PROTO NORTHERN CHIN

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PROTO NORTHERN CHIN

by

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Series Editor's Introduction

This impressive book originated as a doctoral dissertation submitted in 2009 to the School of Oriental and African Studies, University of London, based on fieldwork Chris Button conducted in Burma in 2006-07 on six Northern Chin languages. This dissertation ran to some 395 pages, whereas the present book has been compressed to less than 200, a testimony to the efficiency with which Button has managed to reformat and polish his manuscript in such a short period of time.

An especially interesting feature of Button's study is the fact that his Northern Chin data supports but one leg of a reconstructive tripod that also includes Old Burmese and Old Chinese. Though his Proto-Northern-Chin (PNC) is reconstructed independently on the basis of internal data, Button sensibly allows his etymological judgments in difficult cases to be influenced "teleologically" by what is known about other branches of Sino-Tibeto-Burman (henceforth STB).

After some introductory remarks about the subgrouping of the Chin family, Button proceeds to a theoretically sophisticated treatment of Northern Chin phonology, supported by spectrographic evidence, and presented in enough detail to provide a firm basis for the comparative work to come. This is followed by a chapter on the relatively complicated Chin morphology, with special attention paid to reconstructing the history of the morphophonemic alternations between the two stems ("Form I" and "Form II") that most Chin verbs display. Chapters on Old Burmese and Old Chinese come next, followed by a chapter discussing controversial points in general STB reconstruction. Chapter VI, entitled "Comparative Sets", offers 185 comparisons of Northern Chin etyma with forms from Old Burmese and Old Chinese, noting cases where the etyma seem to have been borrowed into STB from another language family. Finally, the second half of this study is devoted entirely to lists of PNC reconstructions, presented both in the PNC alphabetical order and in the order of their English glosses.

Throughout this book, Button demonstrates a deep familiarity with the scholarly literature on the various branches of STB. In his discussions of particular etymologies, he painstakingly assembles the opinions of various scholars, comparing and evaluating them in order to come up with his own judgments as to their relative plausibility. As we all know, there is much guesswork involved in historical reconstruction, even when some of the languages involved have long literary traditions. In particular, there are now several competing systems of reconstructions for Old Chinese, and individual scholars frequently change their minds on certain points. Button negotiates his way through this minefield with aplomb.

In the *Concluding Remarks* of the first part of this study, Button permits himself some speculative comparisons between the PSTB vowel system and those of Indo-European and Northwest Caucasian languages, leading him to surmise that there must exist some universal tendency to develop a primordial two-way vowel system consisting only of /a/ and /ə/. Button also ventures to hope that further research along these lines will eventually lead to a collapse of the distinction between vowels and consonants altogether.

While one might not want to go quite that far at the moment, we can confidently say that Button's work, along with the previous invaluable contributions of Khoi Lam Thang (2001) and Kenneth VanBik (2009), have made the Chin languages one of the most important growth points in STB reconstruction.

We are proud to make Christopher Button's highly original work available in the STEDT Monograph Series.

James A. Matisoff
Principal Investigator, STEDT

Proto Northern Chin

Volume 1
An Old Burmese and Old Chinese Perspective

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Symbols & Abbreviations

i. *General*

*	Precedes a reconstructed form.
˙	Precedes a TYPE-A syllable in Old Chinese as distinguished from TYPE-B.
>	Identifies the immediately following form as a derivative of the immediately preceding one.
<	Identifies the immediately preceding form as a derivative of the immediately following one.
~	Separates a Northern Chin FORM-I from its inflected FORM-II.
/	Separates a written Burmese form from its inscriptional predecessor if distinct; separates alternative forms in free variation or complementary distribution.

ii. *Lexical Categories*

n	noun
v	verb
v_b	benefactive verb
v_i	intransitive verb
v_t	transitive verb
ATTR	attributive
PL	plural
SUBJ	subject
TC	tone category

iii. *Languages and Proto-languages*

AA	Austroasiatic
AN	Austronesian
LB	Lolo-Burmese
MC	Middle Chinese
MK	Mon-Khmer
NC	Northern Chin
OB	Old Burmese
OC	Old Chinese
ST	Sino-Tibetan
SC	Southern Chin
TB	Tibeto-Burman
TK	Tai-Kadai

iv. *Transcriptions*

e	Corresponds to ɛ in the same way as *i* to ɪ and *u* to ʊ.
o	Corresponds to ɔ in the same way as *i* to ɪ and *u* to ʊ.

A ɐ/*a*
E ɛ/*e*
I ɪ/*i*
O ɔ/*o*
U ʊ/*u*
V Unspecified vowel

K Alternation of *k* with ʔ/*h* (or rarely *t*)
Ŋ Alternation of *ŋ* with *k*/ʔ (or rarely *w*)
T Alternation of *t* with *d*
TS Alternation of ʦ with ʣ
N Alternation of *n* with *t*
P Alternation of *p* with *b*/*w* (or rarely *f*)
M Alternation of *m* with *p*
J Alternation of *j* with *s*
L Alternation of *l*/*r*/*n*/*d*
W Alternation of *w* with ʔ/*h*/*b*
H Alternation of *h* with ʔ
C Unspecified consonant

ᴵ Tone category I
ᴵᴵ Tone category II
ᴵᴵᴵ Tone category III
¹ Tone 1
² Tone 2
˗ Unspecified tone

v. <u>*Spectrograms*</u>

s Seconds (on the horizontal axis)
kHz Kilohertz (frequency on the left axis; pitch on the right axis)

vi. <u>*Burmese Inscriptional Sources*</u>

BD *Inscriptions Collected by King Bodawpaya* ဘိုးတော်ဘုရား *in Upper Burma*
– Taw Sein Ko (1913)
IB *Inscriptions of Burma* မြန်မာတိုင်းရင်းကျောက်စာများ
– Luce & Pe Maung Tin (1933-56)
LK *The Lokahteikpan* လောကထိပ်ပန်း
– Ba Shin (1962)
MZ *The Burmese Face of the Myazedi* မြစေတီ *Inscription at Pagan*
– Duroiselle (1919)
OBEP *Old Burma – Early Pagán (Volume 3)*
– Luce (1969-70)

SIP *Selections from the Inscriptions of Pagan* ပုဂံကျောက်စာညွှန့်ပေါင်း
– Pe Maung Tin & Luce (1928)

UB *Inscriptions Collected in Upper Burma (Volume 1)*
– Taw Sein Ko (1900-03)

WK *Wetkyi-in Kubyauk-gyi* ဝက်ကြီးအင်းဂူးပြောက်ကြီး
– Luce & Whitbread (1971)

Preface & Acknowledgements

This, along with Volume 2, is a thoroughly revised version of Button (2009) which was submitted as a Ph.D. dissertation to the School of Oriental and African studies, University of London.

The Northern Chin information presented herein was collected in Burma during 2006-07 and results from the immense efforts of many Chin people who willingly and patiently sacrificed their time. None of this would have been possible without them.

The moot distinction between the variant forms ဗမာ bəmɐ¹ *Burma* and မြန်မာ / မြံမာ mrɐm¹mɐ¹ *Myanmar* of the same Old Burmese word,[1] is of no consequence here; the former term is used in accordance with historical linguistic convention.

[1] See Luce (1959b:53), Hla Pe (1967a:79) and Okell (1995:105-6).

Introduction

"I was brought up to regard Far Eastern languages generally as (i) Monosyllabic (consisting of words of one syllable); (ii) Invariable (not modified by any inflexions); and (iii) Isolating (destitute of syntax). Chin is a language which disproves all three statements."

– G. H. Luce (1959a:30)

Broad generalisations Luce's remarks may be, but even in today's more informed linguistic environment, the verbal inflections and surface vocalic length distinctions[2] of many Chin languages pit them against the norm for members of the Sino-Tibetan language family. The study here focuses on a reconstruction of the phonology and morphology of Northern Chin based on a closely related group of languages spoken in the Chin Hills on the Burmese side of the border with India. Specific attention is paid to external comparisons with Old Burmese, as attested in inscriptions,[3] and Old Chinese.[4] To compare evidence of such different time depths may seem anachronistic, but the unique insights afforded reveal striking typological similarities with the conservative Northern Chin languages that have not succumbed as easily to time's gentle erosion as have the modern Burmese or Chinese languages.

Reliable descriptions of Northern Chin languages are scarce. The once promising future inaugurated by *The Chin Hills Linguistic Tour* of 1954 by Eugénie Henderson, Theodore Stern and Gordon Luce did not seem to have fate on its side; the foreshortening of the trip and the loss of much of Henderson's data on the tour is recounted by Luce (1959a:20-3, 1968:106). The projected combined work based on the tour, *Studies in Chin Linguistics*, never made it to publication:[5] Henderson's reduced contribution appeared separately in 1965; Stern's was partially published in 1963 but the textual data upon which it was based only appeared later in a different journal in 1984; Luce's mammoth contribution, *Common form in Burma Chin Languages*, based on further research from his base in Rangoon and including much data from Southern Chin languages, still remains largely unpublished.[6]

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[2] Sun (1982:286-91) shows that the few instances of distinctive vowel length in other Tibeto-Burman languages are marginal or secondarily derived.

[3] The traditional date for the earliest inscription is 1112-3 AD. Duroiselle (1913:1-2) notes a few inscriptions prior to this date but cautions (1921:v-vi) that due care must be applied in ascertaining the originality of many of these. Luce & Pe Maung Tin (1933-56:I.4;II.4-5;IV.8-10) are even more discerning than Duroiselle, although Luce (1969-70:I.96) does recognise that some undated inscriptions may well have an earlier provenance.

[4] Old Chinese is traditionally reconstructed back to the time of the *Shijing* book of poetry compiled between 1000 - 600 BC. Palaeographical evidence in the earliest Chinese inscriptions takes this back two centuries earlier.

[5] Henderson's (1962) typed introduction, as well as her preface to Luce's contribution, may be found in the collection of her papers at the School of Oriental and African Studies in London.

[6] A small selection of it may be found in Luce (1985:I.82-6;II.70-87); the complete work may be found in the collection of Luce's papers at the National Library of Australia.

i. Nomenclature

The term used by Northern Chins to refer to themselves is customarily transliterated as *Zo* which may be reconstructed in Northern Chin as jɔw¹. Konow (1904:1-2;58) notes the name *Chin* to be a Burmese exonym, ချင်း k^{h}jɐŋ²,[7] that is synonymous with the term *Kuki*, which Lehman (1963:5) suggests to be Manipuri in origin, on the Indian side of the border.[8] The Chin are unequivocally attested in some of the later Burmese inscriptions:

သက်မြုန်ချင်တိုအစိုရသော...ရခိုင်မင်သည် *(UB 49.21)*
Thet Mrun Chin PL rule ATTR… Arakan king SUBJ
The Arakanese King… who ruled over the Thet, Mrun and Chin.[9]

Luce (1959a:25-6, 1959c:89, 1976:35, 1985:I.80) suggests the homophony shared with ချင်း k^{h}jɐŋ² *companion, ally* is due to a history of relative amicability between the Chins and the Burmans. However, if Luce's (1959a:25, 1959b:60, 1985:I.86) association of the Chin with the Chindwin valley is correct then earlier inscriptional evidence supports the reconstruction of an original medial *-l-* in Chin as လွင် k^{h}lɐŋ²:[10]

လွင်တွင်ကပါသောကျွန်... *(BD 38.10)*
Chindwin from include ATTR slaves…
Slaves included from Chindwin…[11]

ii. Subgrouping

Bradley (1997:26-31, 2002:90-1) splits off a Central Chin group from what is classified here as Northern; Peiros' (1998:180) conflation of Bradley's Northern and Central branches represents the approach adopted here. Peterson (2000), who focuses in particular on the evolution of the *r* phoneme, retains Bradley's distinction of a Central group but fuses his Northern and Southern groups together. Particularly as regards Southern Chin evidence, a thorough discussion of such subgrouping issues is beyond the scope of this work. While the phonological and morphological evidence to be presented here shows Bradley's division of a Central Chin group to be not simply a geographical one, the overwhelming similarity between these Central languages and their more

[7] Lehman (1979:1-2, 1992b:62) and VanBik (2009:4) reject an exonymic source and prefer to derive the name from a Southern Chin word meaning *person* which was co-opted into Burmese; the viability of this proposal is beyond the scope of this work.
[8] A hyphenated form *Kuki-Chin* is often found; this is somewhat tautological and the term *Chin* is exclusively used here due to its Burma-specific focus.
[9] See Luce (1959a:25) for the context of this inscription; see Luce (1985:I.94-5) for a suggestion that *Mrun* may refer to the Mru ethnic group.
[10] The confusion of *-l-* with *-j-* in Old Burmese does not rule out the possibility of a medial *-l-* in *companion, ally*, but the uniqueness of forms in *-j-* makes this unlikely.
[11] Luce & Pe Maung Tin (1933:4) question the originality of this inscription and Luce (1962:65) suggests it to be an early copy. Nevertheless, solid evidence for a medial *-l-* is found elsewhere in IB (294.24) where reference is made to aလွင်တွင်ဥယျန် *Chindwin garden*. Luce (1985:I.77) translates *Chindwin* literally as *Hole of the Chins*; Matisoff (1989a:600) suggests *Wellspring of the Chins* may be a nicer turn of phrase.

Northern counterparts, particularly in terms of degrees of mutual intelligibility as opposed to the Southern ones, supports the clumping of them together at least for the purposes of this exposition.

The number of Chin languages spoken in Burma is difficult to quantify; Luce (1962:2) suggests that his sampling of just over twenty northern and southern varieties may represent around half the actual number. Bradley (2007:168) suggests there to be around 550,000 speakers of Northern Chin languages in Burma; reliable figures for individual languages are mostly unavailable.[12]

iii. Representative Languages

The six Northern languages studied here may be viewed as generally spreading northwards from Zahau as the furthest south through to Sizang, Tedim, Zo and Thado in the North with Mizo flanking Zahau on the West. All six languages have missionary-based orthographies in which tone is never marked and surface vowel length is noted somewhat inconsistently if at all. Official orthographies for Zo and Sizang have only been established in recent years with projects to translate the Bible into their respective languages instead of having to rely on the Tedim standard. The languages are listed in the following order to reflect the most natural layout in terms of phonological linkages between them.

Mizo:

Reflecting a combination of mi^{IIB} *person* and zɔw^{I} *Zo*, Chhangte (1993:32) notes the name *Mizo* to be a specific usage of a generic term originally applied to all Chin people. It now appears to be the preferred designation for both the Burmese *Hualngo* and Indian *Lusei* varieties as distinguished by Luce (1959a:22) and Lehman (1963:16). An account for the older transliteration of the latter as *Lushai* may perhaps be found in the occasional confusion in Northern Chin of *-ɛj* and *-ɐj*, discussed in 1.1.2.3, and Chhangte's (1993:59) observation of an alveopalatal fricative allophone *ɕ-* of *s-*. Bradley (2007:168) notes that the large numbers of speakers in India make Mizo the most widely spoken of all Chin languages.

Zahau:

Often conflated with several languages spoken in and around Falam township under the general name *Falam* Chin,[13] Zahau is barely distinguishable from its more prominent counterpart *Laizo* with which comparisons are occasionally drawn in the word list. Osburne (1975:4-5) and Bradley (2007:168) note a more generic usage of the term *Laizo*, composed of laj^{I} *middle* and zɔw^{I} *Zo*, in reference to the many languages within Bradley's

[12] Bradley actually divides this between 150,000 for his Northern Chin group and 400,000 for his Central Chin group.

[13] See Lehman (1963:105) for a brief comment on the linguistic situation. The language Khualsim, as surveyed by Luce (1959a:22, 1962) and to which reference is occasionally made in the word list, may also be included here.

Central Chin group, but its usage parallels Mizo in its more specific designation of an individual language. Its first syllable *Lai* should be further differentiated from its reference to a distinct language spoken in Hakha township, south of Falam, to which reference is occasionally made.

Thado:

Sparsely represented in Burma, Thado is often referred to as Thado-Kuki to reflect its Indian base. Bradley (2007:168) notes it to be the largest Kuki language with over 50,000 speakers. Lehman (1963:5) suggests Thado speakers were pushed north into Manipur by Mizo speakers in the mid 19th century.

Zo:

Identical in name to that of the Chin people in general, Hartmann (1988:102) shows the usage of the name Zo in reference to a specific Chin language to be paralleled in the names of some Southern Chin languages albeit with different surface reflexes. Zo, as a distinct Northern Chin language, is spoken both in Tedim and Tonzang townships. The latter is the focus of the study here, although Luce (1962:noteA) notes the Zo to be the original inhabitants of Tedim before being largely ousted by those now referred to as Tedim below.

Tedim:

Transliterated as *Tiddim* in Henderson (1965), Tedim is the language of the township that bears its name. Bradley (2007:167) notes the adoption of the township name for this language to have replaced the name *Kamhau*. Luce (1962:noteA) more specifically notes *Kamhau* to have been the name of a 19th century chieftain, whose very closely related *Sokte* dialect persists in a few nearby villages, who led his followers into Tedim and drove the original Zo speakers northwards.[14] Tedim is the only Chin language that had started to develop an orthography before the development of missionary orthographies in the early 20th century: the original logographic script is still used in textual recitation but never developed into a complete system; the later syllabary, described in Bennison (1933:194-5;217-8), is conversely rendered unwieldy by its marking of non-phonemic surface differences.

Sizang:

Confined to the Burmese side, Sizang is spoken in several scattered villages south of Tedim by a very small population. The occasionally encountered name *Siyin* is noted by Stern (1963:224) to be a transliteration of its Burmese pronunciation. Stern (1963:225) further notes that this small linguistic group rose to prominence as a result of their spirited resistance to the British colonial incursions into the Chin hills which later made them favoured recruits for colonial armies.

[14] Reference is sometimes made in the word list to Saizang and Teizang which are treated by Luce (1962:5) and Henderson (1963:551) respectively as very closely related dialects to Tedim.

Chapter 1
Northern Chin Phonology

1.1 Rhymes

The five vowels of Northern Chin are generally regular across all six languages; they superficially appear to be divisible into two sets of distinctive length except in open syllables where the vowel naturally surfaces as long unless occurring as the short unstressed initial syllable of a disyllabic compound.[15] Stern (1963:228-9) differs from other analyses of Northern Chin languages to suggest that in Sizang the length distinction may be better interpreted as syllabic peaking on the vocalic nucleus or on the sonorant coda. This is supported by some similar observations by Melnik (1997:17) on Lai Chin, and helps to account for the longer realisations of sonorant codas after short vowels such that, particularly in rising tones, the distinction in syllable length is relatively small whether the vowel surfaces as long or short. Stern's distinction may be more conventionally noted in terms of syllable weight; with weight being unable to fall on an obstruent coda, in purely notational terms it makes more sense to mark the distinction on the vowel, although with sonorant finals it could equally well be marked on the coda instead.

For the purposes of exposition, the vowels *e* and *o*, for which a more conventional transcription would call for [ɛː] and [ɔː] will be treated here in the same structural relationship to *ɛ* and *ɔ* as *i* and *u* with *ɪ* and *ʊ*. This approach essentially follows the structural arrangement of the American phonetic system, as originally outlined by Boas et. al. (1916:2-3;9), while incorporating Halle & Mohanan's (1985:72-6) refinements regarding tense *e* and lax *ɛ* to extend it further to *o* and *ɔ*. The intent here is not to assume any tense/lax distinction in Northern Chin vowels but rather to incorporate Pulleyblank's (2003:723) observation that an association of syllable weight with the traditional tense/lax distinction may sometimes be drawn. Lindau's (1978:557-9) observation that tense vowels are relatively more centralised in the vowel space sits well with the phonetically reasonable transcription of the low vowel as an alternation of *ɐ* and *a* to give the following vocalic distinctions in Northern Chin:

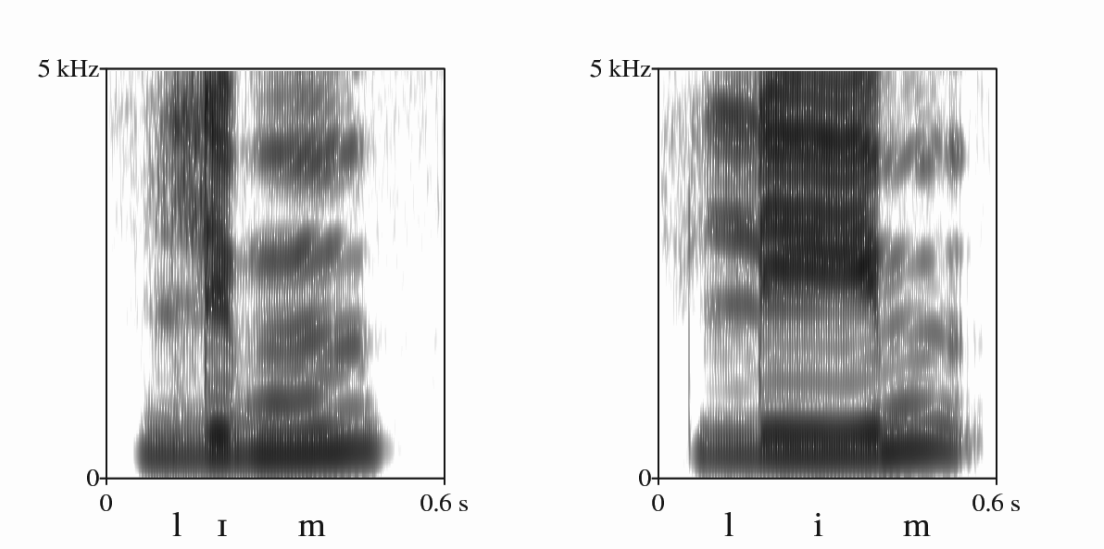
ɪ/i *ʊ/u*

ɛ/e *ɔ/o*

ɐ/a

The two spectrograms below of the Sizang words lɪm^{II} *image* and lim^{II} *ball of string* show the difference in surface realisation of syllable weight on the coda or on the vowel:

[15] This concomitantly renders such unstressed syllables unable to bear distinctive tone.



