** (Lh. **cɛ**) Dulong **dzŭm⁵⁵**

scatter (as seeds) PLB ***san² ⋇ *sat** < PTB ***sywar** Rw. **wun**
/WB **swan ⋇ swân**; Lahu **šē** 'scatter seed' < PLB ***swan² ⋇** Lh. **šêʔ** 'pour' < PLB ***swat**. Since Rawang preserves both ***-r** and ***-l** in native words, **wun** may be a borrowing from PLB ***swan**. Both Lahu and Chinese show final nasal ⋇ stop allofamy in this root (cf. Chinese 散 < OC ***sân ⋇** 撒 < OC ***sât**), as does Kadu (**sē** 'pour water, as from a kettle' **⋇ sɛ́t** 'scatter seed'). See HPTB:394–5./

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[17] The Lahu high-rising tone suggests an intermediate stage ***syaʔ-braŋ**; the sibilant initial and glottal final would then provide the proper environment for "glottal dissimilation" (see Matisoff 1970).

pillow	*m-kum² (Lh. ú-gê)	Anong məkhim; Dulong mɯ³¹kum⁵⁵
	/The nasal prefix is preserved overtly in Nungish, and indirectly by the voiced Lahu initial./	
pine	WB thâŋ-rû [Jg. mərāu]	Anong śəru
poor	Lh. hā	Anong di³¹ɕɑ³¹; Rw. dəʃɑ³¹
prefix	*ʔaŋ¹- ⪤ *ʔak-	Dulong aŋ⁵³ '3p. pronoun'
	/The Nungish 3p. pronoun aŋ undoubtedly reflects the same etymon as the aŋ- prefix ubiquitous in Loloish (Lahu ɔ̀-, Bisu and Pyen aŋ-, Phunoi ã-), as well as in other languages like Mikir. In Dulong it also functions as a prefix: aŋ³¹-mul 'hair', aŋ³¹-niŋ 'year', aŋ³¹-śi⁵⁵ 'fruit'. See HPTB:522./	
price	*pəw² (WB ʔəphûi, Lh. ɔ̀-phû)	Trung aŋ³¹pɯ⁵³; Anong dəphü
raw	*džim² (Lh. ɔ̀-cî)	Anong ɕɑ⁵⁵dzim⁵⁵, əzim
scales (weight)	*kyiːn (Lh. chɨ)	Dulong ci⁵⁵
set (of sun)	*g(l)im ⪤ *g(l)um (Lh. qɛ̀)	Trung glɔm⁵³; Nung dzim⁵⁵
stretch out	*tšan³ (WB can', chan'; Lh. che)	Trung t'san⁵³, Dulong tɕɑːn⁵⁵
sweet	*kyəw¹ (WB khyui; Lahu chɔ)	Anong khɹŋ⁵³; Trung dʑɯ⁵³
tears	*m-brəy¹ (Mpi m⁴pi⁶)	Trung mɛ⁵⁵pi⁵³; Nung (TBL) phɹŋ⁵⁵
	/The LB prefix is undoubtedly a reduction of PLB *s-myak 'eye', which appears overtly in the 1ˢᵗ syllable of the Trung form./	
testicles/virility	*səw² (WB sûi, Lh. šɔ̄)	Rw. sɯ³³ 'male genitals'
tired/thirsty	PLB *ban² < PTB *bal 'tired'	Trung bal⁵⁵, Dulong bɑːn 'thirsty'
turn over	*m-pup (Lh. phû?)	Dulong pɔ?⁵⁵
vegetable	*ʔgyak	Dulong dzɯ³¹gwa?⁵⁵
warm/glad	*lum¹ (Lh. lɛ̀ 'warm') Lh. ha-lɛ̀ 'happy'	Anong lim, Trung lɯm⁵³ 'warm' Anong ɑ³¹lim³¹ʂŋ⁵⁵, Trung ɑ³¹lɯ̆p⁵⁵ɕɯ³¹, Trung Nujiang ɹ³¹lɯm⁵³ 'glad'
	/Both Lahu and Nungish have undergone the same semantic development from WARM to HAPPY. The 1ˢᵗ syllable of Lahu ha-lɛ̀ < PLB *s-la³ 'spirit, soul'. When the spirit is warm, one is happy./	

2.3.1. Burmese loans into Rawang

Quite distinct from the above examples are a number of relatively recent loanwords from Burmese into Rawang, e.g.:

	Written Burmese	*Modern Burmese*	*Rawang*
butter	thâw-pat	thɔ̂bá?	thɔ³³bat
festival	pwây	pwê	bwɛ⁵³ ~ bɔi³¹
happy	pyau	pyɔ	byo³³ wɛ³³
peacock	?u-dâuŋ	?u-dâũ	u³¹dɔŋ³³
prison	thauŋ	thãu	thoŋ³¹
slippers	bhi-nap ~ phi-nap	phəna?	phənat

2.4. Nungish and Jingpho

As indicated above (II), expert opinion seems now to be firmly of the view that the perceived closeness of Jingpho and Rawang is due to contact, rather than to any especially close genetic relationship.[18] Among the lexical items which Rawang has borrowed from Jingpho are words which Jingpho itself had borrowed, either from Burmese or from Shan (see, e.g. FRUIT, above 2.2).

Here are a few examples of Jingpho loans into Rawang:

	Jingpho	*Rawang*
brick	wùt	wut
	/The Jg. form is borrowed from Burmese: WB ?ut./	
early morning/ tomorrow	mənàp 'early morning'	nap ni³³ 'tomorrow'
	/Other languages reflect ***m-nak**, e.g. WB mənak, Lh. tê nà? (HPTB:326)./	
flower	nàm-pàn	nam³¹ban³³
God	kərài-kəsàŋ	gərai³¹-gəʃaŋ³¹
	/For the connection between the first element of the Jg. form and the copular morpheme ***ray**, see Matisoff 1985./	
net	sùm-gòn	ʃam³³gon⁵³
place	šərà	ɕəra³¹
rabbit	pràŋtái	braŋ³¹dai³³
	/This is a widespread areal word, found also in Lolo-Burmese and Luish./	
tobacco	lùt; məlùt	məlɯt
	/Cf. also Dulong nɯt⁵⁵./	
tomb	lùp	Dulong tɯ³¹lɯp⁵⁵
vulture	làŋ-dà	laŋ³¹da³¹
	/This is another areal word, of Mon-Khmer origin./	

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[18] Among the important structural differences between Jingpho and Nungish are the near absence of numeral classifiers in Jingpho vs. their profusion in Nungish (above 2.2); and the great degree of sesquisyllabicity in Jingpho as opposed to its relative rarity in Nungish (below 4.3).

In SILVER and HORSE, Rawang has borrowed the Jg. **gùm-** prefix:

silver	**gùm-phrò**	**gəm³¹soŋ³¹**
horse	**gùm-rà ~ gùm-ràŋ**	**gɯm³¹raŋ³¹**

/Note that the Jingpho and Rawang tones are the same in these prefixes. The Jg. variant with final nasal is characteristic of the Hkauri dialect./

III. Other Aspects of Jingpho's Interrelationships[19]

3.1. Jingpho and Tai (Shan)

There is a large Shan element in the Jingpho lexicon. Most of these words were identified already in Hanson 1906. Some of these Shan items were themselves from Burmese, and in turn some of these were originally from Indo-Aryan (Pali/Sanskrit), constituting borrowing chains across several language families, e.g.:

$$\text{Pali} \rightarrow \text{Burmese} \rightarrow \text{Shan} \rightarrow \text{Jingpho} \rightarrow \text{Rawang}$$
$$\textit{IA} \qquad \textit{TB} \qquad \textit{Tai} \qquad \textit{TB} \qquad \textit{TB}$$

A few examples of Tai loanwords into Jingpho:

	Tai	*Jingpho*
bazaar	Shan **gát**	**gát**
difficult	Si. **jâak**	**yàk** 'difficult'; **ʔəyàk** 'difficulty'

/The borrowed status of this word is immediately apparent, since in native words ***-k** > Jg. **-ʔ** (e.g. PIG ***wak** > Jg. **wàʔ**; EYE ***mik** > Jg. **myìʔ**)./

high/deep	Si. **sǔuŋ**; Shan **sʰuŋ**	**sùŋ**
riceplant	Si. **khâaw**	**khàw**
rope	Si. **chîak**; Shan **jìk**	**jìk**
teak	Si. **máj-sàk**	**mài-sàk**
turtle	Si. **tàw**	**tāw-kok⁵⁵**

/This Tai word has also been borrowed into Lahu: **tɔ̀-qú**./

3.2. Jingpho and Lolo-Burmese

Perhaps because Jingpho and Burmese were the first TB languages I ever studied, I have wondered for a long time whether there was any special relationship between them.[20] Comparison of the tone systems of Jingpho and LB (Matisoff 1974; 1991) was inconclusive

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[19] For a sketch of Jingpho phonology, see Appendix II.
[20] I am even guilty of coining a term "Jiburish" to cover Ji(ngpho), Bur(mish) and (Lolo)ish collectively (Matisoff 1991).

(except for a certain weak correlation between Jingpho high tone /ɤ́/ and PLB Tone *2). I am now persuaded that the LB/Jingpho relationship is no closer than that between any two major subgroups of Tibeto-Burman.

Yet there has been massive contact between Jingpho and the Burmish branch of Lolo-Burmese. Many Burmish languages are known both by Jingpho and Chinese names, e.g. Atsi, Maru, and Lashi are Jingpho language names corresponding to Chinese Zaiwa, Langsu, and Leqi, respectively. Chinese taxonomy considers these Burmish groups to be part of the Jingpho nationality.

Here are a few loanwords of Indic origin which came into Jingpho by way of Burmese:

	Written Burmese	*Jingpho*	*Other*
life/age	ʔəsak	əsàk	Kadu asák
ocean	səmúddara	nàmmùkdərā	

/The Jg. form is a Burmese/Tai hybrid, with the 1st syllable remodeled after Tai **nam** 'water'./

rich man	suṭhê	səthí	Lh. šathê; Pali saṭhī ~ seṭhī, Skt. śre(ṣṭha) 'most splendid; preeminent'
unhappiness/misery	dukkha	dùk-khàʔ	Lh. tùʔ-khā(n)

Modern Jingpho must now be borrowing from Burmese without restraint.

IV. Luish: an Obscure Branch of TB Coming into Focus

The *Linguistic Survey of India* grouped Andro, Sengmai, Chairel, and Kadu into the "Lūi Group"; to these have been added Sak (= Cak = Chak = çak),[21] spoken both in northern Arakan (Rakhine Province, Burma) and in the Chittagong Hills Tracts of Bangladesh (formerly E. Pakistan). Lucien Bernot, who studied Cak in E. Pakistan in the 1960's, refers to these languages and ethnicities as "Loi",[22] while Shafer and Benedict have preferred "Luish". However, it seems preferable to come up with a new name for this group, since **loi** is said to be the Meithei (Manipuri) word for 'slave; dependent'.[23] The Kadu (= Kantu), who are thought to have once been a dominant group in northern Burma,[24] are now concentrated in the Sagaing Division of Katha District, in the Chindwin Valley. Their autonym is also Sak or Asak. Since Sak/Chak and Kadu are the most important surviving members, there seems no reason not to rename this group as something like Asakian or Kantu-Sak.

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[21] To add further to the nomenclatural proliferation, this group is also known by the Modern Burmese pronunciation of WB **sak**, namely [θɛʔ], transliterated either as **Thek** or (misleadingly) as **Thet**.
[22] This name was first used in McCulloch 1859, who wrote it "Loee".
[23] The dominant Meithei group has swept away many smaller languages of Manipur, including Andro, Sengmai, and Chairel, which have all gone extinct.
[24] It may well be that pressure from Kadu caused the Taman language (see R.G. Brown 1911) of the upper Chindwin valley to go extinct. Luce (1985) surmises that the Asakian languages "once spread over the whole north of Burma, from Manipur perhaps to northern Yunnan".