1.1.1 <u>*Diphthongs*</u>

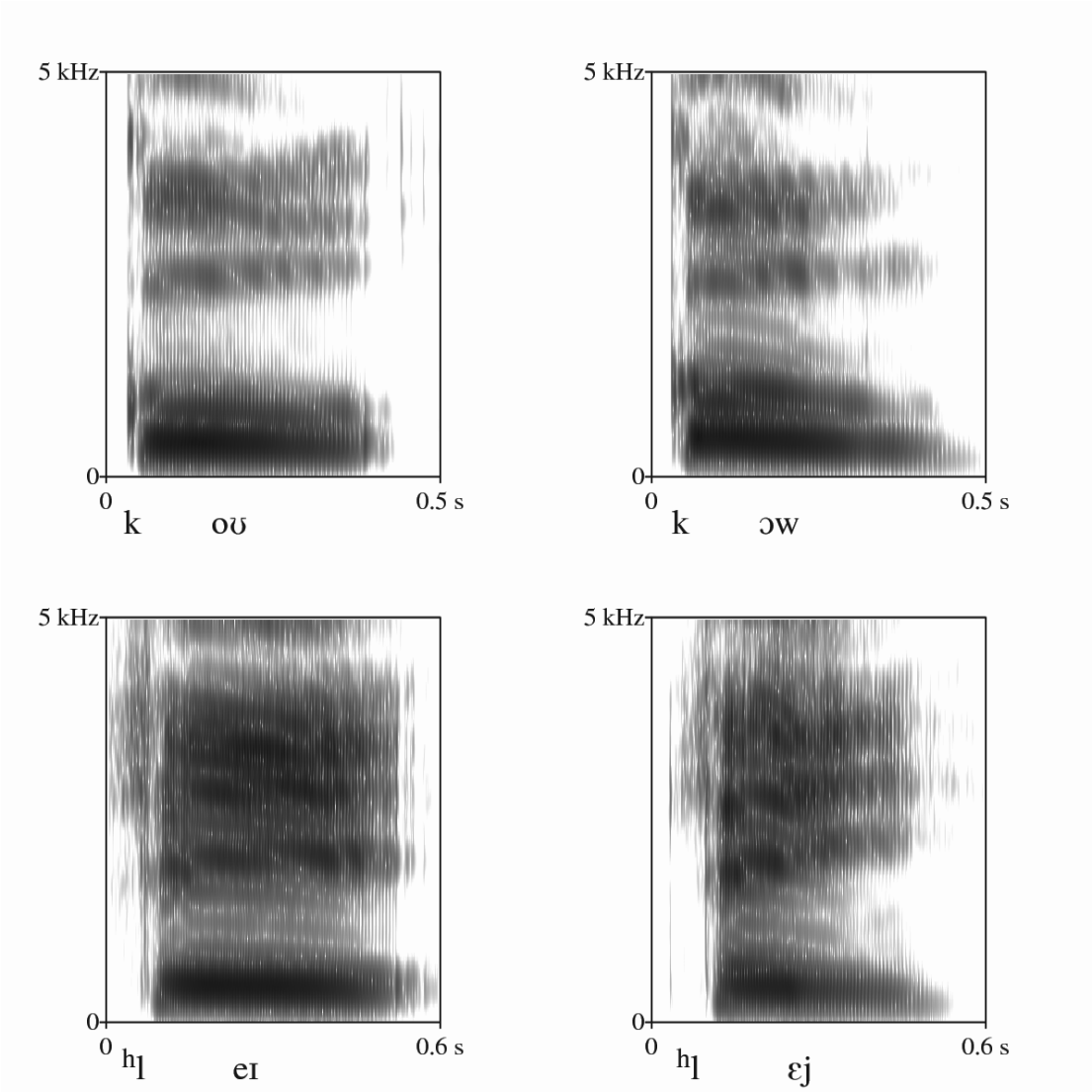
The analysis here treats *-j* and *-w* as codas that may freely occur after all vowels excluding *ɪ/i* and *ʊ/u* respectively. Alternatively, Luce (1962:55-60) treats all such cases as rising diphthongs ending in *-i* or *-u*. Bright (1957a:25) suggests that the situation in Mizo, for which Henderson (1948:716), Bright (1957b:101) and Chhangte (1993:42) use *-j* and *-w* while Burling (1957:154-5) and Weidert (1975:7) use *-i* and *-u*, rests on little more than a question of priorities regarding phonemic minimalism or syllabic regularity. Phonetically there is of course no real distinction and the discussion is rendered somewhat inconsequential as linguists have naturally dwelled on the transcriptional distinction between the glides *-j* and *-w* and their vocalic counterparts *-i* and *-u* when the distinction is equally valid to all other sonorant codas which just happen to lack such transcriptional flexibility. However, in phonological terms and incorporating the opservations in Chhangte (1993:42;50-1), the divorcing of the synchronic from the diachronic entailed in the phonemic analysis means the syllable will be favoured in this work.

With the exception of the secondary dissimilatory diphthongisations of Sizang *e* to *ɛa* in all environments except before *-t, -n* and in open syllables,[16] and Sizang *o* to *ɔa* before *-j*, the establishment of glide codas restricts diphthongs to two contrastive types distinguished by the presence or absence of rounding. Contrary to Stern's (1963:229) suggestion that Sizang diphthongs have contrastive weight, which most likely stems from a confusion with Tedim, syllabic weight is manifested with the nucleus either at the end in Mizo, Zahau, Zo and Tedim or at the beginning in Thado and Sizang:

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
**ɪa*	*ɪa*	*ɪa*	*eɪ*	*ɪe*	*ɪa*	*iɐ*
**ʊa*	*ʊa*	*ʊa*	*oʊ*	*ʊo*	*ʊa*	*uɐ*

[16] The diphthong *ɛa* is not noted by Stern (1963), but is noted by Luce (1962:tableA).

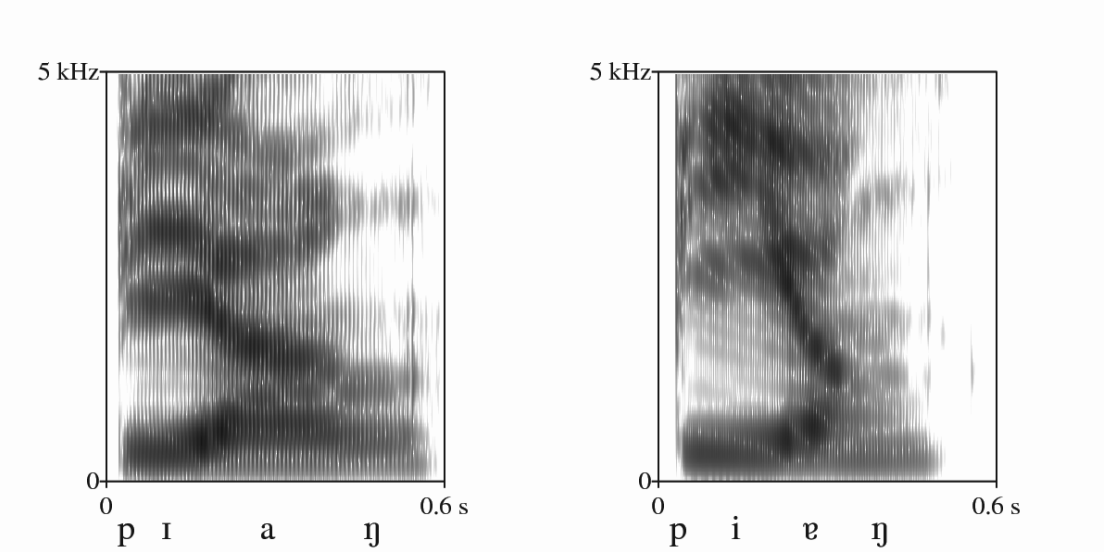
The following surface variations may be noted: Zo *ʊo* and Sizang *uɐ* surface as *ʊe* and *uɛ* respectively before *-j*; Mizo, Zahau and Sizang reduce the unrounded diphthong to *ɛ* before *-n*^{III} in inflected forms while all six languages, excepting Tedim, reduce the rounded diphthong to *ɔ* in the same environment;[17] all six languages reduce the rounded diphthong before *-m*^{III} to *ɔ* in inflected forms. It should also be remarked that the Thado diphthongs *-oʊ* and *-eɪ* tend to approximate the pure vowels [oː] and [eː] as noted by Luce (1962:57-9). In open syllables, they are very similar to the closed rhymes *-ɔw* [əʊ][18] and *-ɛj* from which they are nonetheless consistently discernible in words like koʊ^{III} *burrow* and kɔw^{III} *call* or the inflected forms ^{h}leɪ^{III} *snap* and ^{h}lɛj^{III} *sift*:



[17] There is an exceptional case in the word for *froth* in Thado and Zo where the change does not appear to occur.

[18] This surface realisation is supported by Luce (1962:60, 1985:II.70-87) who has [əu].

Weidert's (1981:31-2) rather arbitrary rejection of Henderson's (1948:721) proposal to interpret the high vowel components in Mizo *ɪa* and *ʊa* as palatal and labial features of the syllable initial is questioned by Matisoff (1982:29) who suggests that in diachronic terms it is of little relevance whether one treats the feature as part of the initial or the nucleus. For most Tibeto-Burman languages Matisoff's comment would be valid, but treating the first part of the diphthong as part of the initial reopens the possibility in Northern Chin for contrastive syllable weight in individual languages, as Stern supposed for Sizang diphthongs, which does not occur. The two spectrograms of Tedim pɪaŋˡ and Sizang piɐŋˡ *come into being* below exemplify the difference in syllable weight between the two languages:



Benedict (1940:120, 1972a:58, 1977:12) supposes the pure vowels *ɛ/e* and *ɔ/o* to be secondary derivations from *ɪa* and *ʊa* but, as similarly noted by Matisoff (1972b:281) for Tangkhul Naga, is unable to account for cases where the diphthongs remain. Luce (1962:55;57-9, 1985:II.70-87), who transcribes the Northern Chin distinctions *ɛ/e* and *ɔ/o* as *ɛ̌/ɛ* and *ɔ̌/ɔ* or *ɛ/ɛː* and *ɔ/ɔː*, follows a proposal originally made in Luce (1959a:tableII), to suggest conversely that the diphthongs derived from the vowel-breaking of original [e] and [o] which he maintains to be still attested in Thado *oʊ* [oː] and *eɪ* [eː]. However, in addition to the respective alternations of *ɪa* and *ʊa* with *ɛ/e* and *ɔ/o* in certain morphological inflections discussed above, Stern (1963:236), Henderson (1965:24), Weidert (1975:69-70) and Chhangte (1993:49-50) note that the diphthongs *ɪa* and *ʊa* surface as *ɛ* and *ɔ* when forming the short unstressed initial syllable of a disyllabic compound. Furthermore, sporadic alternations of these diphthongs with their pure vowel correlates may be found throughout the word list. In a purely synchronic description, the restriction of the diphthongs to combinations with *a* may simply be regarded as a feature of the phonological system requiring no further explanation; in diachronic terms, the discussion in 5.1 shows that the weaker *ə* vowel in Sino-Tibetan *jə* and *wə* could not maintain a dipthongal articulation like *ja* and *wa* which gave *ɪa* and *ʊa*, although for reasons still to be elucidated sometimes developed into *e* and *o*. The source of the

diphthongs in medial glides suggests that the syllable weight in Sizang *iɐ* is more likely a secondary development from an original placement in the latter part of the syllable as *ɪa*, although it may simply reflect a slightly different evolution. Notably, the secondarily derived Sizang diphthongs *ɛa* and *ɔa* also have syllable weight in the latter part.

1.1.2 Codas

Codas are always unreleased and are voiceless unless sonorant. A discussion of the correspondences of morphological inflections requires a separate analysis that will be addressed in 2.1. The correspondences of uninflected forms are noted below:[19]

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
**-k*	*-k*	*-k*	*-ʔ*	*-ʔ*	*-k*	*-k*
**-ŋ*	*-ŋ*	*-ŋ*	*-ŋ*	*-ŋ*	*-ŋ*	*-ŋ*
**-t*	*-t*	*-t*	*-t*	*-t*	*-t*	*-t*
**-n*	*-n*	*-n*	*-n*	*-n*	*-n*	*-n*
**-p*	*-p*	*-p*	*-p*	*-p*	*-p*	*-p*
**-m*	*-m*	*-m*	*-m*	*-m*	*-m*	*-m*
**-j*	*-j*	*-j*	*-j*	*-j*	*-j*	*-j*
**-r*	*-r*	*-r*	*-ʔ*	*-ʔ / -a*	*-k*	*-k*
**-l*	*-l*	*-l*	*-l*	*-l*	*-l*	*-l*
**-w*	*-w*	*-w*	*-w*	*-w*	*-w*	*-w*
**-s*	*-ʔ* / -[III]	*-ʔ* / -[III]	-[III]	-[III]	*-ʔ* / -[III]	-[III]

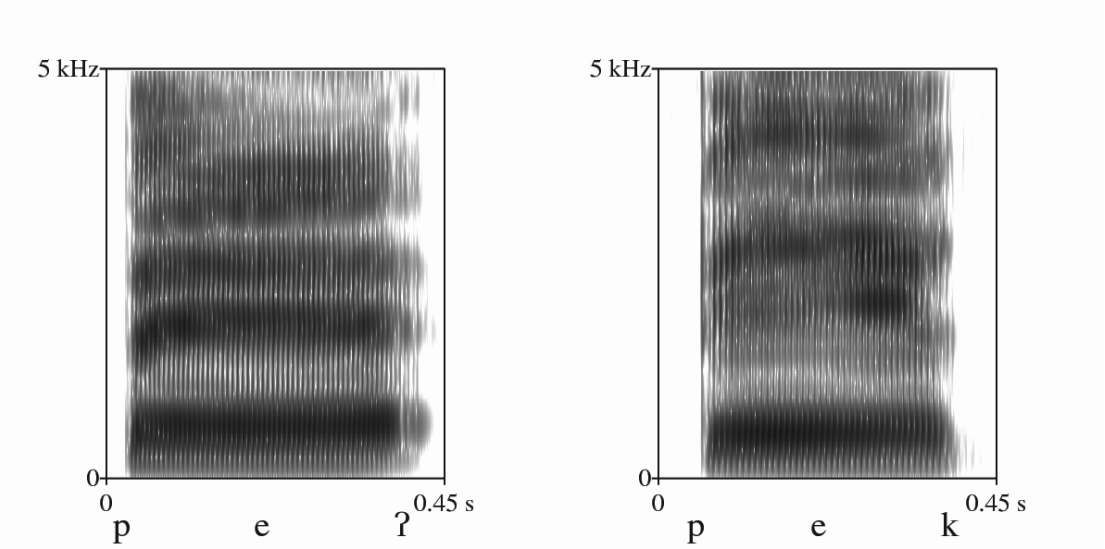
1.1.2.1 Rhotic -r

The association of *r* with a velar articulation in Thado, Zo, Tedim and Sizang, further reduced in coda position to *-ʔ* in Thado and Zo, is dicussed in 1.2.2. When derived from original *-r*, the Zo glottal coda is only retained after the mid-vowels *ɛ/e* and *ɔ/o*; after *ɪ/i*, *ʊ/u* and *ɐ/a* it has vocalised to *a*.[20] The resulting reflexes of *ɪa* and *ʊa* remain distinct from the original Zo diphthongs *ɪe* and *ʊo* discussed in 1.1.1. The glottal coda in Zo is much weaker than in Thado; the distinction between Zo *-ʔ* and Tedim *-k* in the spectrograms below for Zo peʔ[I] *back kick* and Tedim pek[I] *wag, bob* is discernible but is not nearly as pronounced as in the Thado example discussed in 1.1.2.5.[21]

[19] There is a sporadic shift of *-ɪk* and *-ɪŋ* to *-ɪt* and *-ɪn* in all six languages.

[20] There are a few exceptions in the word list which appear to provide a rare opportunity to clearly isolate inter-Chin loanwords. A good example is Zo naʔ[I] *nose* which should regularly correspond to Mizo [h]nar[I] as na[I] but is most likely a late loan in place of the more commonly used binome nɐpkʊo[III] *nose* literally meaning *snot burrow*.

[21] When uttered in isolation, there is a very faint glottalic constriction in Zo syllables in TC-II which makes them difficult to distinguish from a slightly more clearly articulated glottal coda.

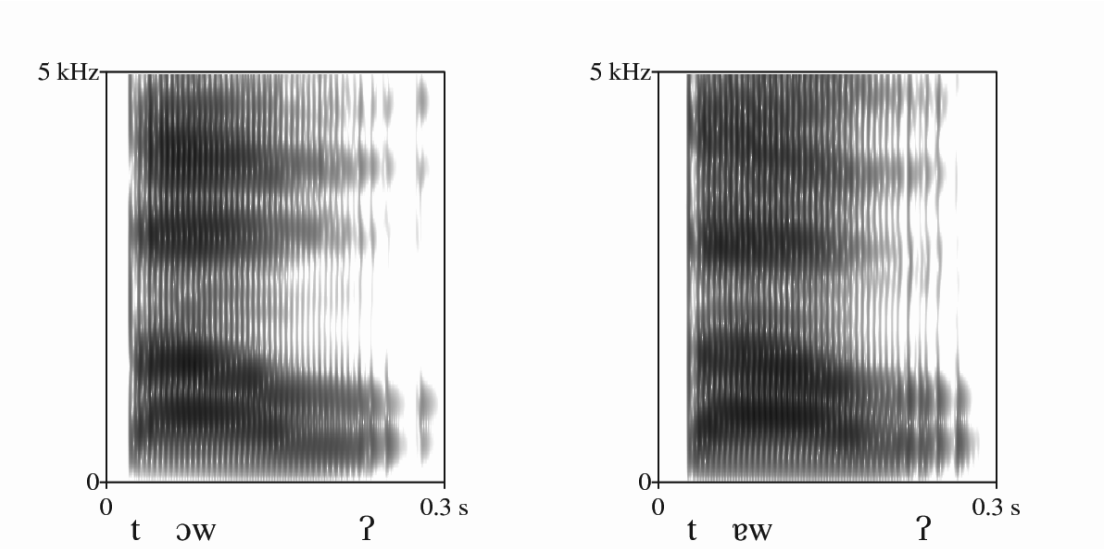


1.1.2.2 <u>*Sibilant -s*</u>

An association of Tibeto-Burman *-s* with Mizo *-ʔ* is noted by Shafer (1944:141-2) and Benedict (1972a:16). Focusing on Tedim, Ostapirat (1998:239-40) develops Benedict's observation by proposing that *-s* developed regularly to *-h* but then glottalised after surface short vowels while developing into TC-III after surface long vowels. Notably the distinction between *-ʔ* and TC-III only occurs in Mizo, Zahau and Tedim; Thado, Zo and Sizang unequivocally reflect TC-III.

1.1.2.3 <u>*Zahau -ɔwʔ / -ɐwʔ*</u>

Zahau *-ɔw* tends to be pronounced with a more open articulation than in the other five languages where it surfaces as [əʊ]. Consequently words like tɔwʔ *seat (vt)* are barely distinguishable from the inflected form tɐwʔ of taw^{III} *sulk*:



Luce (1962:60) notes this also to be the case in some Mizo dialects. VanBik's (2009:401;411) assignation of free-variation to Northern Chin alternations of *-aw* with *-ɔw* and *-ɐj* with *-ɛj* is contradicted by the evidence here. In light of the historical association, discussed in 1.1.1, of *-ɪa-* with *-ɛ-* and *-ʊa-* with *-ɔ-*, the lack of the dipthongs *-ɪaj* and *-ʊaw* in Northern Chin may seem superficially supportive of VanBik's suggestion. However, the discussion in 5.1 shows the source of *-ɛj* and *-ɔw* to be entirely distinct.

1.1.2.4 Glide Codas and Syllable Weight

Henderson (1948:716-7) makes no individual vocalic length distinctions before glide codas in Mizo, but Bright (1957a:25-6) notes a distinction before *-j* of all possible vowels in Mizo and tacitly assumes one before *-w*. Unless the surface vocalism is shortened for morphological reasons noted in 2.1, the Mizo data here only supports Bright's (1957a:25-6) distinctions of *-ɐj/-aj* and *-ɔj/-oj* such that his other distinctions may be rejected accordingly: the data in Weidert (1975:24) suggests Bright's *-ej*, contrasting with regular *-ɛj*, to be restricted to certain phonological exceptions associated with adverbial and onomatopoeic words which may be safely excluded;[22] Bright's case in point for *-uj* is the word ^{h}muj^{III} *muzzle* which, as the only instance in the word list, contrasts with *-ʊj* in Zahau ^{h}mʊj^{III} *visage* and represents an Austroasiatic loanword; there are no cases of variation before *-w*, for which *-iw*, *-ew*, *-ɔw*, *-aw* are attested, except for ^{h}rɛw^{I} *leech* for which an external origin is suggested by its irregular correspondence with a lateral initial in Thado and Zo ^{h}lɛw^{I}.

Excluding *-ʊj*, to be discussed below, the Mizo rhymes *-ɐj/-aj*, *-ɔj/-oj*, *-ɛj, -iw*, *-ew*, *-ɔw*, *-aw* may be extended to the other five Northern Chin languages, although Thado FORM-II derivations with *-aj^{III}*, *-oj^{III}* and *-uj^{III}* tend to surface as *-ɐj^{III}*, *-ɔj^{III}* and *-ʊj^{III}* such that gaj^{I} *pregnant* may occur in FORM-II regularly as gaj^{III} or in a reduced form gɐj^{III} while gaj^{III} *impregnate* and its regular FORM-II gɐj^{III} are invariable. The only exceptions are mainly confined to a handful of words in Thado: Thado has *-ɪw* instead of *-iw* in kɪw^{III} *elbow*, which is the only word attesting this rhyme, such that whether this is a regular Thado reflex or the result of the word being a contraction of an original compound noun, as Luce (1962:60) tentatively suggests, remains unclear; Thado has how^{I} *reprove, quarrel* as an ablaut of haw^{I} elsewhere; Thado has xɛw^{II} *scrape* and t^{h}ɛw^{II} *graze*, along with hɛw^{II} *prune* comparing with Zo hɛw^{II} *shave, cut hair*, in an externally influenced word family attesting *-ew* elsewhere.

A clear distinction between *-ʊj* and *-uj* may be found in both Thado and Tedim as supported by Luce's (1985:II.70-87) transcriptions of *-wi* and *-ui* respectively. Zahau, excluding a shift to *-i* after coronal initials, and Sizang concur with Mizo in solely reflecting *-ʊj*, while Zo conversely merges them as *-uj* to give the following distinctions:

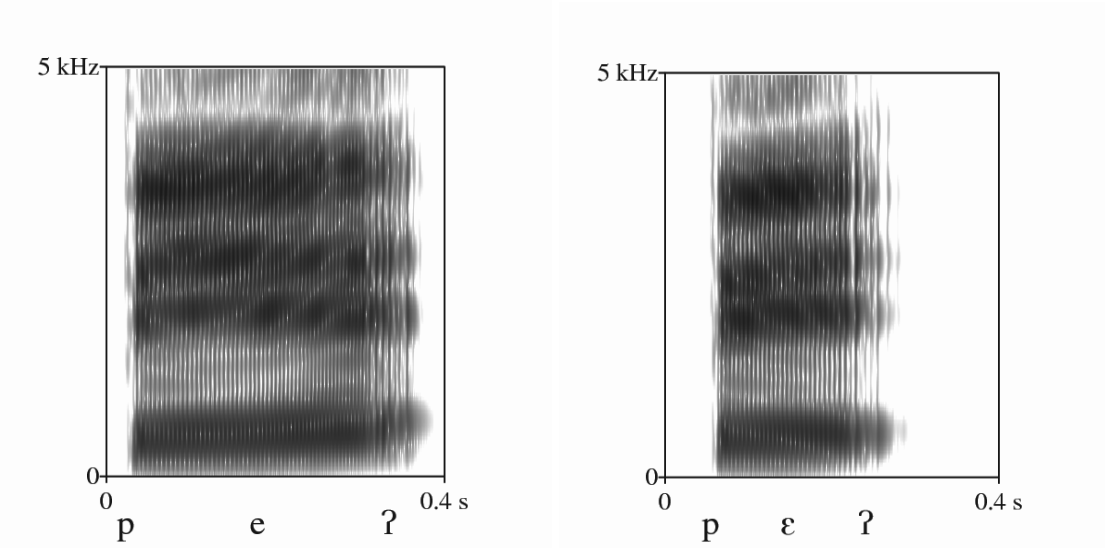
[22] These cases are not addressed in the work here; see Henderson (1965:94) and Bhaskararao (1989:110) and for a discussion of the special phonological characteristics of adverbial usage in Tedim.

Mizo	Zahau	Thado	Zo	Tedim	Sizang
-ʊj	*-ʊj / -i*	*-ʊj*	*-uj*	*-ʊj*	*-ʊj*
-ʊj	*-ʊj / -i*	*-uj*	*-uj*	*-uj*	*-ʊj*

A few exceptions may be noted: the status of Zo vʊj[I]– *elephant* as an Austroasiatic loanword is supported by its irregular initial in Sizang; Thado tʊj[I] *egg* and tʊj[II] *water* contrast with Tedim tuj[I] and tuj[II], yet Luce (1962:59;85;tableA) has Thado tuj[I] *egg* and ti[II] *water*, while in Teizang, which would be expected to correlate with Tedim, Henderson (1963:551) has tʊj[I] *egg* and tʊj[II] *water*; Thado ŋuj[II] *sad, sleepy* compares with Tedim ŋʊj[II] *tired out*, but variations in initial and rhyme elsewhere suggest external influence.

1.1.2.5 Thado -ʔ and Syllable Weight

There is a reduction of the surface length of vowels bearing syllabic weight in Thado syllables before a glottal stop. In words in TC-I and TC-II, this is not to the extent of a vowel not bearing syllable weight and the distinction is not noted in the transcriptions here;[23] in words in TC-III, the vocalism merges with that of a vowel without syllable weight and is noted as such in the transcription. Consequently the inflected form of Thado peʔ[I] *back kick* is pɛʔ, which can no longer bear distinctive tone,[24] rather than peʔ[III] as would be expected by analogy with Zo which, excluding tonal distinctions, is homophonous in the uninflected form. The two Thado forms are shown below:



[23] If length rather than syllable weight were being marked, this could be distinguished as [ː] and [ˑ] after the vowel.
[24] This change renders it homophonous with the uninflected Thado word pɛʔ *flat*.

1.2 Initials

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
**k-*	*k-*	*k-*	*k-*	*k-*	*k-*	*k-*
**k^{h}-*	*k^{h}-*	*k^{h}-*	*x-*	*x-*	*x-*	*k^{h}-*
**kr-*	*ʈ-*	*ʈ-*	*k-*	*k-*	*k-*	*k-*
**kr^{h}-*	*ʈ^{h}-*	*ʈ^{h}-*	*x-*	*x-*	*x-*	*k^{h}-*
**kl-*	*t^{l}-*	*t^{l}-*	*^{h}l-*	*t-, (ʧ-)*	*t-, (ʧ-)*	*t-, (ʧ-)*
**kl^{h}-*	*t^{lh}-*	*t^{lh}-*	*^{h}l-*	*^{h}l- / h-*	*x-*	*t^{h}-*
**ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*
**^{h}ŋ-*	*^{h}ŋ-*	*^{h}ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*
**ʦ-*	*ʦ-*	*ʦ-*	*ʧ-*	*t-, (ʧ-)*	*t-, (ʧ-)*	*t-, (ʧ-)*
**ʦ^{h}-*	*ʦ^{h}-*	*s-*	*s-*	*s-*	*s-*	*s-*
**ʣ-*	*f-*	*f-*	*ʧ-*	*t-, (ʧ-)*	*t-, (ʧ-)*	*t-, (ʧ-)*
**t-*	*t-*	*t-*	*t-*	*t-, (ʧ-)*	*t-, (ʧ-)*	*t-, (ʧ-)*
**t^{h}-*	*t^{h}-*	*t^{h}-*	*t^{h}-*	*t^{h}-, (s-)*	*t^{h}-, (s-)*	*t^{h}-, (ʧ^{h}-)*
**d-*	*d-*	*d-*	*d-*	*d-*	*d-*	*d-*
**n-*	*n-*	*n-*	*n-*	*n-*	*n-*	*n-*
**^{h}n-*	*^{h}n-*	*^{h}n-*	*n-*	*n-*	*n-*	*n-*
**p-*	*p-*	*p-*	*p-*	*p-*	*p-*	*p-*
**p^{h}-*	*p^{h}-*	*p^{h}-*	*p^{h}-*	*p^{h}-*	*p^{h}-*	*p^{h}-*
**b-*	*b-*	*b-*	*b-*	*b-*	*b-*	*b-*
**m-*	*m-*	*m-*	*m-*	*m-*	*m-*	*m-*
**^{h}m-*	*^{h}m-*	*^{h}m-*	*m-*	*m-*	*m-*	*m-*
**r-*	*r-*	*r-*	*g-*	*g-*	*g-*	*ŋ-*
**^{h}r-*	*^{h}r-*	*^{h}r-*	*h-, (g-)*	*h-, (g-)*	*h-, (g-)*	*h-, (ŋ-)*
**l-*	*l-*	*l-*	*l-*	*l-*	*l-*	*l-*
**^{h}l-*	*^{h}l-*	*^{h}l-*	*l-*	*l-*	*l-*	*l-*
**j-*	*z-*	*z-*	*ʒ- / z-*	*z-*	*z-*	*z-*
**w-*	*v-*	*v-*	*v-*	*v-*	*v-*	*v-*, (*h-*)
**s-*	*s-*	*s-*	*s-*	*s-*	*s-*	*s-*
**h-*	*h-*	*h-*	*h-*	*h-*	*h-*	*h-*
**ʔ-*	*Ø-*	*ʔ-*	*Ø-*	*Ø-*	*Ø-*	*Ø-*

1.2.1 Velars

The obvious attestation of *b-* and *d-* leads Ohno (1965:16-7) to suggest that it must be possible on distributional grounds to reconstruct an original *g-*, but that the actual processes are still unclear. Luce (1962:39) notes evidence for preglottalisation in some Southern Chin languages of *b-* and *d-* which he transcribes with the implosives *ɓ-* and *ɗ-*. VanBik (2009:64-5) suggests that implosion may have originally been characteristic of the voiced obstruent series with *ɠ-* shifting to *k-* due to a similar lack of *ɠ-* in some Austroasiatic and Tai-Kadai languages which attest *ɓ-* and *ɗ-*. However, VanBik's analysis, based on Hartmann's (1985, 2001) and Nolan's (2001:68) respective analyses of two Southern Chin languages does not account for plain *b-* and *d-* in these languages. Furthermore, Hartmann's (1985, 2001) analysis shows preglottalisation, along with

prenasalisation, to be a morphologically conditioned change resulting from nasal and glottal prefixes that are applicable to all initial types. A more likely cause is a simple devoicing of plain Tibeto-Burman *g-* to Northern Chin *k-* that is supported by the discussion in 1.2.2 where the Sizang shift of *r-* > *ɣ/ʁ-* > *g-* > *ŋ-* demonstrates the difficulty in maintaining the voicing of velar obstruents in Northern Chin.

1.2.1.1 Velar Clusters

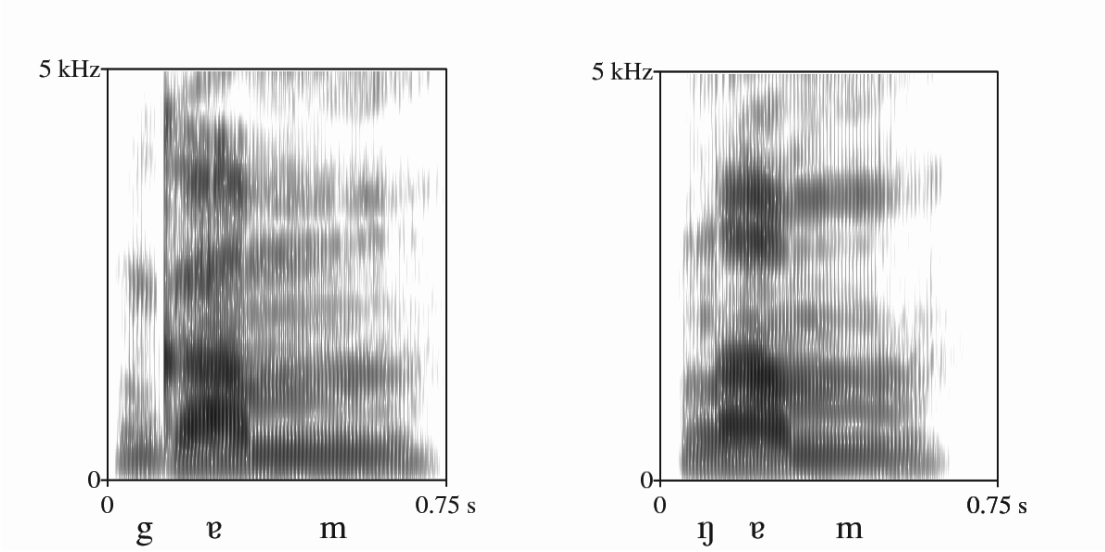
For the purposes of exposition, *kr-* and *kl-* are treated as unitary clusters. Their original source in a *k-* prefix that has been retained before liquids is supported in a few cases in the word list where reflexes of original *kr-* and *kl-* are confused with *r-* and *l-*. Based on ideas in Shafer (1940:309-10) and Benedict (1972a:41-2), Solnit (1979:117-8) concludes that *pr-* and *pl-* may be treated as standard sources of Mizo *ʈ-* and *tʲ-* along with *kr-* and *kl-*, but this is unwarranted: Mizo ʈʰal^{I} *summer* and tˡu^{III} ~ tˡuk^{IIB} *fall* do not correlate with Tedim pʰɐl^{III} *winter* and puk^{II} *fall*, but with Tedim kʰal^{I} *summer* and tuk^{II} *fall*; Mizo ʈʰa^{III} ~ ʈʰɐt *good* and the avian name tˡaj^{I}– do compare with Tedim pʰa^{III} ~ pʰɐt and baj^{I}–,[25] but are exceptional cases resulting from external influence via a bilabial pre-syllable that may also account for the irregular FORM-II inflections of the former.[26] Two further cases may also be noted: Mizo ʈɔw^{I} ~ ʈɔw^{III} and Tedim pɔw^{I} ~ pɔw^{III} *sprout (v)*; Zahau ʈʰɪm^{I}, for which there is no Mizo correlate, and Tedim pʰɪm^{I} *needle*.[27]

The Zo *ʰl-* and *h-* reflexes of *kʰl-* generally reflect speaker idiosyncrasy. The evidence of one speaker suggests a lexical distinction between the two such that *moon* is always ʰla^{III} and *wing, feather* is always ha^{III}. Only the transcription *ʰl-* is used in the word list.

1.2.2 Rhotics

Luce (1962:52, 1985:I.81-2) and Peterson (2000:81-5) note that several Southern Chin reflexes of *r-* have a uvular *ʁ-* or velar-fricative *ɣ-* articulation. This supports Solnit's (1979:115-6) suggestion for a shift *r-* > *ɣ-* > *g-* in languages like Zo, Tedim and Thado. This development was no doubt triggered by the shift of *g-* to *k-*, discussed in 1.2.1, due to *g-* becoming being an available slot in the phonemic inventory. Ohala's (1983:195;199-200) observations that prenasalisation is often used as means to maintain voicing, which is harder to maintain for back articulations, provides a good account for Sizang's further shift of *g-* > *ŋ-* which is also noted for Teizang by Henderson (1963:551). Notably, Luce (1962:52;noteA, 1985:II.70-87) actually transcribes Zo, Thado and Tedim *g-* as *ᵑg-*. Although this provides a nice bridge between Thado, Zo and Tedim *g-* and Sizang *ŋ-*, this prenasalisation is not noted by Henderson (1965:16) for Tedim. While there is possibly some faint nasalisation of *g-*, the spectrograms below of Tedim gɐm^{I} *forest, territory* and ŋɐm^{I} *dare* do not conclusively warrant a transcription of *ᵑg-* for the former:

[25] The avian name is not in the word list, but supported in Luce (1962:tableB).
[26] For the latter, compare Mizo bak^{IIA}, in irregular TC-IIA rather than TC-IIB, and Tedim bak^{II} *bat* with Khualsim pɐlak^{IIA} from Luce (1962:tableB) and with the forms in VanBik (2009:85).
[27] VanBik (2009:291-2) adduces a few other cases on the basis of Old Burmese and Southern Chin, but these do not pertain to Northern Chin reflexes.



The occasional failure of Thado, Zo, Tedim and Sizang to manifest ^{h}r- > *h*- and instead develop as if from unaspirated *r*- most likely reflects the instability of preaspiration before sonorants noted by Luce (1962:43-4) and supported in Southern Chin by Löffler (2002a:133-4). Luce's (1962:50) suggestion that the reflexes in *h*- may reflect a local variant of *h*- in Mizo and Zahau, manifested as ^{h}r-, is belied by statistical evidence; Solnit's (1979:116) suggestion of an original Tibeto-Burman distinction of *sr*- and *s-r*- finds little supporting evidence in 5.2.

1.2.3 Affricates

The voiceless affricates ʦ- and ʦ^{h}- are retained as such in Mizo.[28] Benedict's (1940:123, 1972a:18) derivation of Mizo *f*- from Tibeto-Burman *dz*- is supported by Löffler (2002a:128-9) and may be adopted at the Northern Chin level.[29] The change this entails is not too dissimilar from the fronting of *θ*- to *f*- in Cockney English; VanBik (2009:26;174) actually reconstructs original Chin *θ*-. The loss of voicing, paralleling the change of *g*- to *k*- discussed above, is readily accounted for by Ohala's (1983:201-2) observation that fricatives have an even greater tendency to become voiceless than stops.

1.2.4 Coronals

The coronals *t-, t*^{h}-, *d*-, $^{(h)}$*n*-, $^{(h)}$*l*- have a dental articulation in Mizo and Zahau. Luce (1962:40) extends this to the other four languages which is supported by Stern (1963:226) for Sizang. However, the evidence here supports Henderson (1965:9-10;16) in noting purely alveolar articulations in Tedim, and contrasts Stern in only noting a dental articulation in Sizang for unaspirated *t*-; Zo appears to parallel Sizang while Thado inconsistently attests a dental articulation for *t*^{h}- as well. The dental articulation in Mizo

[28] The shift of ʦ- to *t*- in Tedim leads Matisoff (1988b:4-9) to suggest an erroneous association between Northern Chin tsɐm^{I} *level* and dɪm^{II} *full*.
[29] Benedict's further derivation of Mizo *f*- from a voiced sibilant *z*- is rejected in 5.2.2.

and Zahau,[30] most likely represents the original state of affairs with the shift to an alveolar articulation possibly influenced by Burmese; in this regard it would be interesting to compare the reflexes on the Indian side.

There is an allophone *ʧ*- of Zo, Tedim and Sizang *t*- before *ɪ/i* which is reflected as *s*- when from underlying *t*^{h}- except in Sizang where it becomes *ʧ*^{h}-. The origin of Northern Chin *t*^{h}-in Tibeto-Burman *s*-, discussed in 5.2.2, leads VanBik (2009:17) to suggest that *ɪ/i* inhibited the shift of *s* > *t*^{h}- in Tedim, but the evidence for palatalisation elsewhere suggests a circular shift of *s* > *t*^{h}- > *s*- in this resticted environment.

1.2.5 Glides

Peterson's (2000:94) observation that *j*- in some Southern Chin languages corresponds to *z*- in the Northern ones is supported by the data in Luce (1985:II.70-87). Peterson's (2000:80) further suggestion that the shift to *z*- first occurred in lanaguages like Mizo and Zahau and then diffused northwards is supported by the fact that Thado, as the language furthest north, still retains a post-alveolar articulation *ʒ*- which appears to be slipping towards the alveolar *z*-; this variation is also noted by Luce (1962:noteB). In the word list only the transcription *ʒ*- is used.[31] Peterson's (2000:94) proposal for an original ^{h}*j*- in Southern Chin is not noted by Luce (1962:39) or VanBik (2009:271).

The provenance of *v*- from a labiovelar glide *w*- is well-supported: Benedict (1972a:18), relying on missionary orthographies, transcribes the Mizo reflex as *w*-; Luce (1962:55;noteB, 1985:II.70-87) records *w*- for some Southern Chin languages. The shift of *w*- > *v*- probably spread northwards in a similar manner to *j*- > *z*- and was possibly facilitated via the devoicing entailed in the Mizo and Zahau shift of *ʤ*- > *f*-. it is possible that the Sizang allophone of *v*- as *h*- before *u* may also reflect a previous non-fricated source.[32] Luce (1962:51) explictly notes no evidence for ^{h}*w*- in Northern Chin.

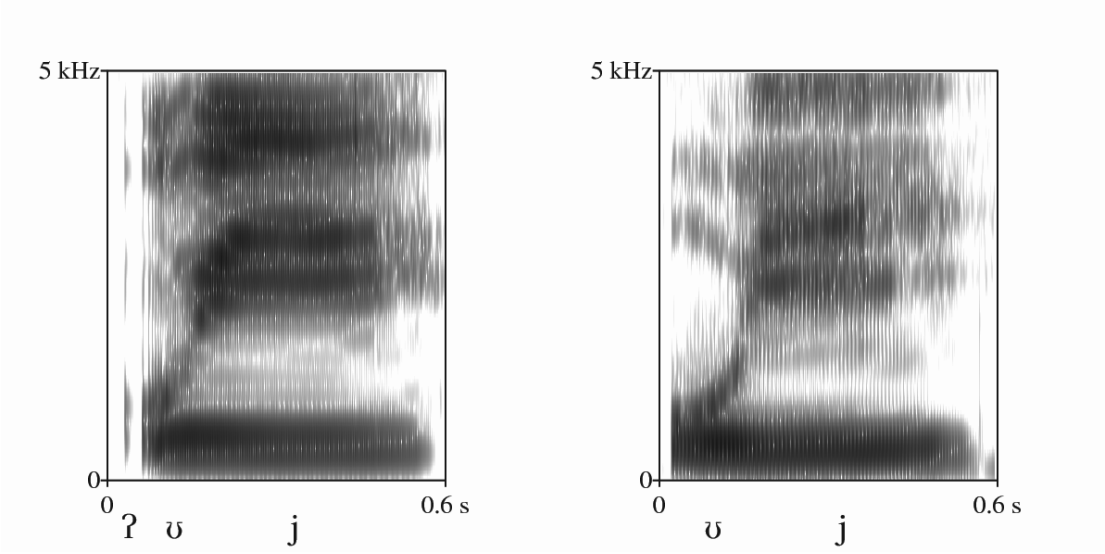
1.2.6 Glottal Stop

The glottal stop is essentially a default feature of vocalic onset, but the overtly creaky phonation in Zahau in comparison to the other languages suggests Osburne's (1975:3) tentative supposition of a distinct phoneme in Zahau to be preferable. Henderson (1965:13;16) and Stern (1963:226) both note a prominent glottalic onset in the word for *dog* in Tedim and Sizang respectively; Weidert (1981:9) questions Henderson's transcription and the word list here provides no evidence for such an onset in either language. The glottalic onset in the spectrogram for Zahau ʔʊj^{II} *dog* is clearly evident when compared to Tedim ʊj^{II} *dog*:

[30] This may also be extended to the lateral plosives *t*^{l}- and *t*^{lh}-.

[31] Notably there are also a select few cases of *x*- being articulated as *k*^{h}-; whether this represents dialect confusion or shift is unclear and only the transcription *x*- is used in the word list.

[32] There are two words where Sizang reflects *v*- before *u*: vʊt *ash*; vʊj^{I}(saj^{I}) *elephant*. The latter is an Austroasiatic loanword that is internally irregular in Northern Chin.



1.3 Tonality

In syllables with weight falling on the vowel or the sonorant coda, Mizo and Zahau have four possible tones while Thado, Zo, Tedim and Sizang have three.

	Mizo	Zahau	Thado	Zo	Tedim	Sizang
I	˥	˧	˧	˦	˦	˨
IIA	⎡˧	˥⎤	˦	˧	˧	˧
IIB	⎣˦	˦⎦				
III	˨	˨	˨	˦	˨	˦

The tripartite division follows Luce's (1959a:28-9, 1985:I.83) assumption that Mizo and Zahau have undergone a later split of TC-II.[33] Löffler's (2002b:128) suggestion that TC-I and TC-II are primary fits well with the common association of TC-III with derived verbal and nominal forms, to be discussed in 2.1 and 2.2, that pertains equally to Old Burmese and Old Chinese.