Although these languages have been the object of sporadic study since the mid-19th century,[25] it is only very recently that full length lexical, phonological, and grammatical treatments of the two major representatives of the group have become available. Two splendid doctoral dissertations, by Huziwara Keisuke (Kyoto University, 2008) on the Chak of Bangladesh, and by David Sangdong (La Trobe University, 2012) on Kadu, have now made it possible both to undertake systematic phonological comparisons within Luish, and to better evaluate its affiliations with other subgroups of Tibeto-Burman.

4.1. Luish phonologies

4.1.1. Kadu

The arrival of the Chins into the Chindwin Valley in the early 2nd millennium A.D. challenged the dominant position of the Kadu in northern Burma; their decline was then definitively sealed by the Shan, who flooded Burma when Yunnan was seized by the Mongols in the 13th century. Naturally enough, the influence of Burmese and Shan on Kadu is very strong.[26]

Kadu Phonology [Sangdong 47 ff., improving on Brown 1920]

Syllable canon (adapted from Sangdong, p. 95):

$$(C_i)(G) \begin{matrix} T \\ V \end{matrix} (C_f)$$

C_i:				
p	t		k [27]	
p^h	t^h		—[28]	
		c		
		ch		
	s [30]	sh		h
	s^h			
m	n	ɲ	ŋ	
w	l	j		

V:		
i		u
e		o
ɛ		ɔ [29]
	a	
	ai [31]	

---

[25] See, e.g. McCulloch 1859, Houghton 1893, Bernot 1967, Löffler 1964, Luce 1986.

[26] Sangdong (pp. 27–28) cites a wonderful judgment on this matter by Houghton 1893: "Who the Kadu were originally remains uncertain, but now they are little more than Burmese and Shan half-breeds with traces of Chin and possibly Kachin blood. If they ever had a distinct language it is now extinct or has been modified so much by all its neighbors as to be little better than a kind of Yiddish."

[27] /k/ and /ŋ/ do not occur before front vowels.

[28] **Kh-** apparently occurs only in loanwords from Burmese.

[29] In Sangdong's practical orthography, the vowels /ɛ/ and /ɔ/ are written with the digraphs "eu" and "au", respectively, with the tonemark written over the "u". In the comparative portion of this paper (4.3.3.1 et seq.) these digraphs have been replaced with the proper phonemic symbols, e.g. 'monkey' "kveú" /kvɛ́/; 'jump' "phaúk" /phɔ́k/.

[30] In his practical orthography, Sangdong uses "z" for the phoneme /s/, and "s" for its aspirated homologue, /s^h/, an unusual sound that also occurs in Modern Burmese and Shan, as well as in several Karen dialects.

[31] **-ai** occurs only in open syllables or before **-k** (occasionally also before **-ŋ**).

C_f:	-p	-t	-k	-ʔ		G:	-w-	-y- [32]
	-m	-n	-ŋ					

Kadu tones (Sangdong 81–89):

HIGH	55 ~ 44 ~ 45 ~ 44	v́	
MID	33 ~ 22	v̄	(This is lexically the most common tone.)
LOW	22 ~ 11	v̀	

It is still not clear whether there are two or three tones in stopped syllables.

Minimal tonal triplets:

sín 'spicy'	sīn 'iron'	sìn 'heart'
há 'red'	hā 'bitter'	hà 'five'

Sesquisyllabicity: [33]

Kadu is highly sesquisyllabic. As in Sak (below), the most common minor syllable is **a-**, followed in order of frequency by **ka-, ta-, sa-, pa, na-**, and **ma-**. Rare ones include **ha-, la-, wa-, ya-, za-**, and **ca-**. Kadu even has words with two minor syllables, e.g. **takalāt** 'root'. This is not uncommon in TB, e.g. Tangkhul **khəmələk** 'lick', WT **brgyad** 'eight', but we need a term for such a word—"doubly sesquisyllabic"?

4.1.2. Sak/Cak/Chak

Huziwara calls his language "Chakku" (= Chak). Everyone agrees that this Luish language is quite distinct from that of another group in the Chittagong Hills Tracts called "Chakma", which is Indo-Aryan, a rather divergent form of Bengali, but written in a Burmese-type script.[34] Bernot surmises that the Cak had lived in Central Burma for at least eight centuries, and that they migrated from Arakan to the Chittagong area in relatively recent times. The dialects of the two regions are mutually intelligible, and intermarriage occurs between the groups. There are 2000–3000 Chak in Bangladesh, where Huziwara did his research. The Chak share the Chittagong Hills with 10 other minority populations: besides the Indo-Aryan Chakma and Tanchanghya, there are Central Chins (Mizo, Paangkhua, Bawm), Southern Chins (Khumi, Khyang), a Barish language (Tripura = Kokborok), Mru (close to the Chin group, but unclassified), and most importantly, Marma (= Arakanese). Huziwara is especially careful to identify the innumerable Marma words that have made their way into the Chak lexicon (pp. 857–917).

Huziwara recognizes two subdialects of Bangladeshi Chak: that of Baishari District (on which his work is based) and that of Naikyongchari District. There are only relatively slight differences between them, e.g. B. **ŋy-** / N. **y-** ('weaken' B. **ŋyó**, N. **yó**); B. **ky-** / N. **tɕ-** (e.g. 'sweet' B. **kyi**, N. **tɕi**).

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[32] The glides **-w-** and **-y-** occur mostly in loans from Burmese.
[33] See "Minor syllables", Sangdong pp. 98–104.
[34] See especially Löffler 1964.

Chak Phonology [Huziwara 63, 77]

Sak syllable canon (adapted from Huziwara, p. 19):

$$(Cə)(Ci)\ (G)\ \overset{T}{V}\ (Cf)$$

Ci:

p	t	k
ph	th	kh
b	d	g
	c	
	ch	
	j	
ɓ	ɗ	
	s	ʃ	h
v		
m	n	ŋ
	l	r
w		y

V:

i	ɨ		ɯ	u
e		ə		o
		a		

G: | -w- | -r- | -y- |

Cf: | -ŋ | -ʔ |

Sak tones:

LOW   v   (longer, comparatively lower pitch)
HIGH   v́   (shorter, comparatively higher pitch)

G = glides (-w-, -y-, -r-); **-l-** only occurs in loanwords where Marma has **hl-**; **-w-** also occurs mostly in loanwords from Marma (p.68). Medial **-y-** occurs only after labials and velars (p. 74). There is also a glide **-v-** which only occurs before /u/, and which is realized phonetically as a syllabic [v̩].[35] There are also a few Marma loanwords with the double glide **-yw-**.

Cf = final consonants (-ŋ, -ʔ). All scholars agree on these two. But Luce (1985) also recognized /-k -t -n/; Löffler also noted **-k** and **-p**; while Bernot recorded **-h** and **-f**. Evidently the final consonants other than **-ŋ** and **-ʔ** are hard to hear and/or on the way out.

Sesquisyllables:

Huziwara (2010) has devoted a whole article to Sak prefixes. He recognizes 8 minor syllables. The most common of them appears to be **a-**, which shows dissimilatory tonal variation according to the tone of the major syllable: **a-** before HIGH tone (e.g. **atá ʔ** 'branch') vs. **á-** before LOW tone (e.g. **áta ʔ** 'leaf'). The other prefixal syllables, in rough order of frequency, are **sə-** (which pre-verbally occasionally has causative meaning: e.g. **pyoʔ** 'disappear'/**səbyoʔ** 'lose'; **pru** 'appear'/**səbru** 'put sthg into view'); **pə-**, **mə-**, **hə-**, **kə-**, **rə-**, and **tə-**.

* * *

We may summarize some of the salient phonological features of these Luish languages and compare them to those of Jingpho.[36] As implied by the chart, Kadu will prove to be better for reconstructing earlier finals, while Sak will be better for reconstructing initials:[37]

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[35] There is a somewhat analogous phenomenon in Lahu; see below 4.2.2.
[36] For a fuller outline of Jingpho phonology, see Appendix II.

	Kadu	Sak	Jingpho
Ci's	only 2 series	4 series	3 series
Cf's	-p -t -k -ʔ	-ʔ [38]	-p -t -k -ʔ
	-m -n -ŋ	-ŋ	-m -n -ŋ
Initial clusters	none	yes	yes
Rhotic initials	no	yes	yes
Numerals	< Tai above 4	TB preserved	TB preserved
Sesquisyllabic	yes	yes	yes

It seems to me that "degree of sesquisyllabicity" is an important criterion for comparison among subgroups. Both Jingpho and Luish are highly sesquisyllabic, while Nungish seems only slightly so.[39] Bodo-Garo and Northern Naga prefer compounding to prefixation; in Lolo-Burmese sesquisyllables do exist, but are extremely rare.

4.1.3. Interesting Luish morphophonological phenomena, mostly involving velars

(a) In many roots, PTB ***k-** and ***ŋ-** > Luish **h-**:

	PTB	Jingpho	Kadu	Sak
bile	*m-kri-t	khrī		ahə
bitter	*b-ka	khá	hā	ha
branch	*s-kaːk		hàk	
chin/jaw	*m/s-ka	ǹ-khá	ahà	ahəɓúʔ
crow	*ka		ūhá	uhá
door	*m-ka	ñ-khā		ahá
hole	*g/kuŋ	ǹ-khūn		ahúŋ
pillow	*m-kum	bùŋ-khúm	teúm [40]	úʔ-huŋ
weep	*krap	khràp	hāp	
borrow	*r/s-ŋya		hɛ̄	huɯ
fish	*ŋya	ŋá	hɛ̄; táŋŋā	[təna]

(b) In other roots Luish shows **k ⋛ h** variation, either intra- or inter-lingually:

	PTB	Jingpho	Kadu	Sak
dove	*m-krəw	khrū-dû	khō	bəhríʔ
head	*m/s-gaw			ahú, ăhwu² (HK)
				uk'u (Luce, Dodem)
smoke	*kəw	khú ⋛ khùt	khó	vaiŋ-*hvu*

---

[37] This is rather analogous to the situation in Hmong-Mien, where Hmongic is better for reconstructing earlier initials, but Mienic is better for reconstructing finals.

[38] The Dodem dialect of Sak recorded by Luce also has **-k**.

[39] Although LaPolla does observe that "Dulong often preserves the proto-prefixes as separate syllables" (1987:2). Examples include 'grandchild' PTB ***b-ləy** > Dulong **phəli³³**; 'pillow' ***m-kum** > Rawang **əgɔ məkhim**; 'chin/jaw' PTB ***m-ka** > Rw. **məkhɑ⁵³**.

[40] In this word the h- has progressed to Kadu zero-initial.

(c) In still other roots, Luish retains original velars:

	PTB	Jingpho	Kadu	Sak
dance	PLB *s-ka³			ká?
earth	*r-ga	gá	kā	kəjá?
five	*b/l-ŋa	məŋā		ŋá-hvú
hot			ká	ká 'hot', aká 'roast'

(d) Morphophonemically there is also interplay in Kadu between velars and **h**. In two-syllable sequences where S¹ ends in **-t** or **-k** and S² begins with **h-**, the **h-** is realized as aspirated [kʰ]: **kát** 'run' + **háng** 'again' > **kátkháng**; **yōk** 'eat' + **háng** > **yōkkháng** (Sangdong, p.59).

(e) In two cases Kadu **t-** is found to correspond to Sak **k(y)-** before **-i**:

	Kadu	Sak
penis	tí	akyí (~ atyí)
sweet	tī	kyi

(f) There is an infix **-al-** in Kadu (Sangdong 158–60), which is used (non-productively) especially for nominalizing verbs, e.g. **mɛ́** 'good' ("**meú**") > **məlɛ́** 'goodness' ("**maleú**"). As Sangdong observes, this infixational process is responsible for creating secondary minor syllables, as in the first vowel of "goodness".

Sometimes this infix can disguise a valid cognate, e.g. Kadu **salaú** 'oil' is from PTB ***saːw** (STC #272), though this was not recognized by Benedict, probably because the form was lacking in his sources. There are no doubt quite a few more hidden examples of this infix, so that all Kadu forms with medial **-al-** should be looked at carefully, e.g. 'head/sky' Kadu **halang** (? < ***haŋ**); 'two' Kadu **kalìng** (? < ***kìŋ**).

4.2. Luish and other linguistic groups

4.2.1. Tai → Luish

I have identified a few Tai loans into Luish, but there are likely to be many more to find. All the Kadu numerals from 5–10 are from Shan, and have been so since the early 20ᵗʰ century (Brown 1920). For reference, here are the numerals from 1–10 in several languages of interest. (The Sak numerals from 3–10 seem particularly close to those of Jingpho.)

	Jingpho	Kadu	Sak	Rawang	PNNaga
1	ləŋâi	tèn-à [41]	hvú-wa [42]	thi?	tse / kla
2	ləkhôŋ	kalìng-tén	níŋ-hvú	əni⁵³	-ni
3	məsūm	sóm-tèn	súŋ-hvú	əʃum³¹	sum

---

[41] The second syllable is glossed as 'one' in Sangdong:237. Kadu must thus be added to the short list of languages that has this root for ONE (Aka/Hruso **a**; Qiang Taoping **a²¹**; Qiang Mawo **a**). See Matisoff 1995b:132, section 3.154.
[42] The Sak second syllable must also mean 'one'.

	Jingpho	Kadu	Sak	Rawang	PNNaga
4	məlī	pí-tèn	prí-hvú	əbi³¹	bə-ləy
5	mənā	*Tai*	ŋá-hvú	phə ŋwɑ³¹	ba-ŋa
6	krúʔ	*Tai*	kruʔ-hvú	ətɕhuʔ / kruʔ	tə-ruk
7	sənìt	*Tai*	səniŋ-hvú	ʃəŋɯt	n(y)it
8	mətsát	*Tai*	ácaiʔ-hvú	əʃat	tə-gyat [43]
9	krúʔ	*Tai*	təhvú-hvú	dəgɯ³¹	tə-gəːw
10	šī	*Tai*	sí-hvú	thiʔ sɛ⁵³	roːk / boːn

A random Tai loanword into Luish:

bedbug	Kadu **hàt** < Shan **hət** (cf. Siamese **rŷat**); this Tai word has also been borrowed into Lahu as **hə̂ʔ**.

Ichthyonyms:

Fish names in Kadu frequently have the prefixal morpheme **pa-** (Sangdong 100–101), e.g. **pacīsá** 'loach'; **pazīngzú** 'dwarf fish'; **pasàt** 'carp'; **patùn** 'eel'. This is clearly a loan from Tai (cf. Si. **plaa** 'fish'), a morpheme which regularly occurs as the 1ˢᵗ syllable in Tai names for fish.

4.2.2. Luish and Lolo-Burmese

These two branches of TB are not particularly closely related at all. There is, however, one phonological phenomenon which Sak shares with Lahu: affrication of consonants before /-u/. In Lahu this only happens with labial initials, but in Sak it occurs with velars and laryngeals as well, but apparently not always after dentals:

elephant	**wvukvú**
help	**kvú**
insect	**ápvu**
rat	**kəyvu**
smoke	**vaiŋ hvu**
snake	**kəhvú**
steal	**kvu**

But:	
dig	**thu**
porcupine	**pədvu**

There are a number of Kadu doublets as between native Kadu and Burmese loans:

	Native	*Loans from Burmese*
boat	**halí**	**lē**
moon/month	**satá**	**láq**

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[43] This is the reconstruction given in French 1983:482, but this seems to be a "teleo-reconstruction" based on PTB ***b-r-gyat**. The actual Naga forms cited point rather to PNN ***tsat** or ***tsyat**.

Huziwara devotes 60 pages (pp. 857–917) to listing loanwords and cognates between Marma (Arakanese) and Cak/Sak. A tiny sample of these hundreds of items:

	Written Burmese	*Marma*	*Cak/Sak*
brain	û-hnok	úhnɔʔ	únóʔ
carry on shoulder (w. pole)	thâm	tháiŋ	tháiŋ
gold	hrwei	ʃwe	ʃwe
help	ku	ku	kvú
fox	[mre-khwê]	khéwa	ʃə́wa
hit	tî	tí	tí
ice	re-khâi	rəkhé	rəkhé

A number of these words are ultimately of Indic origin:

	Pali/Skt	*Written Burmese*	*Marma*	*Cak/Sak*
body	khandhaa	khandha	khaiŋtha	kaiŋtha
heart/mind	citta	cit	coiʔ	cíʔ
promise	katikā	kəti'	gədǐ	kədíʔ
sugar	śarkarā-	sakra	θəgrá	səgrá

4.2.3. Luish and Nungish

Sangdong, who is a native speaker of Rawang, finds (p. 39) that any connection between Nungish and Luish is "less promising" than the Jingpho/Luish relationship, and one can only agree with him!

A few examples of closely similar cognates between Luish and Nungish:

lung	Sak asésuʔ	Rawang rəʃɯ⁵³
sesame	Kadu sanàn	Nung sənam
smoke	Sak vaiŋ-hvu	Trung mɯ³¹ɯ⁵⁵
		Anong mə ö
		Rawang məyɯ⁵³
squirrel	Kadu cīlāng	Nung dzɿ³¹thaŋ⁵⁵
thread	Sak rɨ	Dulong tsɯ³¹ri⁵⁵/³³
wither	Sak ŋyɯ	Anong ŋyö

4.3. Jingpho and Luish

Positing a special relationship between Jingpho and Luish is not a new idea, as witness the fourth of the 7 major groupings of TB languages listed in STC (p. 5):

"Kachin ; perhaps also Kadu-Andro-Sengmai (Luish) and Taman."

Burling (2003:178) believes in it too: "Bernot's own data on Sak [1967] are the best that is available on any of these languages, and its special similarities to Jinghpaw are obvious." How much more "obvious" this becomes with all our new data!

4.3.1. Similarities and differences between Jingpho and Luish

• Jingpho/Luish rhymes

Certain rhymes in Jingpho and Luish have developed in a parallel manner from PTB. The ***-yam** rhyme has undergone a similar "brightening" in both Luish and Jingpho:

	PTB	*Jingpho*	*Kadu*	*Sak*	*Other*
fly	***byam**	**pyēn**		**páiŋ**	WB **pyam**, Lh. **pɔ̀**
iron	***syam**		**sīn**	Sak **siŋ** 'iron',	WB **sam**, Lh. **šo**
				siŋ-diʔ 'wok'	

On the other hand, Jingpho final **-p** corresponds to different Kadu final stops in at least three cases:

	Jingpho	*Kadu*
bear	**tsáp**	**kasát**
calf (of leg)	**bòp, ləbòp**	**tapók**
leaf [44]	**làp**	**talāt** < **tāt**

• Morphological parallelism in the triple allofams for **eat/food/rice**

Both Jingpho and Luish display a three-member word family built on the basic PTB root ***dzya** 'eat', with the allofam in **-n** meaning 'meat/food', and the allofam in **-t** meaning 'cooked rice': [45]

	PTB	*Jingpho*	*Kadu*	*Sak*	*Other*
eat	***dzya**	**šá**		**áca, acá**	WB **câ**
meat/food	***dzya-n**	**šàn**	**sān**	**ásaiŋ**	WT **zan** 'food'
rice (cooked)	***dzya-t**	**šàt**	**sàt**	**kvú** *saiʔ*	Lp. **zot** 'graze'

However, partially similar allomorphy in this root is also found elsewhere: Tangkhulic **tsa** 'eat, **tsaat** 'cooked rice'. See also Proto-Tani **do** 'eat' (Sun 1993:160), a root which appears in suffixed form in Kachai (Tangkhulic) **ʔa-ðot** 'cooked rice' (Mortensen 2012).

• Sibilant causative prefix

Jingpho has quite a productive causative prefix, **šə- ⋊ jə-** (the latter variant occurring before aspirates and sibilants), which descends from the well-known PTB ***s-** prefix with the same function (see HPTB:100–102). The same prefix occasionally shows up in Luish as well:

emerge   Jg. **prū**   Sak **pru** 'emerge', **səbru** 'put out'
(With this morpheme Jingpho lacks a prefixal causative; there is no Jg. form ***šəprū**.)

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[44] For the initial correspondence, see 4.3.2 below.
[45] See HPTB:440.

• Verb pronominalization

So-called "verb pronominalization", a type of "head marking" where morphemes in the VP indicate the person and number of the subject and/or object of the sentence, is characteristic of several branches of TB, to the point where some scholars (DeLancey, van Driem) are sure this feature should be reconstructed for PTB.

Jingpho does have such agreement marking to signal the person and number of the subject, although it is nowhere nearly as complicated as, e.g., the systems of the Kiranti languages of Eastern Nepal, where pronominalization reaches its apogee. On the Luish side, there seems to be no evidence at all for verbal agreement. Huziwara has a section (2.15.1.1; p. 37) entitled "Personal suffixes marked in the verb-phrase",[46] which consists of exactly three words: *"Toku ni nasi."* ("Not especially; not particularly.") This is accompanied by a footnote which suggests a possible distant survival of some sort of agreement system, although Huziwara does not seem to really believe it.[47]

Given the lexical closeness I hope will have been demonstrated between Jingpho and Luish, it seems significant that the two groups should differ in this important respect. To me it indicates that verb pronominalization, like tonogenesis, is a phenomenon which can easily arise independently in different branches of TB.

4.3.2. Obstruentization/dentalization of laterals: a key phonological isogloss

A particularly striking phonological development in a few TB languages involves the development of prefixed *lateral initials into secondary dental stops. Before having access to this new Luish data, I had discussed eleven TB etyma that illustrate this phenomenon (Matisoff 2010b). When Luish is added to the mix, the parallels between Jingpho and Luish become obvious indeed! Of my 11 etyma, 5 show obstruentization in Jingpho and/or Luish, with 3 showing it in both groups, 1 in Jingpho but not in Luish, and 1 in Luish but not in Jingpho. [48]

		Jingpho	*Kadu*	*Sak*	*N.Naga*	*Other*
hand	*g-lak	táʔ, ɭətáʔ	tāk		Nocte **dak**	WT **lag-pa**

/In Jingpho, after ***l** > **t**, there was reprefixation by **lə-** (< ***lak**). Bernot (1967:243) cites Cak (Pakistan) *laʔ ñɯɯ* 'index finger'. This is a survival of the general TB root; the usual Luish word for 'arm/hand' is **tahu**, where the 1ˢᵗ syllable is perhaps an unstressed allomorph of **tak**./

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[46] *Dousi-ku ni hyouzi sareru ninshou setuzi.*

[47] "However, certain particles which mark the directionality of the action, i.e. **-Xaiŋ** 'benefactive venitive', **-Xaŋ** and **-Xa** 'andative' might descend from the personal suffixes that are hypothesized for PTB, respectively from ***-n** '2ⁿᵈ person', ***-ŋ** '1ˢᵗ person', and ***-a** '3ʳᵈ person'." ("X" is a morphophonemic symbol which stands for various assimilatory variations in the shape of the particles: Huziwara 420–3, 424–6).

[48] Furthermore, three of the five also show obstruentization in Northern Naga. On the other hand, none of my eleven etyma show obstruentization in Bodo-Garo (except for Garo **ste** 'abdomen' < ***s-lay** ≍ ***s-taːy** 'navel'). In this respect Jingpho is closer to Northern Naga than it is to Bodo-Garo. Obstruentization of laterals is not characteristic of Nungish, any more than it is of Lolo-Burmese.

leaf	*s-la(p) [49]	làp	talāt < tāt	áta?	PNN *lap

[French 510]

/The Kadu form contains the -al- infix [Sangdong 158–60]./

lick	*s/m-lyak	tá?, mətá?	tāk	áta?	WT ldag,

Tangkhul məlek

/Other languages (e.g. Akha myə̀?) show preemption by the nasal prefix./

moon	*s-la	šətā, tā	sətá	sədá	WT zla-ba;

Meithei tha

/STC's reconstruction *sgl- (n.137, p.42) is needlessly complicated. Interestingly, Meithei also has a stop here./

navel	*s-lay	dāi, šədāi		ásəlu	PNN *ta:y	Garo ste

[Fr. 525]   'abdomen'

WEAVE is a somewhat analogous etymon, which shows interchange between r- in Nungish (e.g. Rawang rɑ?) and in Lolo-Burmese, e.g. WB rak, Lh. γà? < PLB *rak¹), but a dental stop in most other TB languages (e.g. WT ḥthag-pa). This has been explained variously by a proto-cluster (Matisoff 1972:#192, reconstructs PTB *d-rak), and ascribed by Benedict to an Austro-Tai prototype (STC n.69, p.19). Jingpho has a doublet dà? ≈ wà?, while Luish and Northern Naga have stops: Kadu tàk, Sak ta?, PNN *tak (French 578).