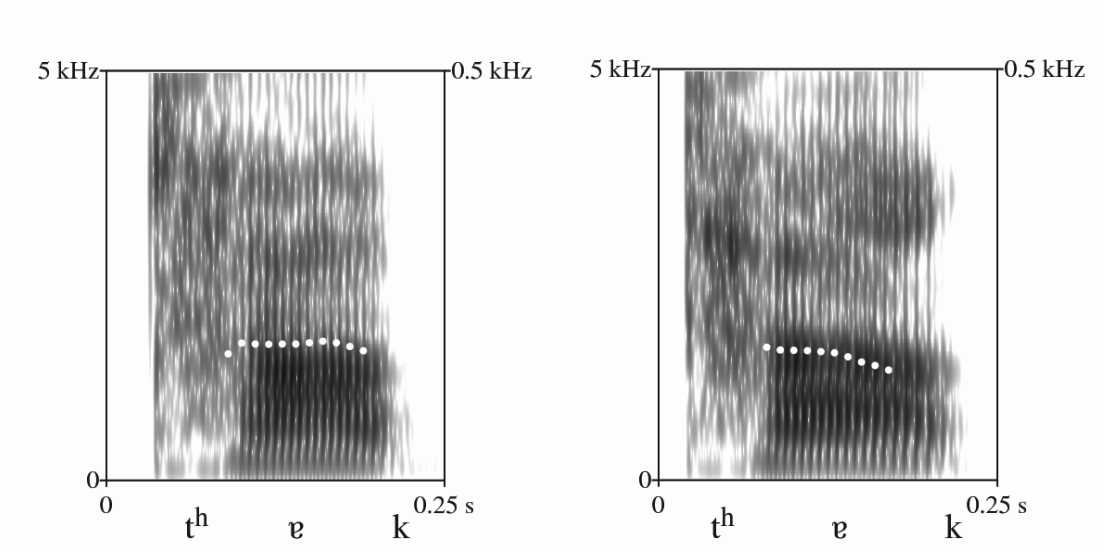
1.3.1 Tone Category I

This is attested in Mizo, Zo and Tedim as a level tone. Stern's (1963:229-30) observation that in Sizang it often surfaces as a low level tone ˩ is also supported here, but his treatment of the frequent Sizang high level tone ˥ as part of the basic tone system is identified by Luce (1962:68) as a result of sandhi. The Thado and Zahau rising contours correlate with TC-II(A) elsewhere, but Hyman (2005) and Osburne (1975:16) note them respectively to have high level sandhi alternates. Although Osburne also notes an alternation in Zahau with the low falling tone in a separate environment, it is tempting to invoke Yue-Hashimoto's (1986:171-3) suggestion that sandhi alternations of tones may

[33] Luce's TC-II and TC-III are inverted here.

reflect earlier forms. Treating TC-I as an original level tone and TC-II as an original rising tone would support the discussion in 5.3 regarding their historical origins, but further research into Northern Chin tone sandhi is required.[34]

Stopped syllables with syllable weight not falling directly on the vowel are generally not tone bearing units; their pitch tends to approximate that of TC-III. Consequently the occlusion of Mizo and Zahau *-r* to *-ʔ* or *-k* in Thado, Zo, Tedim and Sizang usually involves concomitant re-assignation of syllable weight to the vowel if not already there. However, in Tedim and Sizang there are a few exceptions in TC-I in which the syllable weight has not shifted solely to the vowel but the syllable has curiously retained the distinctive tone contour. The case of Tedim t^hɐk^I *new*, corresponding to Mizo t^hɐr^I *new*, is also noted by Henderson (1965:20), and may be contrasted with Tedim t^hɐk *itch* which, along with Mizo t^hɐk *itch*, is unable to bear distinctive tone. In the spectrograms below the Tedim word for *new* has a higher pitch contour than the default contour in the following word *itch*:



The same word, usually after the animal prefix *sɐ-*, also means *serow*; the irregular correspondence between the Mizo and Zahau forms, t^har^I and t^hɐr^{II} respectively, suggests an external origin which is the case for Tedim kɔk^I *peel* from Austroasiatic. The sole other case in the word list involves Tedim hɐk^I *difficult* which is confined to a binomial form that allows Henderson (1965:94) to suggest that its curious behaviour may be attributable to its adverbial status.[35] The Tedim cases above are all equally applicable to

[34] A brief discussion may be found in Luce (1962:11) with more detailed analyses for Sizang by Stern (1963:230-3), Tedim by Henderson (1965:13-4;34-9), Mizo by Weidert (1975:53-6) and Chhangte (1993:54-8), and Zahau by Osburne (1975:14-21).

[35] The curious phonology of adverbs was noted in 1.1.2.4. Luce (1962:54) notes further difficulties with initial correspondences in Southern Chin reflexes.

Sizang, and although a specific account cannot be made for the curious tonal contour of *new*, its exceptional status likely stems from a previous adverbial or external source.[36]

1.3.2 Tone Category II

Osburne (1975:7;23) does not distinguish TC-IIA and TC-IIB in Zahau except as a result of surface intonation. The primary distinction posited here is supported by Luce (1959a:table$_{I}$, 1962:table$_{A}$;note$_{C}$).

Unlike the split of Old Chinese TC-I in Early-Mandarin, as discussed by Pulleyblank (1978:192), and the split of Lolo-Burmese TC-I and TC-II in Lahu and Lisu, as discussed by Matisoff (1970:14), the division of TC-II in Mizo and Zahau is not associated with manner features of initials. Luce (1959a:28) suggests that TC-IIA and TC-I, excepting when an obstruent coda in Thado, Zo, Tedim and Sizang corresponds to an original *-r*, never occur with obstruent codas. Löffler (2002a:129) notes a general association of TC-IIB with obstruent codas in Mizo, and Weidert (1975:11) attributes the few cases outside of TC-IIB in Mizo to a mostly phonoaesthetic origin; Ostapirat (1998:235-7) and Löffler (2002b:139) similarly note an association of TC-II with obstruent codas in Tedim. Luce's (1962, 1985:II.84-7) data also has no cases of TC-IIB with final sonorants; there are actually numerous instances but they can generally be attributed to morphologically derived forms, discussed in 2.1, which are not recorded in Luce's word list.[37] In closed syllables, this allows TC-IIB to be limited to tone-bearing syllables with obstruent codas and to derived forms. Open syllables appear to occur in TC-IIA or TC-IIB, but while Luce (1962, 1985:I.83;II.82) and Weidert (1979:80;90;114-5) do not treat open rhymes in TC-IIA as aberrant, they do both note an abundance in TC-IIB.[38] Cases of TC-IIA in the correspondence sets suggest them to be loanwords or a result of onomatopoeia. Consequently, for native uninflected tone-bearing syllables the following correspondences may be suggested:

	Mizo	Zahau	Thado	Zo	Tedim	Sizang
open	IIB	IIB	II	II	II	II
stop	IIB	IIB	II	II	II	II
closed	IIA	IIA	II	II	II	II

In his "redundancy-free" representation of Mizo, Weidert (1975:4-8) removes a vowel length notation from syllables with obstruent codas suggesting that vowel length is a concomitant realisation of TC-IIB; Lehman's (1978:720) logical counter that the argument could be inverted to treat syllabic shortness as the generator of reduced tone disregards the intrinsic association of TC-IIB, as opposed to TC-I, TC-IIA or TC-III, with obtruent codas.

[36] It is perhaps of relevance that the Tedim form, unlike the Sizang form, does not inflect. However the failure of other morphemes to always exploit their inflectional potential due to the gradual reduction of inflections across all the languages makes this an unreliable indicator of anything being amiss.

[37] The derived nature of TC-III excludes it from the discussion.

[38] Luce's tentative proposal that the open rhymes in TC-IIB may have been conditioned by the loss of an original final voiced obstruent is based on the now disfavoured proposal for voiced obstruents in Old Chinese; see Li (1974:249). It is likely Luce was influenced in this analysis by the association of TC-IIB with obstruent codas.

However, the fact that stopped syllables were originally not able to bear distinctive tone favours inverting Weidert's argument to treat TC-IIB as the concomitant realisation of surface vowel length. Rather than following Weidert in his synchronically reasonable decision not to note the vowel distinction before obstruent codas, it would be preferable in diachronic terms not to note the tonal distinction. This is adopted for the Northern Chin reconstructions in the word list, but the distinction of verbal inflections in TC-III and onomatopoeic words or loanwords in category TC-I or TC-IIA with obstruent codas, requires vocalic and tonal distinctions to be noted before obstruent codas for the individual languages.

1.3.3 Tone Category III

This is attested as a falling tone in all the languages which concurs nicely with its historical source proposed in 5.3. Luce (1959a:tableI, 1962:noteC) only notes Thado TC-I and TC-II, but elsewhere Luce (1962:68;noteB) notes a TC-III contour possibly associated with phrase intonation. Luce's comments are similar to those of Osburne (1975:23) on Zahau TC-IIB, discussed in 1.3.2, and, as with Zahau TC-IIB, Thado TC-III is unequivocally attested as a primary tone in the word list here. The contour ˥˩ of Zo TC-III is supported by Luce (1962:68,noteC), but it sometimes appears to approximate the contour ˧˩ of Tedim TC-III which conversely has a sandhi variant, noted by Luce (1962:11), that parallels the Zo contour.

Chapter 2
Northern Chin Morphology

Northern Chin words may be classified as either nouns or verbs.[39] Most Northern Chin verbs have a basic form FORM-I and an inflected form FORM-II; specific syntactic functions vary between languages.[40]

2.1 Verbal Inflections

The regular FORM-II derivations from a reconstructed FORM-I base are noted below:[41]

	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*-*k*	-ʔ	-ʔ	-Ø^{III}	-Ø^{III}	-ʔ	-Ø^{III}
*-*k*^{I}	-ʔ	-ʔ	-Ø^{III}	-Ø^{III}	-*k*^{III} / -ʔ	-*k*^{III} / -Ø^{III}
*-*k*^{III}	-ʔ	-ʔ	-Ø^{III}	-Ø^{III}	-ʔ	-Ø^{III}
*-*t*	-ʔ	-ʔ	-Ø^{III}	-Ø^{III}	-ʔ	-Ø^{III}
*-*t*^{II}	-ʔ	-ʔ	-*t*^{III}	-*t*^{III}	-*t*^{III} / -ʔ	-*t*^{III} / -Ø^{III}
*-*t*^{III}	-ʔ	-ʔ	-Ø^{III}	-Ø^{III}	-ʔ	-Ø^{III}
*-*p*	-ʔ	-ʔ	-Ø^{III}	-Ø^{III}	-ʔ	-Ø^{III}
*-*p*^{II}	-ʔ	-ʔ	-*p*^{III}	-*p*^{III}	-*p*^{III} / -ʔ	-*p*^{III} / -Ø^{III}
*-*p*^{III}	-ʔ	-ʔ	-Ø^{III}	-Ø^{III}	-ʔ	-Ø^{III}
*-Ø^{I}	-*t*	-*t*	-*t*	-*t*	-*t*	-*t*
*-Ø^{II}	-*k*^{IIB} / -*t*^{IIB}	-*k*^{IIB} / -*t*^{IIB}	-ʔ^{II} / -*t*^{II}	-ʔ^{II} / -*t*^{II}	-*k*^{II} / -*t*^{II}	-*k*^{II} / -*t*^{II}
*-Ø^{III}	-*k*	-*k*	-ʔ	-ʔ	-*k*	-*k*
*-ŋ$^{I/II}$	-*n*^{III}	-*n*^{III}	-*n*^{III}	-*n*^{III}	-*n*^{III}	-*n*^{III}
*-ŋ^{III}	-*n*^{IIB}	-ŋ^{IIB}	-ʔ	-ʔ	-*t*	-*k*
*-*n*$^{I/II}$	-*n*^{III}	-*n*^{III}	-*n*^{III}	-*n*^{III}	-*n*^{III}	-*n*^{III}
*-*n*^{III}	-*n*^{IIB}	-*n*^{IIB}	-*t*	-*t*	-*t*	-*t*
*-*m*$^{I/II}$	-*m*^{III}	-*m*^{III}	-*m*^{III}	-*m*^{III}	-*m*^{III}	-*m*^{III}
*-*m*^{III}	-*m*^{IIB}	-*m*^{IIB}	-*p*	-*p*	-*p*	-*p*
*-*r*^{I}	-*r*^{III}	-*r*^{III}	-ʔ	-ʔ^{III} / -*a*^{III}	-*k*^{III}	-*k*^{III}
*-*r*^{II}	-*r*^{III}	-*r*^{III}	-ʔ / -Ø^{III}	-ʔ^{III} / -*a*^{III}	-*k*^{III} / -ʔ	-*k*^{III} / -Ø^{III}
*-*r*^{III}	-*r*ʔ	-*r*ʔ	-ʔ	-ʔ^{III} / -*a*^{III}	-*k*^{III}	-*k*^{III}
*-*l*$^{I/II}$	-*l*^{III}	-*l*^{III}	-*l*^{III}	-*l*^{III}	-*l*^{III}	-*l*^{III}
*-*l*^{III}	-*l*ʔ	-*l*ʔ	-*l*^{III}	-*l*^{III}	-*l*ʔ	-*l*^{III}
*-*j*$^{I/II}$	-*j*^{III}	-*j*^{III}	-*j*^{III}	-*j*^{III}	-*j*^{III}	-*j*^{III}
*-*j*^{III}	-*j*ʔ	-*j*ʔ	-*j*^{III}	-*j*^{III}	-*j*ʔ	-*j*^{III}
*-*w*$^{I/II}$	-*w*^{III}	-*w*^{III}	-*w*^{III}	-*w*^{III}	-*w*^{III}	-*w*^{III}
*-*w*^{III}	-*w*ʔ	-*w*ʔ	-*w*^{III}	-*w*^{III}	-*w*ʔ	-*w*^{III}

[39] Following Osburne (1975:120) and Chhangte (1993:75), numerals may be classified as intransitive verbs.
[40] See Henderson (1965:84-9), Stern (1963:243-51), Chhangte (1993:135-75) and Lehman (1996).
[41] A reconstructed FORM-I base is used for simplicity of exposition. A coda *-*s* is not included due to its early convergence with -Ø^{III} or, in the case of short surface vowel length in Mizo, Zahau and Tedim, its development into -ʔ which can no longer inflect. See the discussions in 1.1.2.2, 2.1.3 and 5.1.2.2.

The following restrictions to the chart should be noted: non-native or onomatopoeic FORM-I syllables with original obstruent codas in TC-I or TC-II(A) are not included in the chart and appear to develop TC-III in FORM-II without loss of the coda; in the case of sonorant codas, syllable weight may not be assigned to the vowel in Mizo and Zahau derivations in TC-IIB,[42] nor in Thado, Zo and Sizang derivations in TC-III corresponding to *-ʔ* in Mizo, Zahau and Tedim; open syllables with diphthongs tend to develop TC-II(B) in FORM-II regardless of original tone due to their surface vowel length before obstruent codas having an inherent association with TC-II as discussed in 1.3.2.[43]

2.1.1 Stopped Syllable Variation

The alternative Sizang reflexes of *-k/t/p*^{II} are in free-variation; in Tedim they are only in free-variation after the diphthongs *ɪa* and *ʊa* otherwise only the former surfaces. It appears that the former variants in TC-III represent the earlier state of affairs that is gradually shifting to a complete loss of the original coda.[44] Significantly, Osburne (1975:140) notes a similar variation in a few verbs in Zahau where *-k/t/p*^{II} give either *-k/t/p*^{III} or *-ʔ* although only reflexes in *-ʔ* exist in the Zahau recorded here.[45] In Thado, the variation appears confined to reflexes of *-ʔ*^{II} when derived from Northern Chin *-r*^{II}, and only cases of variation across the word list rather than free-variation were noted.[46]

2.1.2 Open Syllable Variation in TC-II

The general FORM-II reflex is *-k* and is derived from regular syllables corresponding to TC-IIB in Mizo and Zahau. Like the grammatically conditioned tonal splits in certain Lolo-Burmese languages, noted by Burling (1967:57) and Matisoff (1978b:19-20;33), Mizo regularly shifts all verbs with open rhymes from TC-IIB to TC-III; this does not affect the form FORM-II inflections. Any nominal forms associated with FORM-I retain the original tone such that Mizo k^{h}u^{IIB} *smoke (n)* correlates with k^{h}u^{III} *smoke (v)*. The shift to TC-III in verbs renders Hillard (1975:12;16-9) unable to separate when Mizo *-k* develops from original TC-III, and when *-k*^{IIB} develops from secondarily derived TC-III.[47] Cases with *-t* appear in words corresponding to irregular open syllables in TC-IIA discussed in 1.3.2. The suggestion that such words belong to a more recent layer is supported by Zahau syllables in *-i*, that are shown in 1.1.2.4 to have developed from *-ʊj* after coronal initials, always developing FORM-II inflections in *-it*^{IIB} regardless of tone. Occassional occurrences of *-t* instead of *-k* from TC-IIB are most likely further analogical extensions of the *-t/-k* alternations discussed in 2.1.6 and attributed to mutual influence between languages.

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[42] Exceptional cases of long vowels with sonorant codas in TC-IIB are externally influenced.

[43] The few instances where TC-III develops, sometimes in free-variation, may be associated with the discussion in 2.1.1.

[44] In some cases a secondary semantic distinction has emerged: the variant FORM-II derivative p^{h}ɪaʔ of Tedim p^{h}ɪat^{II} ~ p^{h}ɪat^{III} *sweep* is only used in its nominal sense of *broom*; see 2.2 for the association of FORM-II with nominalisation.

[45] The exceptional status of Zahau t^{h}uk^{IIB} ~ t^{h}uk^{III} *deep* is also attested in Mizo, Thado and Zo. Benedict (1972a:66-7) compares t^{h}aɪʔt^{h}aɪʔ ထိုက်ထိုက် t^{h}ɨkt^{h}ɨk *thickly*, but its rhyme shows it to be a non-native word whose verbal source ထိုက် *worthy, suitable* is noted by Luce (1973:listA) to be Mon or Shan in origin.

[46] The Zo reflexes in *-a* from an original rhotic correspond to the preceding vocalism as discussed in 1.1.2.1.

[47] Hillard's associated proposal that FORM-II may therefore be primary is discusssed in 2.1.3.

2.1.3 Origin in Suffixal -s

Although noting a general change to TC-III in form FORM-II, the variety of FORM-II reflexes leads Weidert (1979:98-107) to reconstruct a suffixal combination *-(s-)d^{h}* whereby the dentalisation triggered by the *-d^{h}* suffix could be modified by glottalisation caused by the *-s-* infix. Matisoff (1982:9-17) criticises Weidert's proposal for being typologically bizarre and phonetically aberrant; preferring to opt out of any all-inclusive hypothesis, he proposes three separate suffixes *-s*, *-t*, and *-k* to which he can assign no semantic function nor account for the selection of one over another. Ostapirat (1998:244-6) makes the interesting suggestion that in Tedim there is a tense-lax alternation such that syllables in TC-II (tense) give TC-III (lax) but syllables in TC-III (lax) give *-ʔ* (tense) but then admits that this leaves no account for the derived forms with *-t* and *-k*. In spite of Hillard's (1974:78, 1975:1) suggestion that the alternation between FORM-I and FORM-II is not directly phonologically conditioned and, specifically in reference to Mizo, is largely irregular, Hillard (1975:9-12) suggests an inverse proposal that Mizo FORM-I open-rhymes may actually be derived from their FORM-II counterparts which retain etymological *-t* and *-k* suffixes, but notes that the lack of a *-p* coda in this analysis is a problem. Significantly, Hillard does note a correlation between tones and *-t* versus *-k* suffixes, but prefers to assume that the different tonal contours were triggered by the different status of the codas before they were lost. Noting a similar correlation, Löffler (2002b), in essentially a reversion of Hillard's proposal back to a more plausible derivation of FORM-II from FORM-I, believes that all the verbal paradigms may be derived from a single suffix. Löffler (2002b:124;130) tentatively suggests this may be something like *-t* with two alternative surface realisations: *-k* in open syllables according to the tone contour; *-ʔ* in closed syllables that would either replace obstruent codas or, in the case of sonorant codas, would either disappear to leave a distinctive tonal reflex or remain as a coarticulation depending on the tone of the syllable and manner of articulation of the coda.[48]

Löffler succeeds in identifying most of the main derivational patterns outlined above, but the phonological development of his *-t* coda is rather arbitrary. Significantly Löffler (2002a:128), following his own proposals cited in Henderson (1976:16), notes that the Tibetan equivalent of his final *-t* appears to be final *-s*, but excludes this from consideration on the basis that Northern Chin root final *-s* becomes *-ʔ* as discussed in 5.1.2.2. A possible association with the Tibetan *-s* suffix is proposed in Pulleyblank (1966b:423); Henderson (1976:7;9) takes up this proposal and suggests a further possible comparison (1976:11) to the Old Chinese TC-III derivations. Unfortunately Henderson is unable to take the comparison out of the realms of speculation, but her hunch seems to be correct when the different conditioning environments are taken into account. Excluding the general association of *-s* with TC-III, as also attested in Old Burmese and Old Chinese in 3.4 and 4.3, and the loss of original stop codas before *-s* which is noted in 4.1.2 to also occur in Old Chinese, the developments of *-ʔ*, *-t* and *-k* remain to be discussed.

[48] Löffler's (2002b:129-30) proposal for distinctive tones on short stopped syllables to account for verbs that do not inflect seems unnecessary. Verbs in other categories sometimes do not inflect and the process rather represents the gradual depletion of inflections that, as shown in Hartmann (2002:81), has almost completely disappeared in many southern Chin languages.

2.1.3.1 Glottality

An association of *-s* with glottality in the development of TC-III in Old Burmese and Old Chinese is noted in 3.4; this renders its development here under the conditioning environments noted above phonologically possible. The association of root final *-s* with glottality, discussed in 5.1.2.2, may also be noted here. The attestation of glottalised nasals in Lai Chin where Mizo and Zahau have nasals in TC-IIB corresponding to obstruents in Thado, Zo, Tedim and Sizang suggests a glottalic development here also that parallels the glottalised liquids and glides in Lai Chin that are still maintained in Mizo, Zahau and Tedim. The typological naturalness of a development of *-p/t/k* from *-mʔ/-nʔ/-ŋʔ* is noted in Matisoff (1982:49). The alternative emergence of TC-IIB after nasals in Mizo and Zahau is suggestive of the glottalic origin of TC-II; this is supported by the occasional occurrence of liquids and glides in TC-IIB that tend to be in free-variation with their glottalised counterparts such that they are of no reconstructional significance.[49] The further development of *-ŋʔ* to Mizo *-n*^{IIB} and Tedim *-t* appears to be the result of the spreading of the coronal feature of suffixal *-s*.[50]

2.1.3.2 Open syllables and -t / -k

Matisoff (2003:431) shows the development of *-s* into *-t* to be a regular development in Tibeto-Burman; it is also noted in 5.1.2.2 to have occurred sporadically in Old Chinese. A development of *-s* into *-k* is less well-supported cross-linguistically, but the shift of *-r* to *-k* in certain Northern Chin languages, discussed in 1.1.2.1 and 1.2.2, via an intermediary uvular or velar fricative articulation certainly makes such a change less typologically unreasonable when the close relationship of *-s* with the laryngeal fricative *-h*, to be discussed below, is taken into account.