MORTAR is a rather similar case, this time of the hardening a fricate to a stop. While Nungish, as well as Mizo and Garo, have s-, and the PLB reconstruction is *ts- (> WB chum, Lh. chɛ), Jingpho and Luish have dental stops, as does most of Northern Naga, leading to a reconstruction something like *(t)sum > *tum:

Rawang	Mizo	Garo	WB	Lahu	Jingpho	Kadu	Sak
dɔŋ³¹sɯm³³	sum	sam	chum	chɛ	thùm	thōn(-shī)	thuŋ

Northern Naga also has dental stops (Yogli thim, Moshang thum, Nocte thʌm), except for Chang šʌm [French 523].

As I observed at the end of "The dinguist's dilemma", the very sporadicity of l/d or l/t interaction is a consequence of its basis in articulatory fact. Sound changes which are based on universal articulatory tendencies may be activated at any time, so may paradoxically appear to be sporadic in their operation. But in this case the sporadicity may be somewhat localized within the TB family!

4.3.3. Jingpho/Luish cognates and adumbrations of "Proto-Jingloi"

In the following list, cognates have been arranged according to their putative PTB rhymes. The best examples pointing to a special Jingpho/Luish relationship, or to new roots reconstructible for Proto-Luish, are in boldface.

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[49] For the *s- prefix, cf. Magar hla, Dhimal hla-ba.

4.3.3.1. Open syllables

(1) *-a

Gloss	PTB	Jingpho	Kadu	Sak	Other
ask				kəɗa	Bwe da
be there/copula		ŋà	ngā	ŋa	
bitter	*b-ka	khá		hā	ha
bone	*g/m-ra	ǹ-rā		áməra	WT gra-ma
box	*da			táiʔ-ta	Lh. ta-qō
borrow/lend	*r-ŋya		hɛ̄	hu	WB hŋâ
child/son	*tsa ⪬ *za	shâ	sha	ása, maiŋ sa	
chin/jaw	*m/s-ka	ǹ-khá, nìŋ-khá	ahà	ahəɓúʔ	Rw. məkhɑ⁵³
crow	*ka		ūhá	uhá	Rw. thang-khɑ
dance	PLB *s-ga³			káq	WB ka', Lh. qā
door/gate	*m-ka	ṅ-khā		ahá	
dry up		**kā**		**səka**	
ear	*g-na	nā	kaná	akəná	
earth/land	*r-ga ⁵⁰	gá, əgâ	kā	kəjáʔ	Garo ha, Rw. rəgɑʔ
eat/food	*dz(y)a	shá		áca, acá	
father/husband/male	*pʷa	wâ 'father'	wā 'male', awà 'father'	avá 'father', ahróva 'husband'	Bwe wa; Moshang wa
fish	*ŋya	ŋá	ahɛ̄; táŋ-ŋa	təna ⁵¹	
five	*b/l-ŋa	məŋā		ŋá-hvú	Rw. phəŋwɑ³¹
foot/leg			**ta**	**áta**	
fox	*gwa			ʃówa	WT wa
hoof			khwā	khwa	WB khwa
hot			**ká**	**ká** 'hot', **aká** 'roast'	

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⁵⁰ STC #97 reconstructs ***r-ka**, but reconstructing a *voiced initial seems preferable, since Kadu retains a velar, rather than developing **h-**. Jg. and Rw. also have voiced initials.

⁵¹ Sak **tə-** is evidently a reduction of the syllable **táŋ-** that appears in Kadu.

Gloss	PTB	Jingpho	Kadu	Sak	Other
hundred	*r-gya	lətsā		tərá	
hurt/ill	*na	nà	kanà	kəna	
I/me	*ŋa-y	ŋāi	ngā	ŋa	
male		**lā**	**lā**	**ála**	**PNN *la;** **Nung nang-la**
moon/month	***s-la**	**šətā**	**satá**	**sədá**	**Rw. shəlɑ⁵³**
negative			a-	a ... ɓuʔ	
nose	*s-na		shəna	asəkənú	Rw. ʃənɑ⁵³
old				uʔ sa 'old man'	Lh. hɛ-šā 'old field'
one			tὲn-**à**	hvú-**wa**	Aka/Hruso a; Qiang Taoping a²¹
only		**šà**	**sà**	**sáʔ sáʔ**	
palm	*pʷa-n	ləphàn	tāk-pā	ătăp'aĩ² 'sole' [GHL], taʔpráiŋ [HK] 'palm'	
patch ⁵²	*pʷa	kəpà	kapák		
place		**šərà**		**ará**	**Rw. ɕərɑ³¹ ⁵³**
put down /durative	*s-ta	dá		pədáʔ 'put' dáʔ 'done and left'	Lh. tā 'put; durative'
rain (v.)	*r-wa			vé	WB rwa
red			há	ʃá	WB tya
saw (n.)			lwáq	rwá	WB hlwa'
seedling (rice)		**təkå ⁵⁴**	**takà**		
send/see off		**sà ⁵⁵**	**sák**		
skin/flesh			**malā**	**aláʔ 'flesh'**	
sparrow				casa	WB ca
take/accept		**lá**	**lā**	**la**	**Anong ɬɑ⁵⁵**

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⁵² See Matisoff 2000.

⁵³ This looks like a loan from Jingpho. Chinese 所 (OC śrjo, Mand. suǒ) seems definitely cognate to the Jingpho and Sak forms.

⁵⁴ This comparison is offered by Sangdong, but the Jingpho form is not in Hanson, Dai, or Maran. The ring over the Jg. vowel indicates that the tone is unknown to me.

⁵⁵ Written "hsa" in Sangdong.

Gloss	PTB	Jingpho	Kadu	Sak	Other
thin	*ba	phà	phā	pha	Rw. bɑ³¹
tiger			kasà	kəsa	
tongue	*s-lya		salí	asəlíʔ	WB hlya
tooth	*swa	wā, əwā	swá	asəvá	WT so, WB swâ
walk	*s-wa	sā; wà	hā	ha	
want/desire				kaʔ	Lh. gâ 'desiderative'
wound/injury	*r-ma-t	màt, šəmàt	kamà	ámaiŋ [56]	Anong rəmat

(2) *-əy and *-i

Gloss	PTB	Jingpho	Kadu	Sak	Other
bile/gall/sour	*m-kri-t	khrī 'acid; sour'		ahə-kəɨ 'gall'; [57] hrɨ 'sour'	WT mkhris
boat	*m-ləy	lī	halí		WB hle
bow	*d-ləy	kūŋ-lī	talèt	le-háʔ 'bow'; hléjú 'arrow'	WB lê
catch/reach	*s-mi		mì		WB hmi; Lh. mi
comb	*m-si(y)	pəsí (n.); məsìt (v.)	shī	sɨ	Mikir iŋ-thi
copper	*grəy	məgrī		krɨ	WB kre; Lh. kî
earwax/body dirt	*kləy	khyí		saiŋ grɨ	WB khyê
deer (barking)	*d-kəy	khyì-dút		iʃi	WB khye; gyi
die	*səy	sī	shí	sɨ	WB se; Lh. ši
four	*b-ləy	məlī		prɨ	WT bźi
give			ī	ɨ, i	
heavy[58]	*s-ləy	lī, cəlī	neiʔ	ániŋ	WB lê
kick			phi	kəphe	
market	*dzəy			jɨ	WB jhê
	/Probably ult. < Chinese 市 (Mand. *shì*)./				

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[56] The final nasality in this form appears to be due to the influence of the syllable-initial.
[57] The 2nd element in this compound means 'liquid'; cf. **amíʔ-kəɨ** 'tears'.
[58] The Luish forms are of doubtful cognacy to Jg. and WB.

Gloss	PTB	Jingpho	Kadu	Sak	Other
medicine	*tsəy	tsì	shī	sɨ	Lh. nâʔ-chî
penis	*ti [59]		tí	akyí	
send				puu	Lh. pə
skinny		ləzi *or* lətsi [60]	ashì		
thigh		məgyī	tacī		
water	*rəy		wɛ́	ɨ́; kəɨ́	WB re; Lh. ɣɨ̀
write/draw	*b-rəy	mərì		rwɛ́	WB rê

(3) *-wəy

Gloss	PTB	Jingpho	Kadu	Sak	Other
blood	*s-hywəy	sài	sɛ̄	se	WB swê
dog	*kwəy	gùi	cī	kvu	WB khwê; Lh. phî
egg/testicle; water/spit [61]	*twəy	məthwí 'spit'	tī 'egg'; kapaū-**tī** 'testicles'	ákyi-**tvu** ~ ă¹tji⁴ **tu⁴** 'testicles' ("penis-eggs")	
elephant [62]	*m-gwəy	məgwī	a-cí	wvu-**kvú**	
laugh	*m-nwəy	mənī	ní	ané	
pus	*tswəy	mətswī		svu	WB chwê
son-in-law	*krwəy	khrī		ahrɨ́	WB khrwê-ma' 'daughter-in-law'
sweet	*twəy	dwì	tī	kyi	Mizo tui; Rw. khi⁵³wɛ³³

(4) *-əw and *-u

Gloss	PTB	Jingpho	Kadu	Sak	Other
air/sky	*r-məw	ləmù 'sky'		muŋ	WB mûi[gh]
bird [63]		ù	ū	u	≍ *wa

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[59] See Matisoff 2008, #'s 117, 118.
[60] This comparison is due to Sangdong. The Jingpho form does not appear in Hanson or Dai.
[61] For the complicated and somewhat controversial range of meanings of this etymon, see STC, n. 149 and Benedict 1939:225.
[62] L. Bernot (1967:240) supplies some interesting Luish forms for 'elephant' from earlier sources: Cak (Pakistan) **u-kɪ, u-kv**; Kadu (Houghton) **akyi**; Andro (McCulloch) **kee**.

Gloss	PTB	Jingpho	Kadu	Sak	Other
breast/milk	*dzyəw	[tšúʔ]		cəú 'milk' ú nóʔ 'breast'	WB cui' 'suck'
burn			hū	hru	
crazy	*ru			rəw-**vu**-ba	Bai vu²¹; Rw. dəru³³ 'fool'
dig	*du ≍ *tu	thù		thu	Rw. du³¹
dove/pigeon	*m-krəw	khrū-dû	khō	bəhríʔ	Dulong xɹɯ⁵³; Lh. gû
drink			ū	u	
dry			akú	rakú	
emerge		prū	pū	pru 'emerge', səbru 'put out'	
get/obtain		lù 'have'	lū	lu	Dulong lu⁵³ 'get, fetch'
grandfather [64]	*pəw		ouʔ	aúʔ	WB ʔəphûi; Lh. ɔ̀-pū
head	*d-bu			ahú, ăhwu²; [Dodem] uk'u; úʔ-huŋ 'pillow'	WB ʔû
intestines	*pʷu	pù		apíʔ **wvu** sa	WB ʔu
language			tú	tú	
look at			yū	yu	
mother		nû		anú	PNNaga *ɲəːw
mushroom	*g-məw	kəmū	kəmú	kəmú -kaiŋ	Lh. mù
nine	*d-gəw	džəkhû		təfvú ~ təhvú	Rw. dəgɯ³¹
person				lú	WB lu
porcupine		dú		pədvu	
raise/rear	*hu			hrú	Lh. hu
rat	*b-yəw	yú	kayù	kəyvu	
same/alike				tu	WB tu
silver/white	*plu	gùm-phrò	phú	phro	WB phru

[63] This morpheme is a preformative in birds' names in both Jingpho (e.g. **ù-khrūdû** 'dove') and Sak (e.g. **u-há** 'crow').
[64] Luish seems to have undergone a development like ***p- > h- > Ø-**.