2.1.4 Superadded -s Suffixation

An issue with the *-s* hypothesis is that words in TC-III which were originally derived from suffixal *-s* are allowed to further inflect as if they were suffixed again. Pulleyblank (1966b:423) suggests the complexity of the inflectional system may be due to analogical extension affecting different layers of language; in the case of derived words from an original TC-III this seems to have indeed been the case. However, if a FORM-II derivation could be lexically reanalysed in FORM-I and inflected again, the *-s* suffix that triggered the first inflection must have developed into something else before *-s* could be suffixed again. This calls into question how *-s* suffixation could still exist as a formative process if there was no trace of suffixal *-s* left in the lexicon.

A solution to this lies in the development of *-s* in Old Chinese. Pulleyblank (1973b:371, 1978a:173-4) observes that the development of *-s* into a laryngeal fricative *-h* by the time of the *Qieyun* was a sporadic process that affected some rhymes earlier than others. In support of this diglossic situation, Pulleyblank (1978:200) notes a similarity with

[49] Occasionally a semantic distinction appears to have emerged or the variant forms have been reanalysed via analogy as inflectional derivatives; see also Löffler (2002b:132).
[50] See also the discussion in 5.1.2.2.

Henderson's (1952:169-70) observation that the Cambodian final sibilant *-s* is not distinguished from final aspiration *-h* except in careful reading pronunciation. The most likely scenario in Northern Chin is that *-s* gradually started to shift to *-h* in some words which were then open to further suffixation by the lexically still viable *-s* remaining in other words. By the time all cases of *-s* had shifted to *-h*, the pattern was already set such that analogy was allowed to take over to derive the rest of the lexicon. A clear example of this distinction in suffixal levels, and the effect of analogy thereon, may be found in words of the type *-ŋ*^{III} which should all be attested as *-n*^{III} if derived from an original *-ŋ*$^{I/II}$ with suffixal *-s* causing coronalisation. The situation is similar to that of *ŋ*^{III}*-s* becoming *-n*^{IIB} or *-t* in Mizo or Tedim respectively but *-ŋ*^{IIB}, *-k* or *-ʔ* in Zahau, Sizang or Thado/Zo respectively.

2.1.5 <u>*Causativity Paradigms*</u>

The cases of superadded *-s* suffixation tend to mark an interesting process in Northern Chin of causativisation or, to use Chhangte's (1993:86-9) broader terminology, valency change. Henderson (1965:83) shows a few examples of Tedim paradigms whereby FORM-II inflections of intransitive verbs may be used as transitive verbs in FORM-I while the FORM-II inflections of transitive verbs may be used as benefactive verbs in FORM-I which may also manifest a distinct FORM-II. Examples in Thado, Zo, Tedim and Sizang are relatively rare; Zahau and, to a lesser extent, Mizo show broader support, but usually show loss of the intermediate stage such that only the FORM-II inflection of the derived FORM-I remains.[51] This leads Osburne (1975:114), along with Peterson (1998:93-4) and Matisoff (2003:472-3) who focus on Lai, to suggest a distinctive FORM-III inflection in cases like Zahau tˡʊŋ^{II} ~ tˡʊn^{III} *return (v$_i$)* and tˡʊn^{IIB} *return (v$_t$)*. Correlates like Thado ʰlʊŋ^{II} ~ ʰlʊn^{III} *arrive (v$_i$)* and ʰlʊn^{III} ~ ʰlʊt *bring (v$_t$)* show these isolated third forms rather to evince the gradual reduction in verbal inflections that Hartmann (2002:81) shows has already occurred on a massive scale in Southern Chin languages. This is hinted at by Hillard (1974:82-3), who compares Henderson's Tedim paradigms and some Mizo paradigms in Bright (1957b:110) to suggest that they may represent a similar process, but is unable to take the comparison further. The sporadic nature of this reduction means there are also several cases where the FORM-II of the derived transitive or benefactive FORM-I is not attested, although this may sometimes be attributed to phonological convergence preventing verbs from inflecting any further. The ascendancy of benefactive and causative particles in Northern Chin, as discussed by Peterson (1998:94-7) for Lai, seems to have been a major contributor in the reduction of verbal forms.

The ousting of original secondarily derived FORM-I inflections by their FORM-II counterparts in Mizo and Zahau provides clues towards the source of verbal inflections that appear not to fit the correspondences in 2.1. The FORM-II inflection in cases like Mizo deŋ^{I} ~ dɛn^{IIB} *throw (v$_{i/t}$)* appears superficially appear irregular, but its variant FORM-II den^{III} is entirely regular and shows dɛn^{IIB}, still attested in Zahau with its derived benefactive sense *throw (v$_b$)*, to have simply merged grammatically with den^{III} while

[51] There do still remain a few examples where Mizo and Zahau maintain the full paradigm as well as cases where Thado, Zo, Tedim and Sizang lose the derived FORM-I.

retaining its phonological distinctiveness. In certain cases, the transitive/benefactive FORM-II derivation has completely ousted the original FORM-II intransitive/transitive derivation from which it was originally derived. Direct evidence of the existence of original FORM-II may only be recovered from neighbouring languages, although Chhangte (1993:87) notes that variant use can occasionally distinguish Northern and Southern Mizo dialects.

2.1.6 Alternations of -k and -t

Sizang and Zo occassionally reflect *-t* instead of *-k* or *-ʔ* respectively in their derivations of $ŋ^{III}$*-s* > *-ŋʔ* > *-k* (> *-ʔ*); in most cases the two are in free-variation. The explanation lies in the dominance of Tedim, discussed in the introduction, whose shift of $-ŋ^{III}$*-s* > *-nʔ* > *-t* appears to have been adopted by Zo and Sizang in some items. Sizang makes a secondary semantic distinction between nɐŋ^{III} ~ nɐk *sluggish* and nɐŋ^{III} ~ nɐt *ill* which also occurs in ŋat^{II} ~ ŋat^{III} / ŋa^{III} *tight* (v_i) and ŋak^{II} ~ ŋak^{III} / ŋa^{III} *tighten* (v_t) in which *-t* and *-k* do not appear to be derived. Stern (1963:245) notes a similar distinction in the FORM-II of ta^{II} ~ tat^{II} / tak^{II} *scare (v)* which he treats as tat^{II} *fear* (v_i) and tak^{II} *fear* (v_t), but this is not supported in the Sizang recorded here. Occasional variation of *-t* and *-k* was noted in 2.1.2 where it was suggested to be isolated and not of reconstructional significance.

2.1.7 Alternation of -əʔ/-o^{III} and -əwʔ/-əw^{III}

Some words with the rhyme *-əw* have developed FORM-II reflexes in *-əʔ* in Mizo, Zahau and Tedim or *-o^{III}* in Thado, Zo and Sizang. The expected FORM-II reflex would be *-əw^{III}* which even if ousted by a further derived form would be reflected as *-əwʔ* in Mizo, Zahau and Tedim or retained as *-əw^{III}* in Thado, Zo and Tedim. Weidert's (1979:100) failure to acknowledge the discrepancy, and Löffler's (2002b:132-3) observation that this does not occur in the Southern Chin language Maraa, suggests that the distinction must have been a subtle one.

2.2 Nominalisation

Sporadic cases of denominal verbalisation with nouns being used as uninflected verbs in FORM-I are attested throughout the word list. More significant to a morphological study of Northern Chin are cases of nominalisation via FORM-II inflections as noted by Henderson (1976:9) and Chhangte (1993:79). The nominalising function of the *-s* suffix in Old Burmese and Old Chinese is discussed in 3.4 and 4.3 respectively and brings it into alignment with its function in Northern Chin.

2.3 Initial Aspiration

That a prefixal *s-* may have caused initial aspiration in Northern Chin transitive inflections is proposed by Wolfenden (1929a:185-6) who also makes a comparison with Burmese. As with Old Burmese, mentioned in 3.4, the process is no longer productive but a few isolated examples in Tedim and Sizang are provided by Henderson (1965:22) and Stern (1963:251) respectively and several more may be found in the word list. Although

the functions of the *s-* prefix and *-s* suffix tend to coalesce, the former only seems to represent an alternation of transitivity without attesting the full causativity paradigm associated with the latter. However, it seems unnecessary to draw a fundamental grammatical distinction here as the benefactive derivations of suffixal *-s* seem to be simply an extension of its transitive derivations under the broad notion of causativisation discussed in 2.1.5. Notably, there are a handful of cases where both prefix and suffix are attested that parallels the situation in Burmese discussed in 3.4.

2.4 Vocalic Ablaut

Noting a distinction between Mizo/Thado sɛn^{I} and Tedim sɐn^{I} *red*, Benedict (1972a:17-8) suggests that the variation results from an original medial *-j-* which has coloured the Mizo/Thado vowel. However, Benedict's Old Burmese comparison supporting the medial is rejected in 3.3.1.1,[52] and Benedict appears unaware that Thado actually reflects both sɐn^{I} and sɛn^{I}. The Thado case is reflective of a sporadic Northern Chin *ɐ/a* and *e/ɛ* ablaut evinced in several cases throughout the word list. In certain cases the variation appears to have been exploited to create a new semantic distinction or more explicitly define an already existing one: Zahau kɐk *crack* (v_i) and kɛk *crack* (v_t); Thado tɐr^{I} *hard* and tɛr^{I} *elderly*.

A less frequent ablaut also occurs with *ʊ/u* and *ɔ/o*. Excluding occassional evidence of secondary vowel rounding in a labial environment, other sporadic vocalic alternations tend to attest external influence or onomatopoeia.

[52] Benedict's (1972a:159) further comparison with Old Chinese 丹 *ṫan^{I} *cinnabar, red*, which is supported by Sagart (2006a:220), should also be rejected.

Chapter 3
Old Burmese

The validity of orthographic evidence alongside modern dialect evidence has been the subject of several debates concerning the reconstruction of Lolo-Burmese and hence Old Burmese. As noted by Beckwith (2002b:213-4), the main difficulty stems from an over-reliance on modern Written Burmese forms in the literature. While Matisoff (1969:119-20) chides Burling (1967:3) for rejecting Written Burmese as a valid source of evidence for his reconstruction of the Lolo-Burmese subgroup, Jones (1970:231) believes Matisoff goes too far in the other direction. Unfortunately, the lack of any real concordance of Inscriptional Burmese forms means that inscriptional evidence, gleaned haphazardly from sporadic citations in other academic works, tends to be unjustly conflated with Written Burmese in terms of usefulness. Benedict's (1972a:41) dismissal of the pivotal role of Inscriptional Burmese in distinguishing Tibeto-Burman medials is approvingly cited by Matisoff (1978b:30, 2003:70) which will no doubt allay some of Jones' concerns but not those of Beckwith. The unwieldiness of Inscriptional Burmese in terms of its inconsistent spellings is noted by Pe Maung Tin (1929:78), but he hastens to observe its paramount importance in elucidating the evolution of the language. Notably, Ba Shin's (1962:36-9) study of the regularities behind the alternations shows them to represent little more than orthographic variation before script standardisation from which the fundamental underlying system, as will be presented below, may be deduced.

3.1 Vocalism

3.1.1 Jones' Three Vowel i/u/a System

◌ိ	*-i*	◌ု	*-u*	–ာ	*-a*
◌ေ– / ◌ိယ်	*-ij*	◌ေါ် / ◌ုယ်	*-uj*	–ယ်	*-aj*
◌ိမ်	*-im*	◌ုမ် (◌ံ)	*-um*	–မ် (◌ံ)	*-am*
◌ိန်	*-in*	◌ုန်	*-un*	–န်	*-an*
◌ိင်	*-iŋ*	◌ောင်	*-uŋ*	–င်	*-aŋ*
◌ိပ်	*-ip*	◌ုပ်	*-up*	–ပ်	*-ap*
◌ိတ်	*-it*	◌ုတ်	*-ut*	–တ်	*-at*
◌ိက်	*-ik*	◌ောက်	*-uk*	–က်	*-ak*
		◌ို / ◌ိုဝ်	*-uw*	◌ော / –ော်	*-aw*
				–စ်	*-ac*
				–ည်	*-aɲ*

Jones' (1976:45) three vowel system provides a symmetrical account for Old Burmese but struggles with the palatal codas. Following a line of thought similar to Duroiselle (1915:99-102), Jones (1988:207) later removes –ည် *-aɲ* due to its various non-nasal pronunciations in Modern Burmese; contrary to Duroiselle, and in line with the criticisms made by Blagden (1916a:94-5), Jones supposes that it once existed but was lost very

early on. However, his treatment of the two palatal codas as –စ် *-ac* and –ည် *-aɲ* disregards Shafer's proposal (1941:22) to treat them as reflecting Old Burmese *-ik* and *-iŋ* in which the palatal feature of the vowel is assumed to have shifted to the coda.[53] If Shafer's proposal is correct, an account then has to be made for what ိုက် and ိုင်, Jones' *-ik* and *-iŋ*, represent.

3.1.2 *Gong's Three Vowel i/u/a System*

ိ	*-i*	ု	*-u*	ာ	*-a*
ိယ်	*-ij*	ုယ်	*-uj*	–ယ်	*-aj*
ိမ်	*-im*	ုမ် (ံ)	*-um*	–မ် (ံ)	*-am*
ိန်	*-in*	ုန်	*-un*	–န်	*-an*
–ည်	*-iŋ*	ောင်	*-uŋ*	–င်	*-aŋ*
ိပ်	*-ip*	ုပ်	*-up*	–ပ်	*-ap*
ိတ်	*-it*	ုတ်	*-ut*	–တ်	*-at*
–စ်	*-ik*	ောက်	*-uk*	–က်	*-ak*
		ိုဝ်	*-uw*	–ဝ်	*-aw*

Luce (1940:304, 1973:listA/B, 1985:I.100) suggests that most words with ိုက် and ိုင်, Jones' *-ik* and *-iŋ*, appear to be Mon, Shan and Pali/Sanskrit loanwords. Shorto, in Pulleyblank (1963:217), also supports Luce's proposal for an external source. Unaware of, or unwilling to accept, Luce's proposal, Benedict (1972a:76-7) proposes that the source of these rhymes was Tibeto-Burman long *-u:k* and *-u:ŋ* in contrast to the short rhymes *-uk* and *-uŋ* which gave ောက် and ောင် as in Jones' scheme. Nishi (1997:983-4) marvels at Benedict's ability to find such cognates in Tibeto-Burman when none are to be found in much more closely related Burmish languages. This conundrum is solved by Dempsey (2001:207-8) who, following Nishi's (1999b:73-4) skepticism, shows that Benedict's correspondence sets are based on faulty associations. Shafer's (1941:22) proposal, with the additional observations by Luce and Shorto, allows Gong (1980:458-61) to modify Jones' scheme by omitting ိုက် and ိုင် from consideration.

3.1.3 *Pulleyblank's Two Vowel i/a System*

A distributional issue, not raised by Jones or Gong, occurs with medial *-w-*. The fact that it may freely occur after any consonant leads Matisoff (1976b:v, 1986a:83) to treat it as part of the rhyme rather than as part of an initial consonant cluster. A difficulty with this otherwise sound proposal is that medial *-w-* is restricted in distribution to before the low vowel *a*. Noting this complementary distribution of *-u* with *-wa*, Pulleyblank (1963:214-8) reanalyses *-u* as *-wi* thereby reducing the system to a two vowel *i/a* contrast.

[53] Shafer, who makes no comment regarding the status of the orthographic form ိန် suggests that *-in* merged with *-iŋ* to give –ည် *-aɲ*; this is discussed in 3.1.4.

◌ိ	*-i*	◌ြ	*-wi*	◌ာ	*-a*	◌ွာ	*-wa*
◌ိုက်	*-ij*	◌ြုက်	*-wij*	◌ိုက်	*-aj*	◌ွိုက်	*-waj*
◌ိမ်	*-im*	◌ြမ် (◌ျ)	*-wim*	◌မ် (◌်)	*-am*	◌ွမ် (◌ွ)	*-wam*
◌ိန်	*-in*	◌ြန်	*-win*	◌န်	*-an*	◌ွန်	*-wan*
◌ည်	*-iŋ*	◌ျောင်	*-wiŋ*	◌င်	*-aŋ*	◌ွင်	*-waŋ*
◌ိပ်	*-ip*	◌ြပ်	*-wip*	◌ပ်	*-ap*	◌ွပ်	*-wap*
◌ိတ်	*-it*	◌ြတ်	*-wit*	◌တ်	*-at*	◌ွတ်	*-wat*
◌စ်	*-ik*	◌ျောက်	*-wik*	◌က်	*-ak*	◌ွက်	*-wak*
◌ိုဝ်	*-iw*			◌ော်	*-aw*		

Pulleyblank (1963:217-8) literally interprets ◌ိုဳ and ဦ, the latter composed of the individual form ဥ of ◌ြ and the tonal variant ◌ီ of ◌ိ, to support an underlying *wi*, but these are orthographic conventions of no phonological import.[54] Regardless of the symmetry afforded with *wa*, Nishi's (1999a:678) suggestion that Pulleyblank's system has little value is overly dismissive: Pulleyblank's observation of the medial ◌ွ *-w-* in the Written Burmese form ဖွ of ◌ြုက် *-wij* ဖ– / ◌ိုက်, is supported by Benedict (1972a:67) and provides a simpler diachronic account than Nishi's (1999a:678) proposed vowel-breaking of *-uj* > *-wij*; [55] Pulleyblank's treatment of Jones' and Gong's phonological distinction of *u* and *uw* as *wi* and *iw* resolves the lack of any real phonetic distinction, unless distinctive vowel length is assumed, in their systems; Pulleyblank's (1963:218) suggestion that his *i* may originally stem from *ɨ* unwittingly resolves the similar lack of phonetic distinction between Jones' and Gong's *-i* and *-ij* which may be distinguished as *-ɨ* and *-ɨj*.

3.1.4 A Two Vowel ɨ/ɐ System

–ာ	*-ɐ*	◌ြ	*-wɨ*	◌ွာ	*-wɐ*	◌ိ	*-ɨ*	◌ျာ	*-jɐ*
–ယ်	*-ɐj*	◌ြုက်	*-wɨj*	◌ွိုက်	*-wɐj*	◌ိုက်	*-ɨj*	–	
–မ်	*-ɐm*	◌ြမ်	*-wɨm*	◌ွမ်	*-wɐm*	◌ိမ်	*-ɨm*	◌ျမ်	*-jɐm*
–န်	*-ɐn*	◌ြန်	*-wɨn*	◌ွန်	*-wɐn*	(◌ိန်	*-ɨn*), –ည် *-ɐŋ*	◌ျန်	*-jɐn*
–င်	*-ɐŋ*	◌ျောင်	*-wɨŋ*	◌ွင်	*-wɐŋ*	(◌ိုင်	*-ɨŋ*), –ည် *-ɐŋ*	◌ျင်	*-jɐŋ*
–ပ်	*-ɐp*	◌ြပ်	*-wɨp*	◌ွပ်	*-wɐp*	◌ိပ်	*-ɨp*	◌ျပ်	*-jɐp*
–တ်	*-ɐt*	◌ြတ်	*-wɨt*	◌ွတ်	*-wɐt*	(◌ိတ်	*-ɨt*), –စ် *-ɐc*	◌ျတ်	*-jɐt*
–က်	*-ɐk*	◌ျောက်	*-wɨk*	◌ွက်	*-wɐk*	(◌ိုက်	*-ɨk*), –စ် *-ɐc*	◌ျက်	*-jɐk*
–ဝ်	*-ɐw*	–		–		◌ိုဝ်	*-ɨw*	◌ျဝ်	*-jɐw*

[54] See Shorto's comments in Pulleyblank (1963:218).

[55] Nishi (1999a:678) suggests *-uj* > *-wij* on the basis of a few later inscriptional cases of ◌ွုယ်, but the attestation of this form in a very early inscription, discussed by Luce (1969:I.108-9, 1973:81), suggests the *-w-* may be original rather than derived. Particularly as regards Benedict's (1972a:67) difficulty in distinguishing *-waj* from *-oj*, Nishi's (1999a:678) tentative suggestion that Benedict's *-wij* may be better treated as *-uj* is nonetheless preferable to Matisoff's (1992:170-3) treatment of ◌ုဳ as *-uj* which falls victim to the same overly literal orthographic interpretation as Pulleyblank.

Pulleyblank's system has two major drawbacks: the general lowering of Sino-Tibetan *ə* to Tibeto-Burman *a*, discussed in 5.1, renders his *ɨ/a* not directly comparable with his Old Chinese *ə/a* system, discussed in 4.1.2; there is evidence for an original medial *-j-*, discussed in 3.3.1, to parallel medial *-w-*. Positing medial *-j-* in the column headed by ◌ *-ɨ* would make the rhyme ◌ယ် *-ɨj* violate the phonotactic constraint prohibiting a parallel *-jaj*. The discussion in 5.1 shows the source of this rhyme to be *-jə* > *-ɨ* > *-ɨj* whose overlap in phonological development with *-əj* > *-ɨj* > *-ɨ* explains why Luce (1981:iii) is unable to disambiguate them in the inscriptions; the lack of any medial *-j-* in the latter case is explained by the palatal coda *-j* preventing the lowering of Sino-Tibetan *ə* to *a*.

Further confusion stems from –ည် *-ɐɲ* and –စ် *-ɐc* which are vying with ◌ိန် *-ɨn* / ◌ိင် *-ɨŋ* and ◌ိတ် *-ɨt* / ◌ိက် *-ɨk* for the same slots. Pulleyblank (1963:218) accepts Shafer's derivation of –ည် *-ɐɲ* and –စ် *-ac* from *-ik* and *-iŋ*. Bradley (1985:194) claims that –စ် *-ac* has been pronounced *-iʔ*, as its modern pronunciation would indicate, since at least 1450, but this results from a misreading of Miller (1954:383) and, as Dempsey (2001:219) observes, a prejudice towards later developments.[56] Dempsey (2001:218) uses Hla Pe's (1960:74;94) data on Pali loanwords to show that Shafer's *-ik* must have been much closer in pronunciation to –စ် *-ɐc* as its conventional transcription would indicate.[57] Tacitly rejecting his previous proposal, Pulleyblank (1977-8:191-2) attempts to bolster his proposal for Old Chinese palatal codas, discussed in 4.1.2, by conversely suggesting that the palatal codas are original. Inscriptional evidence for ◌ွစ် *-wɐc* and ◌ွည် *-wɐɲ*, not noted by Pulleyblank, is superficially supportive, but the source of the palatal codas *-ɐɲ* and *-ɐc* in Sino-Tibetan *-jəŋ/n* and *-jək/t*, discussed in 5.1, makes the source of medial *-w-*, which could not co-occur with *-j-*, curious. The sparseness of the evidence for the rhymes makes an alternative explanation likely: Luce (1981:50;60, n.d.) treats *-wɐc* as a scribal variant of ◌ြတ် *-wɨt*, which it settles as in Written Burmese; Luce's (1973:17) observation of လွ◌ြယ် klwɨj for the sole nasal form ကျွေး / လွ◌ွည် klwɐɲ² *serve* allows a similar suggestion for ◌ွည် *-wɐɲ* and ◌ြယ် -wɨj.