Gloss	PTB	Jingpho	Kadu	Sak	Other
smoke	*kəw	ʔwàn-khùt khú	khó	vaiŋ-hvu ~ vaiŋ-fvu	Lh. mû-qhô
snake/insect	***bəw**	**ləpú**	**kaphú**	**kəhvú 'snake';** **ápvu 'insect' (? < Bs.)**	**WB pûi**
steal	*r-kəw	ləgú	kū	kvu	WT rku; WB khûi
stick (n.)				duʔ	Lh. á-tà-du ~ á-du-tà
wing		**sìŋ-kō**	**taí-kú**	**ayáiŋ-kó**	

(5) *-ay and *-e

Gloss	PTB	Jingpho	Kadu	Sak	Other
bean	*be			ɓé bráʔ	WB pâi
break off	*be ⩗ *pe			ɓi	WB pai'
carry on shoulder		**phāi**	**phí**		
change/exchange	*s/g-lay	lái, gəlái		kré	Garo sre
fang/tusk/eyetooth	*dzyway			ákywe	WB cway; Lh. cì
goat		**bài-nām**	**kabὲ**	**kəɓiʔ, kabɪk**	
God [65]		kərài kəsàŋ		phərá	Rw. gərai³¹gəʃaŋ³¹
grandmother/ senior female	*(y)ay			aí	Lh. e 'mother'
lie/falsehood	*ha:y			waiʔ	Lh. hē; Mizo hai
root				ákraiʔ	Lh. ɔ̀-gə
sand	*sa-y [66]			sé	WB sâi
tail [67]	*r-may	ǹ-mài, nìŋ-mài	màik-kú	áləmuŋ	Rw. ni³³goŋ³³
ten	*tsyay	šī		sɨ́-hvú	

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[65] See Matisoff 1985 ("God and the Sino-Tibetan copula").
[66] See Matisoff 1995a ("Palatal suffixes").
[67] Note the similarity between the Kadu and Rawang binomes. The final **-k** in the 1ˢᵗ syllable of the Kadu form looks like a secondary anticipatory assimilation to the velar of the 2ⁿᵈ syllable; The final nasal in Sak looks like perseveratory assimilation to the nasal initial of the 3ʳᵈ syllable.

(6) *-ey

Gloss	PTB	Jingpho	Kadu	Sak	Other
buy	*b-rey	mərī	mí	mərɨ́	
fruit	*sey	nàm-sì		ásɨ	Lh. í-šī
know	*syey	šì 'news'		ʃé	Lh. šī
thread/vine	*rey	sùm-rì		rɨ	Rw. səri[53]
younger sibling	*nyey		nəʃi	anésɨ	Lh. ni

(7) *-aw

Gloss	PTB	Jingpho	Kadu	Sak	Other
call/invite	*gaw	gāu	kō		WB khau; Lh. qho
early		**tšāu**	**zóng**	**có jó**	**WB cô**
head	*m/s-gaw			a-hú, uk'u	Rawang əgɔ
mix	*ryaw	yàu		ró	WB rau
oil (cooking)	*sa:w	sáu	salaú [68]		Bodo thau

(8) *-ow

Gloss	PTB	Jingpho	Kadu	Sak	Other
green	*s-ŋow			ŋyú-goʔ	WT sŋo
hammer/pound	*dow ≳ *tow	thù 'pound (v.)' sùm-dū 'hammer'	thū	tu; thvu	WB tu
prick/stab/thorn	*tsow	jú ~ jùt		cvu 'prick' dzú 'nail (fastener)'	

(9) *-oy

Gloss	PTB	Jingpho	Kadu	Sak	Other
long ago		**mòi-mòi**		**mæú**	
monkey	***woy**	**wōi, əwōi**	**kwɛ́**	**kəvu, kɪwuu**	**Nung əwɛ, Moshang vi-sil**

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[68] This form contains the infix **-al-**; see Sangdong 158–60.

4.3.3.2. Nasal rhymes

(10) *-am

Gloss	PTB	Jingpho	Kadu	Sak	Other
bridge	*dzam			thaiŋ	Lh. cò
bright		làm 'gleam'		láŋ 'bright'	
daughter-in-law	*s-nam	ʔnām	náŋ	anáŋ	Ganan nám
dry (in the sun)		lām		məláŋ	
fly (v.)	*byam	pyēn		páiŋ	Lh. pò
iron	*syam		sīn	siŋ	Rw. ʃam³¹
otter ⁶⁹	*sram			phaiŋ	WB phyam; Rw. ʃəram³¹
rice/paddy		mām	ān, ām	aŋ	
road	*lam	lām	lám	láŋ	WT lam
sesame	*s-nam	nàm, tʃíŋ-nàm	sanàn	sənaŋ	WB hnâm
sharp/sword	*s-ryam			ráŋ	Rw. ɕam³¹
shore/coast/bank	*r-ka:m	ǹ-gàm 'precipice'		káiŋ ná	
smell/stink	*m/s-nam	mənám	nám	naũ² [Luce]	Rw. phənam⁵³

(11) *-im

Gloss	PTB	Jingpho	Kadu	Sak	Other
catch		rìm	yīm	riŋ	
house	*k-yim		cím	kíŋ	WB ʔim; Lh. yὲ
raw/unripe	*dzyim	kətsīŋ	kəsheiŋ	akəsíŋ	Rw. əzuum³¹

(12) *-um

Gloss	PTB	Jingpho		Kadu	Sak	Other
lose/be defeated					ʃúŋ	WB hrûm ⁷⁰
mortar	*(t)sum	thùm		thōn	thuŋ	Rw. dɔŋ³¹**suum³³**

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⁶⁹ The Sak form is undoubtedly borrowed from Burmese. See Matisoff 2010a.
⁷⁰ Mod. Bs. **šôᴜɴ** is undoubtedly the source of the Sak word, which has also been borrowed into Lahu as **šôn**.

Gloss	PTB	Jingpho	Kadu	Sak	Other
negative		khùm 'neg.imp.'	kùm [71]		
pillow	*m-kum	bùŋ-khúm	teúm	úʔ-huŋ	Lh. ú-gê; Rw. gɔ³³məkhum³³
salt	*g-ryum	jùm (n.); shūm 'salty'	zūn [72]	cìŋ	
taro	PLB *blum²			príŋ	Lh. pê; Bisu plùm
three	*g-sum	məsūm		súŋ-hvu	
use	*zum			súŋ saŋ	Anong dzom³¹; WB sûm; Lh. yê
warm	*s-lum	lūm (v.i.), šəlūm (v.t.)	lóm	líŋ	WB lum, hlum

(13) *-an

Gloss	PTB	Jingpho	Kadu	Sak	Other
face/front		mān	mán	amáiŋ	
meat	*dzya-n [73]	šàn	sān	ásaiŋ	Rw. ʃɑ³³
onion	*swa-n		sún	súŋ	WB swân; Lh. šū
outside		prān-tàn [74]		apráŋ	
return/come back				práiŋ	WB pran

(14) *-in

Gloss	PTB	Jingpho	Kadu	Sak	Other
cold		kətsī; kəšūŋ	kasín	siŋ	Garo kaʔ-sin
liver/mind	*m-sin	məsìn	asìn	áŋ-siŋ	WB sâñ; Lh. šē̄
ripe	*s-min	myīn	míng	míŋ	WB hmañ; Lh. mɛ

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[71] Glossed by Sangdong (p.498) as "verb particle indicating unfinished activity, exclusively with a negated verb phrase".

[72] STC #245 cites "Kadu *sum*", probably from Houghton 1893.

[73] Note that Jingpho and Luish share the nasal suffix with this etymon, which in its unsuffixed form means 'eat'. With the stop suffix -t, both Jingpho and Luish have developed the meaning 'rice' from this root. See below 4.3.1.

[74] This Jingpho form is cited in Huziwara (pʒan³³tan³¹ in his transcription), but I have not been able to find it in Hanson, Dai, or TBL.

(15) *-en

Gloss	PTB	Jingpho	Kadu	Sak	Other
nail/claw	*m-(t)sin ≽ *m-tsyen	ləmyīn	mīng	taʔmiŋ	Rw. nyin; WB sâñ; Lh. šɛ̄
rob/oppress/suffer	*s-nyen	nyèn 'defraud', šənyèn 'take by force'		sənaiŋ 'rob'	WB ñâñ 'grumble', hñâñ 'oppress'

(16) *-un

Gloss	PTB	Jingpho	Kadu	Sak	Other
bee			túŋ-ŋún	təlúŋ	Gaman təmún
powder/dust [75]				taiŋ mú	PLB *ʔmun¹/³ > WB mun' ≽ hmun; Lahu mə ≽ mə̄
rabbit/rat	*b-yəw-n	yūn ~ yū 'rat'		yuŋ 'rabbit'	WB yun 'rabbit'
wrap/put on and wear		**phún**		**phūn**	**Boro pin; Garo pin-dap 'cover'**

(17) *-aŋ

Gloss	PTB	Jingpho	Kadu	Sak	Other
back (of body)			kəsháŋ	akəsáŋ	
black	***tyaŋ**	**tšāŋ**		**thíŋ**	**Lp. tyaŋ 'dark'; Tsangla tsaŋ**
cheek			lapàng	anəbáŋ	
chest/breast	*b/g-raŋ			raŋ pháiʔ	WB raŋ
corpse/body	*s-maŋ	māŋ	maʔ kuʔ 'bone'	akəmáŋ 'corpse'	Ganan maŋ-kuʔ 'bone' [76]
deaf/mute [77]	*baŋ	nà pháŋ; ləpháŋ		nəbáŋ	Lh. nā pô
dream	*maŋ	ʔyúp-maŋ		iʔ maŋ	WB ʔip-mak
enter/insert [78]	*s-waŋ	šàŋ	sāng 'enter'	saŋ 'enter' soŋ 'insert'	WB waŋ 'enter', swâŋ 'put into'

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[75] This may well be a loan from Marma into Sak.
[76] Cf. also Rawang **ənaŋ³¹**, where the syllable-initial nasal has assimilated to the final.
[77] Jg. **nà** and Lahu **nā** mean 'ear', a morpheme which has been reduced to a prefix in Sak.

Gloss	PTB	Jingpho	Kadu	Sak	Other
friend	*kyaŋ		paháng-**cháng**		WB ʔəkhyân 'an intimate'; Lh. ɔ̀-chɔ̂ 'friend'
go			nāng	laŋ	
high/long/tall	*m-raŋ		myáng		Trung mraŋ; Rw. yaŋ; WB mraŋ'
horse	*mraŋ	gùm-rà(ŋ) [79]		mərán	Rw. gum³¹raŋ³¹
knife/cut		tàn 'cut' [80]	**tāng**	**kə́taŋ**	**Lh. á-thɔ 'knife'**
light (weight)	*r-ya:ŋ	tsāŋ		rəca [81]	WT yaŋ-po
mistake/err		kəmáŋ 'abstracted'		kəmaŋ 'err'	
open	*pwaŋ � *pwak	phɔ̀ʔ		phwáŋ	WB phwaŋ'; Lh. phɔ; Nung phuŋ⁵⁵
rain (n.)		mərāŋ 'rain'		**hráŋ 'rain'**	
roast/toast/broil	*ka:ŋ	kəkāŋ	kàng	kywa	Rw. dəgaŋ⁵³
sing/song			techáng	atéhráŋ	Marma tékhráŋ
squirrel			cīlāng	ʃáiŋ	Nung dzɹ³¹ʈhaŋ⁵⁵; Rw. məthaŋ³³
waste/interfere [82]		kəpáŋ 'interfere'		**kəbaŋ 'waste'**	
wave (water)				ɨ-láiŋ	Chinese 浪 (Mand. làng)
you	*naŋ	nāŋ	nāng	naŋ	Rw. nɑ³¹

(18) *-iŋ

Gloss	PTB	Jingpho	Kadu	Sak	Other
alive/live	*s-riŋ ⋈ *s-raŋ	kətsīŋ 'fresh, green'		síŋ	WB hraŋ
bark (v.)	*priŋ	phrīŋ, məphrīŋ		məríŋ	WB mrañ

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[78] This etymon is a simplex/causative pair. Note the backing of the Sak vowel due to the medial **-w-** in the causative form. The Luish forms show generalization of the **s-** prefix to the simplicia; this prefix then preempted the simplicia's root-initial **w-**.

[79] The Jg. variant with final nasal is characteristic of the Hkauri dialect.