Gong's (1980:459) three vowel proposal does not mention Shafer's (1941:22) suggestion that *-in* merged with *-iŋ* as –ည် *-ɐɲ*. Matisoff's (1968:895) proposed shift of *-it* > –စ် *-ɐc* parallels that of *-ik* > –စ် *-ɐc* and restores symmetry to Shafer's proposal. Benedict (1972a:75-6;79-80) suggests that ◌ိန် *-ɨn* may derive from a long vowel *-iːn*; Matisoff (1972a:65, 1979:19) extends Benedict's proposal to derive ◌ိတ် *-ɨt* from *-iːt*. Noting a paucity of Lolo-Burmese comparative sets, Thurgood (1974:100-1) cautiously accepts the proposal for ◌ိတ် *-ɨt*, but suggests that ◌ိန် *-ɨn* may lie in loanwords or specially

[56] The date cited by Bradley presumably refers to an unrelated Burmese tribute that, according to Miller, was made to the Chinese court in 1451. Miller (1954:371-2) suggests the Sino-Burmese vocabulary dates from works made sometime in the 16th century but notes that the compiler was born in 1649 and the preface to the work to which it is attached is dated 1683.

[57] Hla Pe (1960:93) notes transcriptions to indicate that –ည် appears to have already lost its nasality.

conditioned cases of phonological change.[58] Although Thurgood (1977:182) later adopts Benedict's and Matisoff's proposals, his original caution regarding Benedict's and Matisoff's two main supporting cases is well-considered: Nishi (1974:37) criticises Matisoff's (1972a:65, 1979:19) comparison, originally proposed by Benedict (1972a:80), of ရိတ် rɨt *reap* with Mizo rit[I] *hoe* which suffers from internal irregularities in Northern Chin; Benedict's (1972a:79) comparison of ချိန် / ခိန် kʰɨn[1] *weigh*, reconstructed as Lolo-Burmese kjiːn[1] by Matisoff (1988a:555), with Mizo kʰin[III] *weigh* is similarly problematic.[59] Further support comes from the occupation of the *-ɨk* and *-ɨŋ* slots by externally sourced ိုက် *-ɨk* and ိုင် *-ɨŋ*.[60]

Observing that the digraph ိုၤ is restricted to the velar codas –ွ *-w*, –က် *-k*, –င် *-ŋ*, Jones (1976:45;49) logically concludes that the phonetic change undergone before velars by the sound represented by ိ caused the scribes to use a different symbol ိုၤ to represent it. This is synchronically reasonable and Nishi's (1999a:676) berating of Jones for not acknowledging Shafer's contribution is only partially warranted. The complementary distribution of ိ and ိုၤ makes it curious how much the phonological value of the latter has been debated since it was correctly identified by Blagden (1914:138).[61] The value posited here is further supported by Okell's (1995:8-9) observation that Arakanese has merged ိုၤက် *-ɨŋ* with –စ် *-ɐc* and ိုၤင် *-ɨŋ* with the secondary palatalised rhyme –ည် *-aɲ* to be discussed in 3.3.1.2.

3.2 <u>Pure Initials</u>

Following Hla Pe (1948:62, 1960:97), Old Burmese initials are distinguished purely around aspiration which Okell (1969:205-8) and Thurgood (1981:35-7) show often marks a transitivity distinction in verbs; cases of secondary developed voicing sandhi are discussed by Nishi (1998:255-9).

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[58] See the discussion of မိန်း(မ) / မိယ်(မ) mɨj²(mɐʔ) *woman* under [#128] *Person* in Chapter 6; Thurgood's proposal for a suffixal –န် *-n* in Written Burmese is rather the result of assimilation of the glide coda to the following nasal.

[59] It may be noted that the nominalised form အချိန် / အခိန် əkʰɨn[1] *weight* has merged with အချိန် / အခြိန် əkʰrɨn[1] *time* in Written Burmese which nullifies Stewart & Dunn's (1940-80:53) suggestion that *time* may be a specialised use and renders unnecessary Matisoff's (1978a:35, 2003:277) allofamic variation.

[60] Thurgood (1974:100) also notes ုန် *-wɨn* to correlate poorly in Lolo-Burmese. Burling's (1967:55) reconstruction of ွန် *-wɐn* as *-un* on the basis of Lolo-Burmese reflexes is supported by Nishida (1972:258) in spite of Nishida's (1956:30) earlier observation that Arakanese rhymes ွန် *-wɐn* with –န် *-ɐn*; Matisoff (1968:894) tentatively reconstructs a separate *-un* rhyme to account for ုန် *-wɨn*. It is possible that Sino-Tibetan *-wən* merged with *-wan* as ွန် *-wɐn* in Old Burmese rather than giving ုန် *-wɨn*, but further research is needed.

[61] The confusion stems mostly from the loss of orthographic *-w* –ွ in the Written Burmese form ိုၤ of ိုၤွ. Most recently, Yanson (2006:113-4) chides Dempsey (2002:208-11) for interpreting the combination as *ə* or *ɨ* on the basis of comparative Mon usage; see also the discussion in Lehman (2008). Whatever the provenance of the digraph, Yanson appears to be erroneously conflating Dempsey's opinion with that of Nishida (1955:22, 1972:259-60), Miller (1957:42) and Gong (1980:461) who interpret ိုၤွ as the unrounded vowel *-ɯ* regardless of the orthographic *-w* –ွ, while Dempsey treats ိုၤွ, and its reduced Written Burmese form ိုၤ as *-əw*.

က–	*k-*	ခ–	k^h-	င–	*ŋ-*	င့–	^{h}*ŋ-*
စ–	(*c-*) < *ʦ-*	ဆ–	(c^h-) < $ʦ^h$-	(ည–	*ɲ-*)	(ည့–	^{h}*ɲ-*)
တ–	*t-*	ထ–	t^h-	န–	*n-*	န့–	^{h}*n-*
ပ–	*p-*	ဖ–	p^h-	မ–	*m*	မ့–	^{h}*m-*
ယ–	*j-*	ယ့–	^{h}*j-*	ရ–	*r-*	ရ့–	^{h}*r-*
လ–	*l-*	လ့–	^{h}*l-*	ဝ–	*w-*	ဝ့–	^{h}*w-*
သ–	*s-*	(ဟ–	*h-*)	(အ–	*ʔ-*)		

Initials with slightly misleading orthography under the effects of medials *-j-* and *-w-*, discussed in 3.3.1, are enclosed in parentheses: ည– *ɲ-* < *nj-*/*ŋj-* and ည့– ^{h}*ɲ-* < ^{h}*nj-*/^{h}*ŋj-*; စ– *c-* < *ʦ(j)-* and ဆ– c^h- < $ʦ^h$*(j)-*. The laryngeals are also incuded in parentheses: the rare initial ဟ– *h-* is shown in 5.2.4 not to be from original Lolo-Burmese; initial အ– *ʔ-* appears to be a vocalic place holder with a purely orthographic function. A few late changes in the pronunciation of initials, dated by Pe Maung Tin (1922:129-30) to have begun around the end of the 18th century, had no effect on the orthography: the appropriation of the original sibilant value of သ *s-*, which was shifting to a new dental fricative articulation, by palatal စ *c-* whose aspirated partner ဆ c^h- became a typologically rare aspirated sibilant; the merger of ရ *r-* with ယ *j-*.[62]

3.3 Medials

Benedict's (1972a:37-8) tentative suggestion that the distribution of Tibeto-Burman medial *-j-* parallels medial *-w-*, in contrast with *-r-* and *-l-*, is supported in the discussion of Old Burmese rhymes in 3.1.4.

3.3.1 Medials -j- and -w-

ကျ–	*kj-*	ကွ–	*kw-*
ငြ–, ည–, ဉ–	(*ɲ-* <) *ŋj-*	ငွ–	*ŋw-*
စ–	(*c-* <) *ʦj-*	စွ–	*ʦw-*
စ–	*c-* (< *tj*)	တွ–	*tw-*
ည–	*ɲ-* (< *nj-*)	နွ–	*nw-*
ပျ–	*pj-*	ပွ–	*pw-*
မျ–	*mj-*	မွ–	*mw-*
–	–	ယွ–	*jw-*
ရျ–	*rj-*	ရွ–	*rw-*
လျ–	*lj-*	လွ–	*lw-*
သ–	*s-* < *sj-*	သွ–	*sw-*

[62] The merger of all obstruent codas to a glottal stop and the reduction of all remaining nasal codas to nasalisation of the preceding vowel most likely occurred around this time; Pe Maung Tin (1922:130) believes it to have occurred slightly later, but Yanson (2006:119) suggests the middle of the 18th century.

Following the discussion in 3.1.4, the medials *-j-* and *-w-* are only attested orthographically before ဧ. Medial *-jw-* clusters, including ညွ– *ɲw-* < *njw-/ŋjw-*, are omitted due to their secondarily derived or external origins.[63] Orthographic fluctuations of ယ္ ~ဟျ– ^{h}*j-*, from which သျ– may plausibly be excluded according to the discussion in 3.3.1.4, and ရ– ^{h}*r-*, from which ဟြ– may be excluded following Yanson's (1978, 1994:366-7) demonstration of Mon scriptural influence, make disambiguating Old Burmese ^{h}*j-* and ^{h}*r-* somewhat complex.[64]

3.3.1.1 <u>*c- < ʦ(j)-, tj-*</u>

Nishi's (1974:1, 1999a:668-9) correlation of Inscriptional Burmese *-jɐn* and *-jɐt* with Written Burmese *-ɐŋ* and *-ɐc* via a palatalizing medial *-j-* attests a second wave of palatalisation after the development of original Old Burmese *-ɐŋ* and *-ɐc* from Sino-Tibetan *-jen* and *-jet* as discussed in 5.1. Nishi (1974:26, 1997:979-80;992) notes that secondarily palatalised nasal codas may be distinguished from the original palatal nasals by their distinctive modern nasal articulation and the Written Burmese orthographic convention of distinguishing them as –ဉ် and –ည် respectively.[65] Consequently, Nishi (1974:16) is able to distinguish Old Burmese *ʦ-* and *ʦj-*, concurrent with Matisoff's (1969:157) Lolo-Burmese distinction, which have merged as စ– *c-* by the time of the inscriptions.[66] In spite of a few cases of တျ– *tj-* in Written Burmese, which Nishi (1974:19;42-3) treats as peripheral to the Old Burmese phonological system,[67] the shift of *tj- > c-* occurred prior to Old Burmese.

3.3.1.2 <u>*ɲ- < ŋj-, nj-*</u>

An account for Pe Maung Tin & Luce's (1963:97) remarks on inscriptional fluctuations between ည– *ɲ-* and င– *ŋ-* is made by Nishi's (1974:18-20) identification of confusion between *ŋj- and ɲ-* in words like ညီ / ဒီ ŋɨ^{1} *younger brother*,[68] in which medial *-j-* is

[63] The most common cluster *kjw-* may derive from *k-* prefixation on *lw-* in cases like [#159] *Stone* and [#30] *Buffalo* in Chapter 6. Several loans from Mon attesting *-jw-* are identified by Hla Pe (1967a). Binomial compounding, discussed in the notes to 3.3.2, is another possible cause.

[64] Internal evidence is sometimes forthcoming in cases like ယှဉ် ^{h}rɛn^{1} *put side by side* whose unaspirated intransitive form ရန် rɛn^{1} *side by side* supports an original rhotic and a secondary palatalised coda –ဉ်. Note also Pe Maung Tin's (1933:33) and Yanson's (2002b) discussion of ရှိ / ဟိ hɨ$^{?}$ *be, have* whose rare initial *h-* has developed via the same epenthetic medial *-j-*, discussed in 3.3.1.2, to give orthographic ရ ^{h}*r-* in Written Burmese.

[65] Bradley's (1985:194) attribution of –ဉ် mainly to loanwords is incorrect, but Hla Pe's (1960:92-3) observation of frequent interchange between –ဉ် and –န် in Pali loanwords does support a coronal origin.

[66] Matisoff's (1988b:6) comparison of ပြည့် /ပ္ပည် plɐɲ$^{?}$ *full* with ပျဉ် / ပျန် pjɛn^{1} *plank* may be rejcted on these grounds.

[67] This rejects Benedict's (1972a:17-8;52) comparisons of the old literary form နီတျာ nɨ^{1}təjɐ^{1} of နီတာ nɨ^{1}tɐ^{1} *very red*, which Bernot (1978-92:VII:56-7) shows to attest such a meaning only when preceded by နီ nɨ^{1} *red*, with Mizo sɛn^{l} *red*, as discussed further in 2.4, and တျက်တျက် tjɐktjɐk of တက်တက် tɐktɐk *completely* with Mizo tɐk *real*.

[68] Sagart's (1999b:35) comparison of Old Chinese 弟 ljə$^{?}$ *younger brother* with ညီ / ဒီ ŋɨ^{1} *younger brother* does not take into account the original velar initial in Old Burmese.

epenthetic after a velar initial before *ɨ*,[69] and ညှဉ် / ၎န် ʰŋjɐn¹ *ill-treat* in which Nishi suggests the medial *-j-* that palatalised the coda has been omitted in the inscriptional form. Similar cases like ည ~ ညဉ့် / ဂ ~ ညန့် ŋjɐnˀ *night*[70] and ညင်း / ၎င် ʰŋjɐŋ² *trumpet*, support Yanson's (1990:57-9, 2006:104-5) observation that orthographic *ŋj-* did not occur in the inscriptions; he alternatively draws an interesting link with orthographic ငြ– *ŋr-*.

In spite of Okell's (1971:23) observation of a distributional difficulty whereby *-j-*, *-r-*, and *-l-* may occur after *k-*, *p-* and *m-* while only *-r-* may occur after *ŋ-*, Bradley (1979:147) follows Benedict (1972a:38;44) to reconstruct *ŋr-*. Alternatively, Yanson (1990:57-9, 2006:104-5) suggests that the occasional Written Burmese variant ငြ– *ŋr-* of ည– *ɲ-* represents original *ŋj-* as a result of the merger of the medials *-j-* and *-r-* and the prior existence of the orthographic combination *ŋr-* in the Sanskrit/Pali loanword ငရဲ / ငြင်္ ŋrɐj² *hell*. In fact, Yanson's sporadic association of orthographic ငြ– *ŋr-* may be taken back to the inscriptional level: Nishi (1974:19) reluctantly reconstructs Old Burmese *ŋr-* on the basis of ငြိမ် ŋɨm¹ *calm*, but the medial *-r-* may be better treated as representing epenthetic *-j-*. The treatment of ိုဝ် as *-ɨw* in 3.1.4 affords a similar analysis of cases like ငြိ / ညို ŋɨw¹ *dark (in colour)* which Benedict (1972a:44) notes but is unable to explain. As with *tj-* > *c-*, the shift of *ŋj-* > *ɲ-* is assumed to have happened prior to Old Burmese. Evidence may be found in cases like ညံ့ ɲɐmˀ *inferior* whose ablaut variant နိမ့် nɨmˀ *inferior* retains the original coronal due to medial *-j-* being lost in its merger with *ə* to give *ɨ*.

3.3.1.3 rj-

Yanson's (2002a:166) rejection of Benedict's (1972a:54) suggestion that inscriptional ၏– *rj-* has unequivocally simplified to Written Burmese ရ *r-* is problematic: Hla Pe (1967a:75), supported by Peiros (1997:245), provides a Mon source for ယာ / ၏ာ rjɐ¹ *dry field* whose Written Burmese initial ယ– *j-* is noted by Nishi (1975:3, 1977:46-7) to be the sole exception; Yanson misreads Hla Pe to assume that the date cited refers to its earliest attestation in Mon when it actually refers to the time of the loan into Burmese. No inscriptional evidence has been found for *ʰrj-* which appears to have simplified to *ʰr-* prior to Old Burmese.

[69] This represents a development of Okell's (1971:8-10) resolution of Pe Maung Tin's (1933:32) conundrum as to why *k-* initialled words like ကျး / ကိယ် kij² *parrot* attest no inscriptional medial *-j-*.

[70] Benedict (1972a:100;188) appears unaware of the original initial *ŋ-* or coda *-n*, attested in cases like IB (170.46) and LK (221) respectively, in his comparison of Mizo/Zahau zan^{III}/ʒan^{III} *night* via prefixal *n-* which would not have supported the shift of –န် *-n* to –ဉ် *-ɲ* via medial *-j-* due to the merger of *nj-* with *ɲ-* prior to Old Burmese; see Luce (1981:3) and Thurgood (1981:10). Sagart's (1999b:35) comparison of Old Chinese 夜 la(k)-s *night* suffers from the same difficulties as *younger brother* discussed above.

3.3.1.4 *s- < sj-*

Original *sj-* has merged with *s-* by the time of Old Burmese. It seems only to be maintained in loanwords like ရှမ်း / သျှမ် sjɐm² *Shan*, discussed in Luce (1959b:68-9), although Nishi (1999a:675) suggests it may simply represent a variant inscriptional form သျ– of ယ္ဂ~ဟျ– ^{h}j- and ရ– ^{h}r-.

3.3.2 *Medials -l- and -r-*

◌ြ–	*kr-*	ကျ– / က္လ–	*kl-*
◌ြ–	*pr-*	◌ြ– / ◌္လ –	*pl-*
◌ြ–	*mr-*	◌ြ– / ◌္လ –	*ml-*

Disregarding orthographic ◌ြ– *ŋr-* and ◌ြ– *hr-*, discussed in 3.3.1, the medials *-l-* and *-r-* are restricted to *k-* and *p-/m-* as a result of the retention of Sino-Tibetan prefixes before liquid initials.[71] The shift of inscriptional *-l-* to Written Burmese *-j-* and *-r-* after *k-* and *p-/m-* respectively is noted by Pe Maung Tin (1933:31).[72]

3.4 *Tonality*

I	–	-¹
II	–း / (–ဟ်)	-²
III	–့ / ◌ၟ	-ʔ

The inscriptions generally, albeit inconsistently, mark TC-III as ◌ၟ *-ʔ* which is reduced to –့ in Written Burmese. The distinction between TC-I and TC-II is unmarked except in one inscription, discussed by Pe Maung Tin & Luce (1960:239-50) and Luce (1969-70:I.111-3), where TC-II is often marked with –ဟ် *-h* which appears to correspond to the later Written Burmese use of Sanskrit *visarga* –း which also represents *-h*. Egerod (1971:168-9), Haudricourt (1975:342) and Pulleyblank (1978:175) note a similarity with the glotallic *-ʔ* and breathy *-h (< -s)* phonations of Middle Chinese TC-II and TC-III, discussed in 4.3, but Weidert (1987:83) notes this to imply a flip-flop whereby Old Burmese TC-II and TC-III appear to correspond to Old Chinese TC-III and TC-II respectively.

[71] See Thurgood (1977:151-4) for a discussion of the velar prefix; see the discussion in 5.2 for prefixal *m-*, and Benedict (1972a:111) for the difficulty in distinguishing bilabial nasal and obstruent prefixes. Another source is binomial compounding in cases like မြောက် / မွောက် mlwɨk *north* which Luce (1973:85, 1978:580) and Ohno (1976:87) show to be a compound of မြစ် /မ္ဘစ် mlɐc *river* and အောက် / ဩက် ʔɨwk *under*.

[72] See Okell (1971:15-20) and Nishi (1977:44-7) for a discussion of some exceptional cases. Of particular notes is ချဉ် /ခ္ဉဉ် k^{h}lɐɲ¹ ~ ချဉ် k^{h}jɐn¹ *sour*, as evinced in cases like IB (164.17) and WK (2.4a), whose secondary palatal coda yet concomitant evidence for an original medial *-l-* resolves Matisoff's (1988a:459) query as to why his Lolo-Burmese reconstruction ʔ-kjiŋ¹ does not compare with his Lahu data that suggests ʔ-kjan¹.

Pe Maung Tin & Luce's (1960:243) and Sawada's (2003:330) observation that –ဟ် *-h* is generally only used to mark TC-II in conjunction with short vowel symbols, which are usually reserved for glottalic TC-III in open syllables, is reminiscent of Shorto's (1976:1060) comment that the vowel length distinction in Mon inscriptions was neutralised before *-h* and *-ʔ*. In spite of his comcomitant suggestion that it could have represented breathiness, Sawada's (2003:339;346) suggestion that –ဟ် *-h* may not have represented a separate tonal category tends toward the fact that the transcription of short vowels with –ဟ် *-h* was simply a borrowed transcriptional convention from Mon, to parallel short vowels with glottal ◌ၟ *-ʔ*, that was devoid of phonological significance. Unlike the development of ◌ၟ to –့, the orthographic form of –ဟ် *-h* is unrelated to –း and, regardless of Bradley's (1982:122) discussion of whether its usage represents a later breathy phonation, an original breathy phonation cannot be transferred back to Old Burmese as Lehman (1992a:236;240) and Nishi (1997:993) attempt. With Old Burmese evidence not precluding the derivation of TC-II from Sino-Tibetan *-ʔ* in 5.3, an account still needs to be made for TC-III: Pulleyblank's (1986b:78-80) response to Sagart's (1986:90, 1988:84) evidence for creaky phonation in some Chinese languages suggests a development of *-s* > *-h* > *-ʔ*, as espoused by Sagart (1999b:132-3), which concurs with the Burmese development. Matisoff's (1999:11;18) observation that the preponderance of Old Chinese words in TC-I contrasts with a roughly equal frequency in Lolo-Burmese TC-I and TC-II is addressed in 5.1.2.2 where Matisoff's (1982:45) suggestion that words with Tibeto-Burman final *-s* may have merged with Lolo-Burmese TC-II is discussed.