[80] The Jg. **-n** instead of **-ŋ** is not explained. For similar variation in final nasals, see SHORT.

[81] The lack of a final nasal in Sak is unexplained.

[82] This Jingpho/Sak comparison is made in Huziwara 2010:140.

Gloss	PTB	Jingpho	Kadu	Sak	Other
forest	*b-liŋ	məlīŋ		məlíŋ	
full/fill	*bliŋ ≍ *pliŋ	phríŋ (v.i.) džəphríŋ (v.)		phríŋ bəbaŋ	WB prañ' (v.i.), phrañ' (v.t.)
ginger [83]	*kyaŋ		kazíŋ		WB khyâŋ; Meithei siŋ
name	*r-miŋ	myīŋ		amíŋ	WT miŋ; WB mañ
two	*g-nis	nī	kalìŋ	níŋ-hvu; náiʔ	WT gnyis; WB hnac
year	*s-niŋ	sənīŋ	nát-**nĭ̄ŋ** 'next year'	səniŋ	Rw. nap nuŋ⁵³ 'next year'

(19) *-eŋ

Gloss	PTB	Jingpho	Kadu	Sak	Other
board/plank	*pleŋ	brèn ~ byèn		pyaiŋ	Garo bol-pleŋ

(20) *-uŋ

Gloss	PTB	Jingpho	Kadu	Sak	Other
body	*guŋ			kaiŋ tha	Rw. guŋ
elbow/wing				táiŋ **doŋ** 'elbow'	WB ʔətauŋ; Wanang cak-**doŋ** 'hand; arm'
hole	*guŋ ≍ *kuŋ	ǹ-khūn	tə haŋ	ahúŋ	Ganan khɔŋ-ŋa; WB khâung
horn	*ruŋ	ǹ-rūŋ		arúŋ	Rw. ruŋ³¹
short [84]		**kətùn**		**tuŋ**	**WT thuŋ; Deng kutioŋ⁵³**
sit [85]	*duːŋ ≍ *tuːŋ	dūŋ		túŋ	WB thuiŋ; Namsang toŋ
stone	*r-luŋ	ǹ-lùŋ	lóŋ kəʃi	təluŋ	Ganan təlaung si
wind (n.)	*m-buŋ	ǹ-būŋ		muŋ [86]	Rw. năm⁵³buŋ³¹

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[83] This is a SE Asian *Wanderwort*. See HPTB:302,304.

[84] This root shows variation between **-n** and **-ŋ**, necessitating a TB reconstruction like ***tun ≍ *t(y)uŋ**. For similar **-n ≍ -ŋ** variation, see CUT/KNIFE.

[85] Bernot (1967:254) cites Kadu (Houghton) **t'ô:n-nim**; Andro (McCulloch) **tong té**; Sengmai (McCulloch) **thong dé**.

[86] Notice the preemption of the initial by the prefix in Sak. There is an excellent Chinese comparandum 風 OC **pi̯um**, Mand. *fēng*.

4.3.3.3. Stopped rhymes

(21) *-ak

Gloss	PTB	Jingpho	Kadu	Sak	Other
branch	*s-ka:k		hàk (Clf), halàk		WB ʔəkhak; Lh. ò-qá
breath/air	*n-sak	ǹ-sàʔ		svu saʔ	Rw. ʃaʔ³¹
dark/black	*nak		nāk		WB nak
descend	*zak ⋊ *s-yuk	ʔyúʔ		saiʔ	WB sak; Lh. yàʔ; Mizo zuk
fear	*s-krak		saʔ	ácaʔ	WT skrag-pa; Ganan kəsaʔ
hand [87]	***g-lak**	**lətáʔ**	**tāk; tahú**	**tahú**	**WT lag; WB lak**
itch/itchy	*m-sak	məsàʔ	sāk	kəsiʔ	Rw. məʃaʔ
lick	***m-lyak**	**mətáʔ**	**tāk**	**átaʔ**	**Ganan taʔ; WB lyak**
now/today/day	*s-ryak	yáʔ 'day; now'	yàk 'now', máŋ yaʔ 'day'	rəyaʔ 'day', yaʔ 'today'	Lh. yàʔ-ni 'today', há 'spend night'
pig	*pʷak	wàʔ	wàk	vaʔ	WB wak; WT phag
rest		**sáʔ**		**saʔ**	
rough	*sak			soʔ	Lh. šâʔ; WT sag
spit/saliva	*ha:k	məkhá		məháʔ; həɨ́ [88]	
sweep/broom	*pywak	wé ~ yé (v.), dìŋ-yé (n.)		phráiʔ (v.), səphráiʔ (n.)	WT phyag-ma (n.), ḥphyag-pa (v.)
weave/loom	*d-rak	dàʔ	tàk	taʔ	WB rak; Lh. ɣàʔ; WT ḥthag-pa
wide			**wák**	**váʔ**	

(22) *-ik

Gloss	PTB	Jingpho	Kadu	Sak	Other
eye	*mik ⋊ *myak	myìʔ	mík	amíʔ	WB myak; Rw. nɛ³³

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[87] See above 4.3.2.

[88] This latter Sak form (transcribed by Luce as **hă⁴ʔɯ²**) seems to be derived from ***hak-rəy**, where the 2nd element means 'water' [q.v.].

Gloss	PTB	Jingpho		Kadu	Sak	Other
fly (n.)		mətšî 'small winged insects'; tšì?-kròŋ 'mosquito'		pazèk [DS]; pəsí? [HK]	pəcí?	
joint	*tsik				ăs'aʊ?²	WT tshigs; WB chac
louse	*s-rik	tsí?		sēk	si?	Kanauri rik; WT śig
pot		dì?, ǹ-dì?			ti? 'wok'; siŋ-di? 'iron pot'	PNNaga *?-dik
shiver		kəʒí? [TBL], kǎ³¹ʒin³³ [HK]			səkriŋ	
small					apí? sa	Lh. a-pí-nέ 'sthg. small'
stingy/ miserly		mədžì?			kəjíŋ	

(23) *-uk

Gloss	PTB	Jingpho	Kadu	Sak	Other
after/behind	*s-nuŋ ≽ *s-nuk			nó? tái?	WB nauk; Lh. qhɔ̀?-nó
belly/guts	*pu:k ≽ *pik		púk	apí?	Rw. phu? wɑ⁵³
brain/heart	*s-nuk	nú?		ú-nó?	Lh. ú-nɔ̀?-nɛ?
cattle			mōk	səmu?	
frog		šù?	kasòk	kəsu?	Ganan kəshau?
hatch [89]	*puk ≽ *buk		pōk, palōk		
jump/leap	*p(r)ok		phɔ́k	phró	PTani *pok; Lahu pô?
leech₁			maù	məyúú?	
neck	*tuk	dù?	katòk	ákədu?	Garo gitok
prick/stab/ plant	*dzuk			cu? 'plant'; cvu 'stab'	Lh. jû?; WT zug- pa, ḥdzug-pa
six	*d-k-ruk	krú?		kru?-hvú	WT drug; WB khrauk
spit/vomit	*m-tuk	məthó		thó?	Rw. du?
thunder/sky	*r/s-mu:k	mú?	hamòk	kəmu?	Ganan həmu?

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[89] This root is reconstructed in Matisoff 2008:#16, where all the evidence was from Himalayish languages. This Kadu form shows it is a general TB root.

Gloss	PTB	Jingpho	Kadu	Sak	Other
time/occurrence	*s-pok		paūk		Lh. pô?; Rw. poq
under/below		**ń-pú?**	**hamúk, kamúk**		
valley/ravine	*grok	khəró?		kəló?	WB khyauk; WT grog-po

(24) *-ap

Gloss	PTB	Jingpho	Kadu	Sak	Other
bear (n.) [90]		**tsáp**	**kasát**		
cut	*twap		tap	áthu?	WB twap; Ganan tep
cross (river, bridge)		**ráp**	**yāp**		
fan/wave/winnow	*g-ya:p	kətsàp	yāp; həyat	kəya?	Tangkhul kəyap; Rw. rap
leaf	***s-lap**	**làp**	**talāt** [91]	**áta?**	**Magar hla; Rw. aŋ-sap**
lightning	*b-l(y)ap	myì?-phràp		ʃái? prá?	WB hlyap
rub/wipe/grope	*sap			asó? 'grope', kəsú? 'rub'	Lh. šô?
shoot/hurl	*ga:p	gàp	káp		Rw. wap, Anong hwap, Dulong ɑp⁵⁵
snot	*s-nap	nèp, nyèp		anái?	WT snabs
stack/layer/fold	*tap	thàp, kəthàp	haláp [92]		
stand	*g-ryap	tsáp	zāp	ca?	WB rap; Lh. hú
weep	*krap	khràp	hāp	hra?	WT khrab-khrab

(25) *-ip

Gloss	PTB	Jingpho	Kadu	Sak	Other
fist/clench	*tsip			sɨ?	Lh. chî?

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[90] There are cognates in Naga: Konyak **shap-nyu**, Nocte **sap-ba**, Tangsa **shap**. Sak lúwaiŋ is from the well attested root ***d-wam**.

[91] It is possible that this Kadu word contains the **-al-** infix (Sangdong, pp. 158–60), which would make **tāt** the underlying form.

[92] If this form contains the **-al-** infix, the base form would be **háp**.

Gloss	PTB	Jingpho	Kadu	Sak	Other
press		dìp	thīn		
sink¹/submerge/squeeze	*nip ≋ *nup	nìp		nái?	WB nip, hnip
sleep	*yip ≋ *yup	?yúp	īp	i?	WB ?ip; Lh. yì?
turtle			talèp	təli?	WB lip; Karen kl̬i⁵⁵
wrap	*tip ≋ *tup	thúp	tīp	ɗi?	WB thup; Lh. thî?

(26) *-ep

Gloss	PTB	Jingpho	Kadu	Sak	Other
scale (fish)	*sep	ŋá-sèp		akəsái?	Lh. ŋâ-ŝɛ?
threaten/compel [93]		**kətép 'compel'**		**kədái? 'threaten'**	

(27) *-up

Gloss	PTB	Jingpho	Kadu	Sak	Other
breast/suck [94]	*dzup	tšú?		cu? 'suck', ácu? 'breast'	Lh. cú
cover up/bury	*klup	grúp		mərú? 'bury'	WT klub-pa
hit/push		**tùp 'hit'**		**ɗú? 'push'**	
rot	*m-bup			6ú	WB pup; Lh. bù?; Rw. bɯp
sew	*d/g-rup			khrí?	WT ḥdrub-pa; WB khyup; Lahu tó
dive/sink²/drown	*lup ≋ *lip	phùŋ-líp 'dive'		mərú? 'sink'	Garo rip, srip; Rw. əlɯp

(28) *-op

Gloss	PTB	Jingpho	Kadu	Sak	Other
bubble/foam		**khùm-bòp**		**asə6ó?**	
calf (of leg) [95]	*bop	bòp, ləbòp	tapók		

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[93] This Jingpho/Sak comparison is made in Huziwara 2010:140.
[94] For the complicated word-family variations of this etymon, see HPTB:382.
[95] For similar heterorganic final correspondences, see BEAR and LEAF.

(29) *-at

Gloss	PTB	Jingpho	Kadu	Sak	Other
clothes/wear	*wat			áwaiʔ	WB wat; Lh. vòʔ
eight	*b-r-gyat	mətsát		ácaiʔ-hvú	WB hrac; Lh. hí
forget	*ma-t	máʔ 'be used up'; màt 'disappeared'		maiʔ 'forget'	Garo mat 'be spent'
ghost/spirit	*nat			náiʔ	WB nat
kill	*g-sat	sàt	tàt	kəɗaiʔ	Rw. ʃat
leech₂	*r-pʷat	wòt	wàt		WB krwat; Rw. dəphat
release/disrobe	*g/s-lwat	lòt; šəlòt	laúk	ʃuʔ	WB lwat, hlwat/ kywat, khywat; WT glod-pa, hlod-pa
rice (cooked)		**šàt**	**sàt**	**kvú saiʔ**	**Tanghul tsaat**
run	*k(y)at ≍ *g(y)at	kəgàt	kát	kaiʔ	Lh. qā-**qhêʔ** 'dance'
smell/odor	*bat	bàt		ásəɓe	Lh. ɔ̀-pὲʔ
starve/hungry	*mwat		kanàt		WB mwat; Lh. mὲʔ

(30) *-it

Gloss	PTB	Jingpho	Kadu	Sak	Other
extinguish/ blink	*s-mi(:)t	simit [96]	mīt	səmiʔ	WB hmit; Lh. mὲʔ
pluck/pinch	PLB *ʔjwat		cìt		Lh. cîʔ; WB chwat
tear/split	*m-džit ≍ *m-džut		sháiʔ	sáiʔ	Lh. jìʔ; WB cut, chut
urine/urinate	*tši-t	jìt (n.), jí (v.)	zít	co-sɨ (v.), co-háʔ (n.)	