Alternatively, Thurgood (1977:166-8, 1981), developing Matisoff's (1972a:16-22) proposals for a Lolo-Burmese glottalising *s-* prefix,[73] suggests that Burmese TC-III may have developed from a prefixal *s-*. Matisoff (1982:45) and Benedict (1983:16) are supportive, but Jones (1986:136) prefers the conservative assumption that it derived from a glottal suffix which may now be treated as derived from *-s*. Weidert (1987:156) crticises Thurgood's (1977:168, 1981:49) proposal that this must have occurred independently from aspiration via prefixal *s-* which is the usual Burmese reflex for glottalised initials elsewhere in Lolo-Burmese. Benedict's (1983:15-16) associated attempt to distinguish between root clusters beginning with *s-* that gave aspiration and root initials with *s-* prefixes that gave TC-III is unable to account for Burmese verbal forms with both aspiration and TC-III. In fact, Thurgood (1981:43;49-50;56) only proposes *s-* prefixation for certain TC-III verbs with TC-I provenances and notes that a separate account, which he accepts could theoretically derive from *-s*, is required elsewhere; evidence for TC-II verbs with TC-III counterparts are equally mitigating. Nevertheless, Thurgood's association of causation with Old Burmese TC-III and initial aspiration nicely parallels Sun's (1999:194-5) association of prefixal *s-* and suffixal *-s* with causation in Tibeto-Burman. While its prefixal and suffixal functions tend to coalesce, the discussion of Northern Chin in 2.1.5 shows the former solely to affect transitivity while the latter more broadly to affect valency in what Henderson (1965:83) terms cauativity paradigms. Thurgood's (1981:67-9) further association of verbal

[73] Thurgood (1977:162-8) merges Matisoff's *s-* and *ʔ-* prefixes, which Matisoff (1972a:25) maintains as distinct only before nasal initials, on the basis that it pertains to a few peculiarities at the Loloish level that do not stem from Lolo-Burmese.

nominalisation with TC-III compares well with the discussions of Northern Chin and Old Chinese in 2.2 and 4.3 and respectively.

Chapter 4
Old Chinese

4.1 Vocalism

4.1.1 Li's Four Vowel i/u/ə/a System

	Yin	Yang	Ru
I		侵 *-əm, -iəm*	緝 *-əp, -iəp*
II		談 *-am, -iam*	盍 *-ap, -iap*
III	微 *-əd, -iəd*	文 *-ən, -iən*	術 *-ət, -iət*
IV	歌 *-ar, -uar, -iar*	元 *-an, -uan, -ian*	月 *-at, -uat, -iat*
V	脂 *-id*	真 *-in*	質 *-it*
VI	支 *-ig*	耕 *-iŋ*	錫 *-ik*
VII	之 *-əg, -iəg*	蒸 *-əŋ, -iəŋ*	職 *-ək, -iək*
VIII	魚 *-ag-, iag*	陽 *-aŋ, -iaŋ*	鐸 *-ak, -iak*
IX	幽 *-əgw, -iəgw*	冬 *-əŋw*	毒 *-əkw-, iəkw*
X	侯 *-ug*	東 *-uŋ*	屋 *-uk*
XI	宵 *-agw, -iagw*		藥 *-akw, -iakw*

Li's (1974) four vowel system is premised upon the existence of three diphthongs *iə, ia* and *ua*. While the roundness of *ua* explains its lack before bilabial codas and velar codas which would presumably have merged with the labiovelar series, its lack of a counterpart *uə* before coronals is curious. Li (1974:260;264) suggests *uə* results from a phonological shift of *ə* between a coronal initial and coda but can find no such conditioning environment for *a* which forces him to reconstruct *ua* as a temporary measure. Li (1974:264) follows Pulleyblank (1963:208-9) by rejecting Yakhontov's (1970) proposal, later adopted by Baxter (1992:236-40) below, that *ua* may represent vowel breaking of a rounded vowel *o* in a similar manner to *u* for *uə*. Li's pure vowels also suffer from distibutional difficulties with *i* only occuring before dentals or velars and *u* only before velars. Li (1974:250;261) accounts for the distributional difficulty between *-d* and *-r* by assuming that *-ər* developed as *-ar* into Middle Chinese while a possible *-ad* would have been very close to *-ar* in any case. Li's proposals for *-ər* are actually hitting on a more fundamental *ə/a* ablaut to be discussed below.

4.1.2 Pulleyblank's Two Vowel ə/a System

Developing ideas in Pulleyblank (1963:207-14), Pulleyblank (1977-8) reconstructs a series of palatal *-j/-c/-ɲ*, labiovelar *-w/-k^{w}/-ŋ^{w}*, and uvular *-ʁ/-q* codas to reduce Li's unbalanced four vowel system to a balanced two vowel *ə/a* system which is bolstered by solid evidence for a low *a* vowel in rows VI and X.

	Yin	Yang	Ru
I		侵 *-əm*	緝 *-əp*
II		談 *-am*	盍 *-ap*
III	微 *-əl*	文 *-ən*	術 *-ət*
IV	歌 *-al*	元 *-an*	月 *-at*
V	脂 *-əj*	真 *-əɲ*	質 *-əc*
VI	支 *-aj*	耕 *-aɲ*	錫 *-ac*
VII	之 *-əɣ*	蒸 *-əŋ*	職 *-ək*
VIII	魚 *-aɣ*	陽 *-aŋ*	鐸 *-ak*
IX	幽 *-əw*	冬 *-əŋ^{w}*	毒 *-ək^{w}*
X	侯 *-aw*	東 *-aŋ^{w}*	屋 *-ak^{w}*
XI	霄 *-aʁ*		藥 *-aq*

Pulleyblank's convincing reductionism is mitigated by his handling of Li's diphthongs: Pulleyblank (1977-8:200-2) accounts for Li's *ua* via an original *-w* coda that metatheisized with the *-a-* vowel via the addition of dental suffixes *-l, -n* and *-t*; Pulleyblank (1977-8:184) accounts for Li's *iə* and *ia* via palatal features originally associated with initials. It seems unlikely that either proposal could account for all the relevant reflexes. Pulleyblank's (1962:216-221, 1973b:371) replacement of Li's voiced obstruents with glides follows a proposal by Haudricourt (1954b:364) to account for contacts between *Ru* and *Yin* rhymes as a result of suffixal *-s* on final obstruents.[74] Pulleyblank (1977-8:185-6) follows Schuessler (1974a) in reconstructing final *-l* which he assumes to have merged with *-j* very early on.

4.1.3 Baxter's Six Vowel i/u/e/o/ə/a System

The precursor to Bodman's (1980) and Baxter's (1980) six vowel system was essentially that of Pulleyblank (1962:141-2). In spite of Pulleyblank's (1963:207-8) later abandonment of the proposal, Bodman (1980:47) and Baxter (1980:8-9) correlate their vowel-breaking with Li's system accordingly: *e* > *ia*; *o* > *ua*; *i* > *iə*. The occasional correlation of Bodman's *i* with Li's *ə* is explained by Baxter's (1992:251-5) modification of Baxter (1980:9-10) to note that Li's *iə* between coronals may be treated as *ə* due to Li's *ə* being restricted to velar initials before coronal codas such that Li's *ə* between coronals, which Li believed to develop into *uə*, may be treated as original *u*. The difficulty with Bodman's and Baxter's proposal is that many new rhyme categories need to be established in order to obtain an equal distribution of vowels before codas. Rather than viewing these older rhymes as unattested in the *Shijing* dialect, Baxter (1992:235-90;367-564) proposes statistical evidence to suggest several new rhyming categories in the *Shijing* that are unrecognized in Li's and Pulleyblank's systems where the main vowel in each row remains constant.

[74] Pulleyblank (1977-8:186-7) vacillates over the status of -ɣ which he suggests to have very little frication; Pulleyblank (1995c:297-8) modifies it to *-ɰ* and treats it as a case of epenthesis used to make open syllables well-formed.

	Yin	Yang	Ru
I		侵 *-əm, -um, -im*	緝 *-əp, -up, -ip*
II		談 *-am, -om, -em*	盍 *-ap, -op, -ep*
III	微 *-əj, -uj*	文 *-ən, -un*	術 *-ət, -ut*
IV	歌 *-aj, oj*	元 *-an, -on, -en*	月 *-at, -ot, -et*
V	脂 *-ij*	真 *-in, (-iŋ)*	質 *-it, (-ik)*
VI	支 *-e*	耕 *-eŋ*	錫 *-ek*
VII	之 *-ə*	蒸 *-əŋ*	職 *-ək*
VIII	魚 *-a*	陽 *-aŋ*	鐸 *-ak*
IX	幽 *-u, -iw*	冬 *-uŋ*	毒 *-uk, -iwk*
X	侯 *-o*	東 *-oŋ*	屋 *-ok*
XI	宵 *-aw, -ew*		藥 *-awk, -ewk*

Baxter's (1992:294;414) treatment of Pulleyblank's *-l* as *-j* struggles to account for occasional rhyming contacts with *-n*. Schuessler's (1974a:83) hypothesis that an original *-r* may have merged with *-l* is developed in Starostin's (1989:338-41) suggestion, adopted by Baxter (1995), that *-r* merged with *-n* and *-j* dialectally. However, Baxter's (2005:4-21) and Baxter & Sagart's (2008:25-7;48-51) treatment of the *-j* reflex as a restricted dialect feature that was occasionally preserved mitigates its usefulness as a complete account for *Shijing* rhyme correspondences which Pulleyblank's *-l* better serves. Baxter's (1992:257) broadening of the more restricted proposals in Pulleyblank (1991a:66) to suggest a complete merger of *-iŋ/k* with *-in/t* is well-founded, but difficulties with his further association of *-iŋ/k* with *-eŋ/k* will be discussed in 4.2 below. Baxter's (1992:563) tentative suggestion that *-i* may have merged with *-ij* is unnecessary according to the discussion in 3.1.3; an explanation for the distributional lack of *-ej* will be found below.

4.1.4 A Two Vowel ə/a System[75]

	Yin	Yang	Ru
I		侵 *-əm, -jəm*	緝 *-əp, -jəp*
II		談 *-am, -jam*	盍 *-ap, -jap*
III	微 *-əj, -wəj*	文 *-ən, -wən*	術 *-ət, -wət*
IV	歌 *-aj, -waj*	元 *-an, -wan, -jan*	月 *-at, -wat, -jat*
V	脂 *-jə*	真 *-əɲ (< -jən/ŋ)*	質 *-əc (< -jət/k)*
VI	支 *-ja*	耕 *-jaŋ*	錫 *-jak*
VII	之 *-ə*	蒸 *-əŋ*	職 *-ək (~ -əq)*
VIII	魚 *-a*	陽 *-aŋ*	鐸 *-ak*
IX	幽 *-əw (~ -wə), -jəw*	冬 *-wəŋ*	毒 *-wək, -jəq*
X	侯 *-wa*	東 *-waŋ*	屋 *-wak*
XI	宵 *-aw, -jaw*		藥 *-aq, -jaq*

[75] This is originally presented in Button (2010:7) without detailed discussion.

Pulleyblank's (1977-8:188, 1979:29) suggestion that the coda of *-aɲ* and *-ac* were retracted to velar articulations *-jŋ* and *-jk* in Middle Chinese is unlikely. Pulleyblank's (1991a:47) reinterpretation of Old Chinese *-ɲ* and *-c* as *-ŋ^{j}* and *-k^{j}* is phonologically more plausible in terms of Middle Chinese, but his concomitant reanalysis of *-q* as *-k^{w}*, with his original labiovelars being reinterpreted as labiopalatovelars, results in an unlikely proliferation of velar codas. Nonetheless, Pulleyblank's recognition of the ability of velar codas to maintain palatal and labial articulations is crucial in elucidating the separation of the rhyme categories. A reanalysis of Pulleyblank's *-aɲ/c* as *-jaŋ/k*, to contrast with *-əɲ/c* from an original *-jəŋ/k* prior to the *Shijing*, allows a reanalysis of *-aŋ^{w}/k^{w}* and *-əŋ^{w}/k^{w}* as *-waŋ/k* and *-wəŋ/k*. Their Middle Chinese reflexes with *-wŋ/k* similarly support the reassignation of the glide to the coda as in the case of *-jŋ/k* above. Applying the same logic to the other codas, but disregarding *-jən/t* which has merged with *-jəŋ/k* as *-əɲ/c*, accounts for all the variations noted by Li and Baxter. The inability of these codas to support the glides is manifested by their Middle Chinese reflexes, where combinations like *-jm* and *-wn* are unattested, and accounts for the convergence of rhyming categories regardless of the medial. The medials *-j-* and *-w-* are not assumed to be distinctive in the *Shijing* before codas with palatal and labial features respectively; the latter includes bilabials, contra Baxter (1992:356), and uvulars to be discussed below.

Pulleyblank reconstructs *-aʁ* for *-aw* to correspond with *-aq* in its *Ru* counterpart. Pulleyblank's (1977-8:197-200) uvular series accounts better for the lack of a typologically unusual uvular nasal *Yang* rhyme than Li's and Baxter's labiovelar series that would suggest *-ŋw* or *-wŋ* in their respective transcriptions. Unlike *-aq* whose Middle Chinese reflexes vary in labiality such that Li and Baxter must posit sporadic delabialisation,[76] the reflexes of *-aʁ* are always rounded such that Pulleyblank suggests a shift of *-aʁ* > *-aβ* > *-aw*. Treating this as original *-aw* simplifies the reconstruction and, in terms of the merger of *Ru* with *Yin* as a result of suffixal *-s*, a shift of *-q-s* to *-w*, possibly via *-ʁ* > *-β*, parallels the shift of *-t-s* to *-j*. The merger of the lost row XII with row IX suggests a possible account for why the Early Middle Chinese reflex *-ɛjk* of *-jəq*, representing *-iəkw* and *-iwk* in Li's and Baxter's respective systems, is unrounded. The merger of *-əq* with *-ək* is addressed in 5.1.2.3, while the necessity to distinguish Sino-Tibetan *-wə* from its merger with *-əw* in Old Chinese is made apparent in 5.1.1.

Although Baxter's *-j* coda is adopted for Pulleyblank's *-l*, this represents a lack of distinction between *-l* and *-j* in the *Shijing* that eventually settled as *-j*, rather than an unequivocal *-j* coda which had completely merged with an obsolete *-l* as Baxter (1994b:156) concedes may have happened. Following Pulleyblank (1993a:362-3), and the discussion in 5.1.2.1, Sino-Tibetan *-r* is assumed to have shifted to *-n* or dialectally to *-l* > *-j*.

[76] An association of labialisation with back articulations may be found in the Cockney English change of velarised/pharyngealised *-ɬ* into *-w*.

4.2 The ə/a Ablaut

Although the statistical evidence marshalled by Baxter (1992) in support of *i, u, e, o* is strong, the two vowel system above accounts for all of Baxter's considerations while heeding Pulleyblank's (1993a:371) suggestion that exceptional cases result from them ulitmately being allophones of what are treated here as underlying *jə, wə, ja*, *wa*. Furthermore, by taking its structural premise from Pulleyblank (1963, 1977-8), this system feeds cleanly into Pulleyblank's (1984a, 1991b) meticulous reconstruction of Middle Chinese to form a complete system; Baxter's (1992:27-32) Middle Chinese notation, in which *o* is allowed to stand for an unrounded vowel, provides no such testing ground for Old Chinese.

Morphological evidence for a vocalic ablaut between *ə/a* neatly accounts for haphazard alternations in Baxter's system. In addition to the brief observations in Baxter (1992:348), Li's (1974:274) sporadic merger of *-in/t* and *-iŋ/k* corresponds with Baxter's (1992:257) *-in/t* and *-eŋ/k* which leads to a conflict with Baxter's complete merger of *-in/t* with *-iŋ/k*. The latter is represented as *-jən/t* and *-jəŋ/k* here while the former as *-jəŋ/k* and *-jaŋ/k* in support of Pulleyblank's (1982a) proposed *ə/a* ablaut. As Pulleyblank (1963:220-1, 1965a:238-9, 1989:8-14, 1994b:163, 2000:33-5) endeavours to show elsewhere, this ablaut extends across the lexicon. While the original morphological function, for which Pulleyblank proposes an extrovert/introvert distinction, requires further research, the phonological implication is apparent. Pulleyblank's (1965a) further speculation that the ablaut may pertain to Sino-Tibetan as a whole is, albeit on somewhat different grounds,[77] upheld in 5.1.

4.3 Tonality

I	—
II	*-ʔ*
III	*-s*

The Old Chinese system with TC-I and TC-II as basic and TC-III as derived,[78] corresponds to the Northern Chin and Old Burmese evidence discussed in 2.1.3 and 3.4 respectively.

The source of TC-II in a glottal stop is first suggested by Pulleyblank (1962:225), via analogy with Haudricourt's (1954a:80-1) proposal for Vietnamese, and developed in detail by Mei (1970:88-97). The idea that TC-II may sometimes have been suffixal in origin like *-s* for TC-III is discussed in Sagart (1999b:133-4). The origin of TC-III in suffixal *-s* is proposed by Haudricourt (1954a:70-78, 1954b:346). Downer (1959) distinguishes several categories for TC-III as a derivational suffix in Classical Chinese, but his inability to isolate a specific grammatical function leads him to propose that any

[77] Pulleyblank's proposal that Tibetan verbal alternations represent this primitive ablaut is rejected by Róna-Tas (1985:178-179).
[78] The late development of the Mandarin Chinese TC-IB category from different manner features of initials is discussed in Pulleyblank (1978:192).

regularity may be fortuitous with derived forms essentially being created on a need-by-need basis. Mei (1980:434-9) reduces Downer's categories to three predominant ones in which he suggests the last may be attributed to later analogical developments: verbs to nouns; endoactive verbs to exoactive verbs; nouns to verbs.

Schuessler (1985), on the basis of pre-classical evidence from Early Zhou Chinese, questions Mei's separation of Old Chinese into distinct layers to suggest that Downer's categories obscure an underlying unilateral inversion of attention flow. The desirability of Schuessler's proposal is that it attributes a single function to the *-s* suffix believed to have triggered the derivations; the difficulty lies in Schuessler's (1985:354) counterintuitive treatment of *-s* as an intransitiviser which somehow triggers causativsation. The main obstacle to conciliation with Mei's proposals, is Schuessler's identification of verbal derivations from nouns in Early-Zhou Chinese that runs counter to Mei's proposal for analogical development post Classical Chinese.

The force of Schuessler's argumentation is strong enough that Mei (1989:47-8) is persuaded. Yet, whatever the significance of analogy in TC-III derivations may have been, several examples in Northern Chin, like Tedim pol^{I} *group* only retaining its FORM-II derivation pol^{III} for the verb *associate* such that it superficially appears to derive from the noun, show that the perceived association between a noun and a derived verb may rather reflect the loss of an original underived verb rather than any direct correlation between the two. This then allows TC-III as a nominaliser and transitiviser/causativiser of verbs in Old Chinese to correspond with its similar functions in Northern Chin and Old Burmese.

4.4 The TYPE-A and TYPE-B Syllable Distinction

Following Pulleyblank's (1977-8:183) terminiology, Old Chinese syllables are bifurcated into TYPE-A and TYPE-B. Following Pulleyblank's (1962:98-100) tentative suggestion of long vowels as the source of TYPE-B, Pulleyblank (1973a:118-20, 1994a:91-3, 2001:27;32) suggests a prosodic accent which he associates with syllabic weight in Sizang Chin, as discussed in 1.1. Conversely, Starostin (1989:328-9;516-7) suggests there to be a significant correlation between short surface vowel length in Mizo and TYPE-B.

As essentially the inverse of each other, it is unlikely that either Pulleyblank's or Starostin's proposal is valid: Pulleyblank's (2001:34) discussion of the phonological difficulties with Starostin's proposal may be extended to include the observation in 1.1 that Northern Chin vowel length is a surface phenomenon in any case; Pulleyblank's proposal disregards Weidert's (1975:4-8) observation, discussed in 1.3.2, of a concomitant realisation of TC-IIB with surface vowel length before obstruent codas in Mizo which would then violate Norman's (1994:402-3) observation that TYPE-B syllables are unmarked in Old Chinese. Although Sagart (2006a:213) remains cautiously optimistic about Starostin's proposal, Matisoff's (2007:440) rejection of any correlation concurs with comparative evidence in chapters 5 and 6. Notably, Sagart & Baxter (2009:224-6) prefer to adopt Norman's (1994) proposal, rejected by Pulleyblank (1996), that initial pharyngealisation blocked palatalisation in TYPE-A syllables. In the reconstructions here,

the diacritic ˙ is posited before TYPE-A syllables with no phonological implication intended.

4.5 Initials

4.5.1 Pure Initials

k-	*k^{h}-*	*g-*	*ŋ-*	*^{h}ŋ-*
k^{w}-	*k^{wh}-*	*g^{w}-*	*ŋ^{w}-*	*^{h}ŋ^{w}-*
ʦ-	*ʦ^{h}-*	*ʣ-*		
t-	*t^{h}-*	*d-*	*n-*	*^{h}n-*
p-	*p^{h}-*	*b-*	*m-*	*^{h}m-*
r-	*^{h}r-*			
l-	*^{h}l-*			
w-	*^{h}w-*			
s-				
ʔ-				

The system adopted here essentially follows that of Sagart (1999b:25-42) and Baxter & Sagart (2008) without their uvular hypothesis.[79] Sagart & Baxter's (2009) detailed proposal for uvulars tacitly expounds upon ideas briefly espoused, and later abandoned, by Pulleyblank (1977-8:198-9, 1982b). The unlikelihood of original uvular initials in Sino-Tibetan is discussed in 5.2.4.

4.5.2 Prefixation

Although Pulleyblank's (1973a:114-6) proposal for an intransitivising voicing prefix is well-founded, his phonological treatment of this prefix is criticised by Beckwith (1996) and Sagart (1999b:77). Sagart's (1999b:77, 2003, 2006b) proposal for prenasalisation, speculatively from an original *m-*, is better supported: Sagart (2006b:66) effectively reconciles the conundrum in Benedict (1972a:124-5) whereby Lolo-Burmese does not have intransitive voicing due to it already having prenasalised initials as reconstructed by Matisoff (1972a:14). However, an account for Sagart's (1999b:63-73) observation that prefixal *s-* generally gives distinct sibilant reflexes in Old Chinese rather than initial aspiration as in Old Burmese and Northern Chin still needs to be made. To facilitate comparisons with Old Burmese and Northern Chin, distinctive voicing is simply noted as part of the initial itself (e.g. *m-t-* and *d-* are both treated as *d-*) in the Old Chinese reconstructions presented here.

Other morphological prefixes convincingly identified by Sagart (2001, 2005b) are *k-* and *m-* with the latter being distinct from the source of intransitive prenasalisation.[80] Sagart's (1999b:124-130) differentiation of monosyllabic and iambisyllabic prefixes concurs with

[79] See the original presentation in Button (2010:7) without detailed discussion. Sagart's (1999b:28) initial *ʔ^{w}-* is treated as *ʔw-* which is functionally *ʔ-* followed by medial *-w-*, but see the discussion in 5.2.4

[80] Sagart's (1997) proposal for prefixal *t-* identifies some interesting correspondences but it remains to be seen whether they may be subsumed under such a prefix.

similar proposals for Tibeto-Burman by Matisoff (1972a:25-6), but requires further research.[81]

Pulleyblank's (1965c:205) reconstruction of medial *-r-* provides a neat account for certain Middle Chinese reflexes. Accounting for Coblin's (1986:13) and Benedict's (1987a:30-1, 1988b:18) observations of a more restricted distribution in Tibeto-Burman is problematic: Pulleyblank (1973a:118), supported by Handel (2002), suggests it may sometimes reflect an original prefixal *-r-* that has been dropped; Baxter (1994a:26) suggests an original morphological function may have proliferated via analogy and may correspond to other Tibeto-Burman phonemes as well as *-r-*.