(31) *-et

Gloss	PTB	Jingpho	Kadu	Sak	Other
become/happen	*pret			phraiʔ	WB phrac; Lh. phὲʔ
scrape/scratch	*m-kret	khrèt		a-hré	WB khrac; Lh. gêʔ
vagina	*b(y)et		pák (DS), paʔ (HK)	ăpɛt [Dodem]	Lh. cha-pὲʔ

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[96] This form is from the Assamese dialect of Jingpho; tones are unknown.

(32) *-ut

Gloss	PTB	Jingpho	Kadu	Sak	Other
blow	*s-mut	kəwùt	mūn	muʔ	WB hmut; WT ḥbud; Lh. mâʔ
deer (sambhur)	*d-yuk	khyì-dút		kəjuʔ	Ganan kəsauʔ
knee	*put-s	ləphút		átəfvú	WT pus-mo
wipe	*sut ≍ *sit	kətsút		kəsúʔ	WB sut; Lh. šíʔ

4.3.3.4. Liquid rhymes

(33) *-al and *-ar

Gloss	PTB	Jingpho	Kadu	Sak	Other
enemy/quarrel	*g-ra:l			raiŋ-su 'enemy', aráiŋ 'quarrel'	WB ran; Tiddim ga:l
far	*dzyal	tsān		caiŋ	Bodo gəzaʔn; Tangsa wal
fire/burn [97]	*b-war	ʔwàn	wān	vaiŋ	Anong hwar; Rw. war[53]
flower/bloom	*ba:r	nàm-**pān** 'flower'	pəpá 'flower'	apáiŋ 'bloom'	WT ḥbar-ba 'bloom'; Garo bi-bal 'flower'; WB pân 'flower'
garden/enclosure	*wal	wàn, kəwàn 'be in a circle'		wáŋ	WB wân 'round'; Mizo val
new		**ǹ-nān, nìŋ-nān**	**nayá**	**náiŋ, anáiŋ**	**Tangsa anal; Nocte anyian**
pour/flow/scatter	*sywar	džó, tšyó; šōn	sē; sét	sáiʔ; pəjáiŋ	Rw. wuun[33]; WT ḥtśhor-ba; WB swan, swân; Lh. šē, šêʔ
sister	*dzar	džān	sáŋ	acáiŋ	Ganan sán; Tangkhul əzăr-vă
star	*s-kar	šəgān		səkáiŋ	WT skar-ma; Menba kar-mi
sun [98]	*tsyar	džān	səmíʔ, zamík	cəmíʔ	Ganan shəmíʔ

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[97] This is an extremely complex etymon, with some 10 allofamic variations; see HPTB:428–30.

Gloss	PTB	Jingpho	Kadu	Sak	Other
tired/thirsty [99]	*bal	bàn 'be at rest', bá 'tired'			Bahing bal; WB pân; Dulong bal⁵⁵ 'thirsty'
yellow	*g-war			áwa; waŋ	WB wa; Rw. wɑr³¹

(34) *-il

Gloss	PTB	Jingpho	Kadu	Sak	Other
wash	*m/b-syil ≍ *m/b-syal	šín, kəšìn	chī	kəjáiŋ	Nungish *dzal

(35) *-ul

Gloss	PTB	Jingpho	Kadu	Sak	Other
bend/bent	*gu:l			ákuŋ	Lai Chin kuul 'hunchbacked' [100]
hair (body)	*mul	mūn		ámuŋ	Rw. muɹ³³; WB ʔəmwê
mouth/lip	*m-tsyul [101]		satún	asətúŋ	WT mtshul; Lepcha a-dŭl; Rw. ni⁵³thul⁵³
tree/wood	*bul ≍ *pul	phún	phón, phún	apháŋ 'tree', púŋ-láʔ 'bark', púŋ-pháŋ 'tree'	Garo bol

4.3.3.5. Etyma with root-final *-s
(36) *-as

Gloss	PTB	Jingpho	Kadu	Sak	Other
hear/listen	*tas	mədàt	tét	táiʔ	Ganan tát; WT thos-pa
thick	*r-tas	thàt, ləthàt	thɛ	rəthɛ	Rawang that

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[98] As Huziwara observes (2010:143), this famous eponymous root, which has given its name to Burling's "*sal* hypothesis", has been reduced to a prefix in Luish.
[99] STC #29 only cites forms meaning TIRED. This set is included here simply for its interesting semantics.
[100] See VanBik 2009:#293. A separate root **gok** underlies forms like Rawang **dəgɔʔ**.
[101] A rather similar (but apparently distinct) root with this meaning is **d(y)al**, which underlies such forms as Jg. ǹtēn and Mizo dal.

(37) *-is

Gloss	PTB	Jingpho	Kadu	Sak	Other
seven	*s-nis	sənìt		səniŋ-hvú	Kanauri stis; rGyalrong kĕsnĕs

V. Conclusions

Working on this paper has brought home to me with particular clarity the utter crudeness of the traditional family-tree model of linguistic relationships,[102] especially in a complex contact area like Southeast Asia. We are sorely in need of a new sort of diagrammatic representation, perhaps something like the logician's "Venn diagrams", which show by means of overlapping circles the extent of the areas of similarity among different entities. Any valid language family will show overlapping points of similarity: phonological, lexical, and grammatical isoglosses. Subgrouping depends on how many of these isoglosses reinforce each other—how many strands of similarity combine to become a rope or a cable, as it were.[103]

At the present state of our knowledge, all we can do is rely on our gut impressions as to degrees of interrelationship. Here are mine, for what they are worth:

(a) Bodo-Garo and Northeastern Naga do indeed share a special relationship, as witness the "curious series" of characteristic roots for HAND and FOOT, where the forms are virtually identical except for the presence of a final element in HAND (see STC, n. 108, p. 34):

	arm/hand	foot
Bodo-Garo:		
Garo	dźak	dźa
Dimasa	yau	ya
Northern Naga:		
Tableng	yak	ya
Tamlu	lak	la
Banpara	tśak	tśia
Namsang	dak	da
Moshang	yok	ya
Luish:		
Chairel	lak	la
Tani:		
Miri	əlak	əle
Dafla	əla	al

(b) In general, Jingpho seems closer to Luish than to any other TB subgroup.

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[102] This of course was also the view of Benedict. See Fig. 1, above.
[103] A similar diagrammatic strategy was used for Indo-European isoglosses long ago by O. Schrader 1917–29, quoted in Bloomfield 1933:316. See Figure II.

(c) The connection between Jingpho and Northern Naga seems stronger than that between Jingpho and Bodo-Garo.

(d) Contrary to my previous view, I no longer consider Jingpho to be particularly close to Nungish, since the lexical similarities between them seem to be due to borrowing.

(e) Lolo-Burmese seems closer to Nungish than to Jingpho.

Figure II.

Some overlapping features of special resemblance
among the Indo-European languages,
conflicting with the family-tree model
[adapted from O. Schrader, in Bloomfield 1933, p. 316]
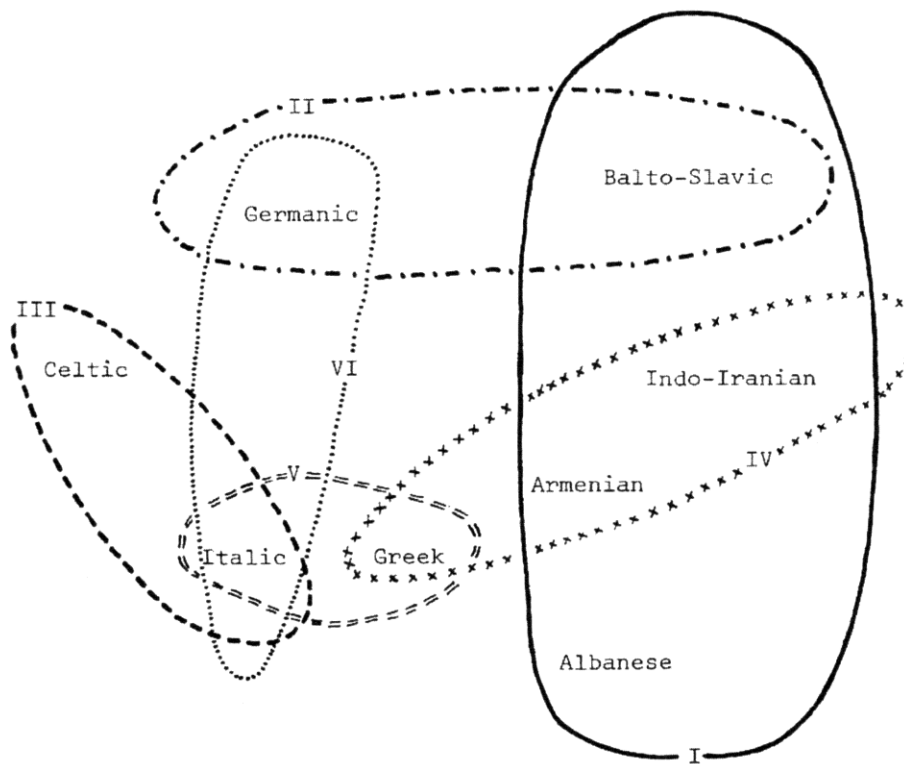

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I.     Sibilants for velars in certain forms.
II.    Case-endings with [m] for [bh].
III.   Passive-voice endings with [r].
IV.    Prefix ['e-] in past tenses.
V.     Feminine nouns with masculine suffixes.
VI.    Perfect tense used as general past tense.
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Appendix I. Evaluation of the evidence for Burling's "sal" grouping[104]

Burling divides his examples into 5 major groups, according to his plausibility judgments: (A) 24 "most convincing" examples; (B) "suggestive sets"; (C) "tantalizing possibilities"; (D) "most widespread TB cognates"; (E) "less widespread but possible cognate sets".

(A) The "most convincing" examples (pp. 8–11)

Of these 24 examples, 10 have no Jingpho cognate, and 10 are general TB roots. [105] That leaves uniquely 4 Bodo-Garo/NE Naga/Jingpho sets: COOKING POT, SKY/RAIN, PESTLE, MOTHER (the latter not in Bodo-Garo). Two of these are easily borrowable cultural items (COOKING POT; PESTLE).

However, the Bodo-Garo/NE Naga comparisons for every item in this list appear quite valid. It is only in that sense that these examples are "most convincing".

(a) Sets with no Jingpho cognate

COOK	No Jg. cognate. Only Bodo-Garo and Naga.
DRINK	Good BG/Naga corresponence, but Jg. **lùʔ** is not cognate to Bodo **riŋ** or Tangsa **liŋ**. [106]
DRY	No Jg. cognate. Bodo and Naga correspond well (< ***g-ran** [JAM])
FACE/FOREHEAD	No Jg. cognate. Only Bodo and Naga.
FINGER	No Jg. cognate. Only Bodo and Naga.
INSECT/WORM	Jg. form of doubtful cognacy to the Bodo and Naga.
LEG/FOOT	Bodo and Naga show special mppc relationship with HAND; Jingpho **ləgō** does not.
LIVE/GREEN	No Jg. cognate. Only Bodo and Naga.
RICE (uncooked)	Good Bodo/Naga correspondence, but no Jg. cognate.
WING	Good Bodo/Naga correspondence, but no Jingpho cognate.

(b) General TB roots

ASH	Both ***tap** [STC #18] and ***pla** [STC#137] are general TB.
BURN/ROAST	General TB ***kaːŋ** [STC #330].

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[104] A similar critique of Burling's evidence appears in Coupe 2012, which I unfortunately did not realize until the draft of this paper was completed.

[105] The claim of unique attestation of an etymon in a particular group or groups of languages is of course weakened when a cognate is found outside the group(s). However, the secondary claim can be made that the reflexes of the etymon in the groups in question are idiosyncratic enough—either phonologically or semantically—that they cannot be imputed to independent descent from a common ancestor, but rather bespeak a closer relationship, either genetic or contactual. Thus the signature *Sal* etyma for SUN and FIRE, while they have many cognates outside the putative *Sal* group, do indeed have undergone semantic specialization from their underlying verbal root, to the point where they have replaced the most widespread TB nominal roots for those concepts.

[106] Burling himself says (p.9) that the Jingpho is "a very doubtful cognate".

CROW	Imitative. Besides, it's a general root *ka [STC p.99–100] that also occurs in Nungish.
FAR	Good Bodo/Naga/Jg. correspondences, but it's a general TB etymon *dzyaːl [STC #229].
FATHER	Good Bodo/Naga/Jg. correspondences, but it's general TB.
	Example of a complex "extrusional" initial, *pʷ-. See Matisoff 2000.
FIRE	*good example* of a Bodo/Naga/Jg. correspondence, but descended from a general TB root *bwar ≍ *pwar 'burn; fire' [STC #220], that appears also in Nungish (Rawang war⁵³, Anong hwar 'burn; kindle') and Luish (Kadu wān, Sak vaiŋ). Another "extrusional" etymon.
LONG	*good example,* but from a general TB root *low [STC #279] Other cognates than WB lu 'disproportionately tall'?
SALT	*good example,* but from a general TB root *g-ryum [STC #245]
SHOULDER	*good example,* but from a general TB root (not in STC or HPTB) *p(r)ak: WT phrag-pa 'shoulder', phrag-koŋ 'upper arm'.
SUN	*good example*; in fact this is Burling's signature example:
	e.g. Garo sal; Tangsa raŋ-sal; Jg. jān. But these forms are also from a general TB root *tsyar [STC #187], that also appears in Luish.

(c) Best examples

COOKING POT	*good example*
	Bodo dik / Nocte tik / Jg. dìʔ
	But this is a cultural item, easily borrowed. Not reconstructed in STC. It also occurs in Luish: Sak tiʔ 'wok'; siŋ-diʔ 'iron wok'.
MOTHER	This root *n(y)u appears only in Naga and Jingpho, not in Bodo-Garo.
PESTLE	*good example* Not reconstructed in STC.
	Garo ri-mol; Nocte man, Tangsa mol; Jingpho thùm-mūn. But this is a cultural item, easily borrowed.
SKY/RAIN	*good example*
	Atong raŋ-wa 'rain'; Nocte rang 'sky'; Jg. mərāŋ 'rain'; but this etymon appears also in Luish: Sak hráŋ 'rain'.

(B) "Suggestive sets" (p. 21)

Of these 19 sets, 6 lack Jingpho cognates, and 8 are general TB roots (one of which, TODAY, is a two-morpheme collocation of two general roots). One is a Wanderwort of Mon-Khmer origin. One is a doubtful case. This leaves COVER, DIVE/SINK and SEED as the convincing examples.

(a) Sets with no Jingpho cognate

BONE	The Bodo forms cited (e.g. Garo greŋ) may be related to Tangsa rang; but Nocte ra: goes with Jingpho ǹ-rā, from a separate root (cf. WT gra-ma 'fish-bone'). The general TB root *rus [STC #6] reflects still a third etymon.

DEER (sambhur)	The Garo and Naga forms are cognate, from ***d-yuk** [STC #386], but Jg. **cəkyī** is from a separate root ***d-kəy** [STC #54] 'barking-deer' [*Cervulus muntjac*].
HOUSE	Good BG/Naga correspondence, but no Jg. cognate.
TIGER	Garo mo-**sa** might go with Yellow Lahu **cà-mɛ** < PTB ***k-la** (ult. < Mon-Khmer), but the onset of Jg. **shərō** is simply the TB 'animal prefix' ***sə-**, while the full syllable -**rō** represents the root ***roŋ** 'wildcat; tiger' (cf. STC p. 107, and Lahu **g̈ɔ̀**). On the other hand, Nocte **sao** and Tangsa **shah** look nicely cognate to Luish forms (Kadu **kasà**; Sak **kəsa, kəʃa, kəθa**).
TREE	The BG/Naga correspondence is good, pointing to ***baŋ**, but Jg. **phún** is to be related rather to Garo **bol** < PTB ***bul ~ *pul** [STC pp. 166, 173], as well as to Luish forms: Kadu **phón**, Sak **púŋ-láʔ** 'bark' (**láʔ** 'skin'). A different Sak form **apháŋ** 'tree' is the true cognate of the BG/Naga forms.
WIFE/WOMAN	The Garo, Nocte, and Tangsa forms seem cognate (perhaps < ***syik**), but there is no Jingpho cognate.

(b) General TB roots

BASKET	Good Bodo/Naga correspondence, but the putative Jg. cognate has the wrong vowel. Anyway it's a general TB root, ***kuk** [STC #393].
MOON	A root of special importance to demonstrate the Jg./Luish relationship. But Nocte **da**, like Jingpho **shətā**, is also a form with dental stop. See above 4.3.2 "Obstruentization of laterals".
NAVEL	Good cognates in all three groups, but this is a general TB root ***s-tay** [STC #299]. Burling (p. 12) is skeptical about the inclusion of WT **lte** here, but this is a perfect cognate.
PUS	Good cognates in all three groups, but this is a general TB root, ***tswəy** [STC #183], with cognates in Burmese and Nungish.
STAB/PIERCE	Good cognates in all three groups, but this is a general TB root, found also in Tibetan and Lolo-Burmese (e.g. Lahu **jû̀ʔ**; see TSR #107).
STAND	Good cognates in all three groups, but this is a general TB root, ***g-ryap** [STC #246].
TODAY	This is a two-morpheme word in all three groups, e.g. Jg. **dài-ní**, lit. "this day", where the 2nd syllable is the general TB root for 'day' ***nəy** [STC #81], and the 1st syllable is a general TB demonstrative ***day** [STC #21].
YESTERDAY	The BG and Naga forms apparently descend from PTB ***s-ryak** 'day of 24 hours; pass the night; now; today'. There is a plausible Jg. cognate, not cited by Burling: **yáʔ** 'day; now'. Cf. also Lahu **yàʔ-ni** 'today'. For the nasal prefix in BG and Naga, cf. WB **məne'** 'yesterday'.

(c) Southeast Asian Wanderwort

FALCON/KITE/BIRD OF PREY	This is a Wanderwort of Mon-Khmer origin < ***g-laŋ**. See STC #333.

(d) Doubtful case

COLD | Tangsa **rang-*song*** goes fairly well with Jg. **kəshūŋ**, but Garo **kaʔ-sin** goes better with Sak **siŋ**. This is perhaps a case of **-i- ⋈ -u-** variation. (See above 2.1 for a discussion of such variation in Nungish.)

(e) Best examples

COVER | Boro **pin**, Garo **pin-dap**, Jg. **phún**.
This is the same etymon as WRAP/PUT ON AND WEAR [q.v.], which has a Luish cognate (Kadu **phūn**).

DIVE/SINK | *good example* [but no Naga cognate]
Garo **rip**; Jg. **phùng-líp**. STC regards this as a general TB root, although all the forms cited in #375 are indeed from Bodo-Garo and Jingpho. For the 1st syllable of the Jg. form, see SWIM, below.

SEED | *good example*
Wanang **ca-li** / Tangsa **uli** / Jg. **ñ-lī ~ nāi-lī**; **ù-lī**
This root has not been found in Luish.

(C) "Tantalizing possibilities" (pp. 22–23)

Of the 32 sets offered, 11 lack Jingpho cognates and 14 are general TB roots. Three (SUDDENLY; SWIM; WAIST) are unconvincing.

1. Jingpho cognates lacking

ANIMAL; BARK (v.); BIG: BITE; COME; HOLD; MAT; NOSE; STOMACH; VULTURE; WOLF

2. General TB roots

BRING; CUT; DUNG; IMITATE/FOLLOW; LIGHT (weight); MAT; NOSE; RED; RIGHT (hand); RUN (See HPTB:519); SLEEP; STOMACH; TICKLE[107]; WIND (n.) [see HPTB:531]

3. Unconvincing comparisons

SUDDENLY | Garo **raʔŋ-san** / Jg. **làŋ- lətáʔ**
According to Hanson:340, Jg. **làŋ** is a verb meaning 'to do once'; the 2nd element is the word for HAND [q.v.]. (Cf. French *maintenant*, Lahu **làʔ-há**, etc.). If the Garo 1st syllable means 'to do once' in isolation, the comparison is excellent.

SWIM | Atong **huŋ-** / Tangsa **jung-** /Jg. **phùŋ-líp**
The Jg. form looks unrelated to the others. In any case PTB ***pyaw** [STC #176], cited by Burling, cannot be the ancestor of any of these forms.

WAIST | Dimasa **jeng-khong** / Tangsa **khing** / Jg. **ǹ-shāng**
The correspondences are dubious.

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[107] Garo **juk-juk** and Jg. **kəjúk** can plausibly both be traced back to PTB ***g-yak** 'armpit; tickle', which is in turn related to ***g-lak** 'arm; hand'.

4. Good examples

BEAR (n.)	This root is not attested in Bodo-Garo, but there is a probable Luish cognate to the Jg. and Naga forms. See above 4.3.3.3 under the rhyme ***-ap** (24).
GARDEN/FENCE	Nocte **pan** / Tangsa **pal** / Jg. **məphān ~ ǹ-phân**. The suggested BG cognates (Boro **bari**, Garo **ba-ri**) are a bit less convincing because of their final vowels.
NEW	(only in NNaga and Jg.): Nocte **anyian** / Tangsa **anal** / Jg. **nìŋ-nān ~ ǹ-nān**. But there are also excellent Luish cognates: Kadu **nayá**, Sak **náiŋ**.
SHAKE	(only in Boro and Jg.): Boro **samaw** / Jg. **shəmū**.

(D) "Widespread cognates" (pp. 24–25)

Table 2a has 38 items shared by all three putative Sal language groups, but 37 of them have general TB etymologies, while one is a SEA'n areal word (GINGER).

(E) *Less widespread but possible cognate sets (p. 27)*

But these 19 items are all actually general TB roots. Burling cites STC reconstructions for all but 3 of them: CATTLE, HEAD, VOMIT. But the correspondences in CATTLE are shaky, and one or more loanwords seem to be involved. The STC reconstruction for HEAD ***m-gaw** [STC #490] is simply missing. The root ***m-pat** 'vomit' does not appear in STC, but is also quite general (see HPTB:330).

Appendix II. Jingpho Phonology

Initials

p	py	pr	t	ts	c	k	ky	kr
ph	phy	phr	th	ʔts	(č)	kh	khy	khr
b	by	br	d	dz	j	g	gy	gr
m	my		n		ny	ŋ	ŋy	
ʔm	ʔmy		ʔn		ʔny	ʔŋ	ʔŋy	
				s	š			h
w		r	l		y			ʔ
ʔw		ʔr	ʔl		ʔy			

Vowels

i		u
e		o
	a	

	ui	
oi		ou
ai		au

Final consonants

-p	-t	-k	-ʔ
-m	-n	-ŋ	

Tones

(a) Non-stopped syllables:

x̄	33
x́	55
x̀	31
x̂	51

(b) Stopped syllables:

HIGH	x́C
LOW	x̀C

(c) Syllabic nasals:

HIGH	ń
MID	n̄
LOW	ǹ

Syllabic nasals

These are homorganic to the following consonant, e.g. :

 m̀-būŋ 'wind'; ń-lû 'not have' (< lù 'have'); ŋ̀-ŋāi '1ˢᵗ person agreement marker'

Minor syllables

bə-	də-	dzə-	**jə-**	gə-
				kə-
mə-	nə-			ŋə-
wə-	**lə-**	**sə-**	**šə-**	**ʔə-**

The seven most common minor syllables are in boldface.

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