[81] Possibly of relevance are Northern Chin forms like (k)raŋ¹ *white* and (k)rıal¹ *stripe*.

Chapter 5
Sino-Tibetan / Tibeto-Burman

The term *Tibeto-Burman* is noted by Matisoff (1991b:472) to have been applied in the 1850s to a group of related languages, including Northern Chin, with the name stemming from the value attached to the extensive, and still extant, literary traditions of Tibetan and Burmese. The term *Sino-Tibetan* appears to stem from an original coinage by Przyluski (1924) which is first used in English by Kroeber in his editorial forward to Shafer (1938); this precipitated a discussion between Maspero (1938:206) and Shafer (1940:302) concerning its validity. The term Sino-Tibetan is used here in accordance with the generally accepted notion of a genetic relationship between the Sinitic and Tibeto-Burman languages;[82] no position is adopted here regarding the various approaches towards the exact nature of this association.

5.1 Rhymes

ST	NC	OB	OC
-ə	*-a*	*-ɐ*	*-ə*
-a	*-a*	*-ɐ*	*-a*
-jə	*-i*	*-ɨj*	*-jə*
-ja	*-e, -ɪa*	*-jɐ*	*-ja*
-wə	*-ɔw*	*-wɨ*	*-əw*
-wa	*-o, -ʊa*	*-wɐ*	*-wa*
-ək	*-ɐk/-ak*	*-ɐk*	*-ək*
-ak	*-ɐk/-ak*	*-ɐk*	*-ak*
-jək	*-ɪk/-ik*	*-ɐc*	*-əc*
-jak	*-ɛk/-ek, -ɪak*	*-jɐk*	*-jak*
-wək	*-ʊk/-uk*	*-wɨk*	*-wək*
-wak	*-ɔk/-ok*	*-wɐk*	*-wak*
-əŋ	*-ɐŋ/-aŋ*	*-ɐŋ*	*-əŋ*
-aŋ	*-ɐŋ/-aŋ*	*-ɐŋ*	*-aŋ*
-jəŋ	*-ɪŋ/-iŋ*	*-ɐɲ*	*-əɲ*
-jaŋ	*-ɛŋ/-eŋ, -ɪaŋ*	*-jɐŋ*	*-jaŋ*
-wəŋ	*-ʊŋ/-uŋ*	*-wɨŋ*	*-wəŋ*
-waŋ	*-ɔŋ/-oŋ*	*-wɐŋ*	*-waŋ*
-ət	*-ɐt/-at*	*-ɐt*	*-ət*
-at	*-ɐt/-at*	*-ɐt*	*-at*
-jət	*-ɪt/-it*	*-ɐc*	*-əc*
-jat	*-ɛt/et, -ɪat*	*-jɐt*	*-jat*

[82] See Miller (1988) and Beckwith (2002a) for dissenting views.

-wət	*-ʊt/-ut*	*-wɨt*	*-wət*
-wat	*-ɔt/-ot, -ʊat*	*-wɐt*	*-wat*
-ən	*-ɐn/-an*	*-ɐn*	*-ən*
-an	*-ɐn/-an*	*-ɐn*	*-an*
-jən	*-ɪn/-in*	*-ɐɲ*	*-əɲ*
-jan	*-ɛn/en, -ɪan*	*-jɐn*	*-jan*
-wən	*-ʊn/-un*	*-wɨn*	*-wən*
-wan	*-ɔn/on, -ʊan*	*-wɐn*	*-wan*
-əp	*-ɐp/-ap*	*-ɐp*	*-əp*
-ap	*-ɐp/-ap*	*-ɐp*	*-ap*
-jəp	*-ɪp/-ip*	*-ɨp*	*-jəp*
-jap	*-ɛp/-ep, -ɪap*	*-jɐp*	*-jap*
-wəp	*-ʊp/-up*	*-wɨp*	*-əp*
-wap	*-ɔp/-op, -ʊap*	*-wɐp*	*-ap*
-əm	*-ɐm/-am*	*-ɐm*	*-əm*
-am	*-ɐm/-am*	*-ɐm*	*-am*
-jəm	*-ɪm/-im*	*-ɨm*	*-jəm*
-jam	*-ɛm/-em, -ɪam*	*-jɐm*	*-jam*
-wəm	*-ʊm/-um*	*-wɨm*	*-əm*
-wam	*-ɔm/-om, -ʊam*	*-wɐm*	*-am*
-əj	*-ɛj*	*-ɨ*	*-əj*
-aj	*-ɐj/-aj*	*-ɐj*	*-aj*
-wəj	*-ʊj/-uj*	*-wɨj*	*-wəj*
-waj	*-ɔj/-oj, -ʊaj*	*-wɐj*	*-waj*
-əl	*-ɐl/-al*	*-ɐj*	*-əj*
-al	*-ɐl/-al*	*-ɐj*	*-aj*
-jəl	*-ɪl/il*	*-ɨj*	*-əj*
-jal	*-ɛl/-el, -ɪal*	*-ɐj*	*-aj*
-wəl	*-ʊl/-ul*	*-wɨj*	*-wəj*
-wal	*-ɔl/-ol, -ʊal*	*-wɐj*	*-waj*
-ər	*-ɐr/-ar*	*-ɐ*	*-ən*
-ar	*-ɐr/-ar*	*-ɐ*	*-an*
-jər	*-ɪr/-ir*	*-ɨ*	*-əɲ*
-jar	*-ɛr/-er, -ɪar*	*-jɐ*	*-jan*
-wər	*-ʊr/-ur*	*-wɨ*	*-wən*
-war	*-ɔr/-or, -ʊar*	*-wɐ*	*-wan*
-əw	*-u*	*-ɨw*	*-əw*
-aw	*-aw*	*-ɐw*	*-aw*

-jəw	*-iw*	*-ɨw*	*-əw*
-jaw	*-ew*	*-jɐw*	*-jaw*
-əs	*-ɐs/-as*	*-ɐˀ*	*-əs*
-as	*-ɐs/-as*	*-ɐˀ*	*-as*
-jəs	*-ɪs/-is*	*-ɨˀ*	*-jəs*
-jas	*-ɛs/-es*	*-jɐˀ*	*-jas*
-wəs	*-ʊs/-us*	*-wɨˀ*	*-wəs*
-was	*-ɔs/-os*	*-wɐˀ*	*-was*
-əq	*-ɐk/-ak*	*-ɐk*	*-ək*
-aq	*-ɐk/-ak*	*-ɐk*	*-aq*
-jəq	*-ɪk/-ik*	*-ɐc*	*-jəq*
-jaq	*-ɛk/-ek, -ɪak*	*-jɐk*	*-jaq*

5.1.1 *Open Rhymes & Glide Codas*

5.1.1.1 *Shafer's 'Graded' i/u/e/o/ə/a System*

i u ~ ui
e ~ ei o
ai au
ə
a

Shafer's (1940, 1941, 1966-7:57-73) vowel system is tentatively premised on vowel gradation between *i ~ e/ei ~ai* and *u/ui ~ o ~ au* in which diphthongs are limited to open syllables. Shafer's (1940:332) speculative hankering for an original *i/u/a* system, in which Sino-Tibetan *ə* has lowered to Tibeto-Burman *a*,[83] appears further influenced by the restricted occurrence of medial *-w-* before *-i* and *-a*, with phonotactic constraints preventing a parallel case before *-u*.

Nishida (1968:17-9), Miller (1968:404-5) and Benedict (1972a:69) criticize Shafer's proposals for vowel gradation which represent an all-encompassing attempt to rein in unwieldly data. Furthermore, Shafer's over-reliance on Written Burmese orthographic evidence results in the curious combination *-ui* and the restriction of *-wi* to open syllables as opposed to *wa* in open and closed syllables; Shafer (1940:313) seems to attribute Written Burmese *ja* in open and closed syllables to gradation.

[83] See Shafer (1941:31) from which only the Old Chinese evidence is relevant due to Tai-Kadai being removed from Tibeto-Burman by Benedict (1942:587-91).

5.1.1.2 Benedict's 'Open' i/u/e/o/ə/a System

(i), əj (u), əw
(e), ej (o), ow
aj aw
ə
a

In spite of Benedict's (1972a:69) explicit rejection of Shafer's vowel gradation, Egerod (1973) and Miller (1974) note that Benedict's (1972a:57-9) system, replete with extra distinctions, struggles to achieve any completely convincing regularity. Excluding Benedict's diphthongs *-ew* and *-oj*, which will be discussed separately below due to their exploitation of the blurring between open and closed syllables in Benedict's counterintuitive treatment of Shafer's diphthongs as open syllables closed with *-j* and *-w*, the above layout of Benedict's phonemes demonstrates the pervasive influence of Shafer's system.[84] Benedict (1972a:58;65) implicitly supports his reanalysis of Shafer's diphthongs via a length distinction of *-aj* and *-aw* from *-aːj* and *-aːw* to account for a supposed merger of *-aj* and *-aw* with *-ej* and *-ow* in Northern Chin. Benedict's separate patterning of *-aj/-aw* from *-əj/-əw* and *-ej/-ow* retains the association of the latter two pairs with their pure vowel counterparts *-i/-u* and *-e/-o*, included by Benedict in parentheses due to their rarity, that Matisoff (2003:160) notes could be viewed as a typologically curious vowel length distinction in open syllables.

Ironically, Benedict's (1973b:11, 1977:2;8-9, 1988b:11) attempt to regularise his system by allowing a length distinction in all vowels closed with glides to parallel the situation before obstruent and nasal codas, removes any regularity in the system by violating the very ground upon which such syllables could be treated as open if representative of a length distinction. The phonological curiousness of *əː* aside, while Shafer's *-e/-ei* and *-u/-ui* pairs may be distinguished via closed and open syllable types, an account for Benedict's corresponding *-e/-ej* and *-u/-əw*, further augmented by his new distinctions of *-i/-əj* and *-o/-ow*, is difficult to make: Benedict's (1973b:7;13, 1977:3) suggestion that *-əj* and *-əw* had essentially replaced original *-i* and *-u* by the time of Sino-Tibetan minimises the Old Burmese distinction upon which it is based;[85] Benedict's (1972a:58-9) association of *-e* and *-o* with Northern Chin *-ɪa* and *-ʊa* concurs well with the discussion in 1.1.1 and leads Benedict (1973b:7;13) to hanker for the same original *i/u/(ə)/a* system as Shafer, but Benedict is not explicit regarding *-ej* and *-ow* whose evolution is made problematic by the lack of the Northern Chin diphthongs *-ɪaj* and *-ʊaw* as discussed in 1.1.2.3. Although a secondary evolution for Benedict's rare diphthongs *-ew* and *-oj*, not included above for simplicity, is tenable, lacking from the system are *-iw* and *-uj*: Nishi (1999a:678) tentatively suggests that the latter may be a better reconstruction for Benedict's *-wəj* which, paralleling Shafer's *-wi*, is limited to open syllables, but the

[84] Benedict's (1972a:187) discussion of Old Chinese *â*, which he follows Shafer (1941:29) to note is indistinguishable from Tibeto-Burman *a*, represents an artefact of Karglren's (1957) system that may be safely conflated with *-a*.
[85] See the discussion in 3.1. Benedict's *-u/-əw* actually merged in Old Chinese prior to the time of the *Shijing*.

phonological difficulties this poses are discussed in 3.1.3; Matisoff (1992:170-3) suggests that the latter may reflect the correlate *-wi* of *-wəj*, but Matisoff falls victim to the same overly literal interpretation of Written Burmese ◌ိုဝ်, discussed in 3.1.3, which is correctly analysed by Benedict (1972a:60;69) in his rejection of Shafer's diphthong *-ui*.

5.1.1.3 A Vertical ə/a System

jə wə
əj əw
ja wa
aj aw
ə
a

Benedict's dipthongs may be unequivocally analysed as closed rhymes with a *-j* or *-w* coda that pattern as all other closed syllables in the vertical vowel system. By treating Shafer's dipthongs with *-i* and *-u* as *-j* and *-w*, Benedict draws tantalizingly close to achieving a vertical *ə/a* system which may be achieved by some reanalysis:[86] Benedict (1972a:61-2) contrasts the pure vowels *-i/-u* with *-əj/-əw*, treated here as *-əj/-wə* and *-jə/-əw* respectively, to account for Old Burmese *-ɨ/-wɨ* as opposed to *-ɨj/ɨw*, yet Benedict's *-i* and *-u* are actually the sources of Northern Chin *-ɛj* and *-əw* thereby concomitantly removing the need for Benedict's *-ej* and *-ow*;[87] Benedict's (1972a:58-9) *-e* and *-o* may be removed due to his general identification of them with *-ia* and *-wa*, treated here as *-ja* and *-wa* respetively, and the lack of supporting evidence for the handful of cases where he retains pure vowels. It is perhaps not insiginifcant that Benedict (1972a:69-70) retains the possibility of Pulleyblank's (1965) proposals for a Sino-Tibetan *ə/a* ablaut as an account for Shafer's vowel gradation.[88] Furthermore, Matisoff (2003:159) compares Hockett's (1947:266-7) two vowel system for Mandarin Chinese that Pulleyblank (1984a:46-57, 1984b) uses to justify his proposal for a basic *ə/a* system underlying Old Chinese.

5.1.2 Other Closed Rhymes

Benedict's (1972a:76;79-80, 1977:2) distinction of *i* from *iː*, before velars and coronals, and *u* from *uː*, before *-k*, to account for Old Burmese reflexes is dismissed in 3.1.2. With Benedict's tacit implication of distinctive vowel length in open syllables and explicit proposal for distinctive vowel length before glides being rejected in 5.1.1.2, Benedict's (1973b:7-10, 1977:2;13-21) extension of distinctive length to all closed rhymes is

[86] It is notable that Benedict maintains his anomalous *-wəj* without adoping Nishi's suggestion of *-uj* as discussed in 3.1.3.
[87] Benedict's (1972a:16;91;61-2) association of his *-i* and *-u* with Mizo *-i* and *-u* is untenable: an association of နီ¹ *red* with Mizo ^{h}ni^{IIB} *gums* is semantically unlikely; the onomatopoeic association between တွီ¹ *hammer* and Mizo tu^{III}- *hammer* is bolstered by the Mizo verbal inflection tɔk *carve* being compared by Benedict (1972a:82) with တွိုက် twɨk *fillip* with which Shorto (2006:143) proposes a MK association via onomatopoeia.
[88] See the discussion in 5.4.2.

unlikely. Excluding cases of palatalisation via medial *-j-* of *-ŋ/n* and *-k/t* to *-ɲ* and *-c* respectively in Old Burmese and Old Chinese, reflexes which are divergent from their Sino-Tibetan source will be discussed below.

5.1.2.1 Liquid -r and -l

Benedict (1940:114-27) and Shafer (1944:137-41) give lengthy treatments to the codas *-r* and *-l* and their confusion with *-n* but fail to elucidate them convincingly. Erreoneous comparisons and loanwords aside, the evidence here suggests the following:[89] lateral *-l* is generally retained in Northern Chin and shifts to *-j* in Old Burmese and Old Chinese, yet Luce (1962:55;noteB) notes a dialect of Thado where it vacilates with *-j* and sporadic evidence for original *-l* in Old Chinese is noted in 4.1; rhotic *-r* is retained in Northern Chin but disappeared in Old Burmese while generally giving Old Chinese *-n* along with a dialect shift of *-r* > *-l* > *-j* as noted in 4.1.

5.1.2.2 Sibilant -s

While Old Chinese appears to pattern as Thado, Zo and Sizang in solely reflecting TC-III, the Lolo-Burmese development of TC-II and TC-III where Mizo, Zahau and Tedim have *-ʔ* and TC-III respectively resolves a couple of conundrums: Weidert's (1987:83;95-6) observation of an occasional flip-flop of Lolo-Burmese TC-II and Old Chinese TC-III; Matisoff's (1999:11;18) observation of a preponderance of Old Chinese words in TC-I in contrast with a roughly equal frequency in Lolo-Burmese TC-I and TC-II that leads Matisoff (1982:45) to suggest that words with Tibeto-Burman final *-s* may have sometimes merged with Lolo-Burmese TC-II. An occasional hardening of *-s* to *-t* in Old Burmese and Old Chinese appears restricted to numerals and loanwords.

5.1.2.3 Uvular -q

Evidence in Old Chinese, where they have mostly disappeared, suggests an original uvular coda *-q*. Following Jacques (2004:262-5), this may tentatively be extended to Sino-Tibetan. It is assumed that Sino-Tibetan *-jəq* would have given Old Burmese *-ɐc* in the same way as *-jək*, but supporting evidence is not forthcoming at present.

5.2 Initials

Benedict's (1972a:17-8;20-1) proposal for a two-way voicing distinction in Tibeto-Burman is criticized by Miller (1974:196-7;200) as inexplicit. Matisoff's (1972a:12-26) evidence for a Lolo-Burmese voicing *m-* prefix, giving Old Burmese unvoiced initials due to devoicing, and an aspirating *s-* prefix[90] supports such an assumption in one branch.

[89] Matisoff (2003:409-13) credits VanBik with associating Northern Chin *-ɪl/il* and Old Burmese *-wij*, but, even disregarding issues of labialisation, the comparisons are either semantically tenous or internally problematic in Northern Chin. Matisoff's (2003:409-13) alternative association of Northern Chin *-ɪl/il* and Old Burmese *-ɨ* follows Benedict's (1972a:37) curious semantic association of *testicle* with *earthworm*, supported by Matisoff (2004:364), but this stems from a faulty transcription of Thado -tel[III] *earthworm*.

[90] See Thurgood (1977:162-8) for a discussion of this.

Sagart's (1999b:77, 2003, 2006b) discussion of *m-* in Old Chinese, discussed in 4.5.2, compares favourably with the former, but the role of *s-* in Old Chinese, which appears to require a separate series of aspirated initials, does not compare. Hartmann's (1985, 2001) discussion of southern Chin prenasalisation and preglottalisation, discussed in 1.2.1, also bears some association but again a distinct aspirated series is required. In the correspondences, no attempt is made to identify *s-* or *m-* prefixes, although a distinct aspirated series may nonetheless be identified.

ST	*NC*	*OB*	*OC*
**k- ~ g-*	*k-*	$k^{(h)}$-	*k- ~ g-*
$*k^h$-	k^h-	k^h-	k^h-
$*^{(h)}ŋ$-	$^{(h)}ŋ$-	$^{(h)}ŋ$-	$^{(h)}ŋ$-
$*k^w$- ~ g^w-	*kʊ-*	$k^{(h)}w$-	k^w- ~ g^w-
$*k^{hw}$-	k^hʊ-	k^hw-	k^{hw}-
$*^{(h)}ŋ^w$-	$^{(h)}ŋ$ʊ-	$^{(h)}ŋw$-	$^{(h)}ŋ^w$-
**ʦ- ~ ʣ-*	*ʦ- ~ ʣ-*	$ʦ^{(h)}$-	*ʦ- ~ ʣ-*
$*ʦ^h$-	*s-*	$ʦ^h$-	$ʦ^h$-
**t- ~ d-*	*t- ~ d-*	$t^{(h)}$-	*t- ~ d-*
$*t^h$-	$ʦ^h$-	t^h-	t^h-
$*^{(h)}n$-	$^{(h)}n$-	$^{(h)}n$-	$^{(h)}n$-
**p- ~ b-*	*p- ~ b-*	$p^{(h)}$-	*p- ~ b-*
$*p^h$-	p^h-	p^h-	p^h-
$*^{(h)}m$-	$^{(h)}m$-	$^{(h)}m$-	$^{(h)}m$-
$*^{(h)}r$-	$^{(h)}r$-	$^{(h)}r$-	$^{(h)}r$-
$*^{(h)}l$-	$^{(h)}l$-	$^{(h)}l$-	$^{(h)}l$-
$*^{(h)}j$-	*j-*	$^{(h)}j$-	*ʔj-*
$*^{(h)}w$-	*w-*	$^{(h)}w$-	$^{(h)}w$-
**s-*	t^h-	*s-*	*s-*
**ʔ-*	*ʔ-*	*Ø-*	*ʔ-*

5.2.1 Affricate ʦ^h- and Coronal t^h-

Benedict (1972a:18) treats Tibeto-Burman *ʦ-* as a source of Northern Chin *s-*. However, the data here suggests that Tibeto-Burman *ʦ-* remains unchanged in Northern Chin while ʦ^h- gives Northern Chin *s-*. Benedict's (1972a:17) proposal that Tibeto-Burman t^h- is the

source of Northern Chin *ʦʰ-* is supported here.[91] When not derived from *ʦ-*, a further source of Northern Chin *ʦ-* and Old Burmese *ʦ$^{(h)}$-* is *ʧ-* which, as with *sj-* > *-s* in 5.2.2, is restricted to *a* vocalism and does not pertain to cases where diphthongs in *-ɪa-* have developed.

5.2.2 <u>*Sibilant s-*</u>

Sino-Tibetan *s-* regularly gives Northern Chin *tʰ-*. Benedict's (1972a:53) further suggestion that *sj-* gives Northern Chin *s-* should be restricted to *a* vocalism in the same environment as *ʧ-* > *ʦ-* discussed in 5.2.1.[92] VanBik (2009:186) distinguishes *sʰ-* from *s-* on the basis of Southern Chin evidence, but Luce (1962:40) treats them as allophones. A Lolo-Burmese voiced sibilant *z-*, which following Thurgood (1977:170-2) does not appear to support medial *-j-*, is reconstructed by Matisoff (1968:886) as a further source of Old Burmese *s-*; its lack of direct support in Northern Chin and Old Chinese suggests this to reflect local variation between *ʣ-* and *z-* at the Lolo-Burmese level without any further implication.

5.2.3 <u>*Glide w- and Obstruent p-*</u>

Benedict (1972a:23-4) notes a sporadic lenition of *p-* to *w-* across Sino-Tibetan for which he suggests two alternative causes: the influence of prefixes as favoured by Sagart (2006a:211-2); extrusion of *w-* from *p-* as favoured by Matisoff (2000a:175-82, 2007:438-9). Matisoff, who concomitantly rejects Matisoff's (1997b:33) proposal for an unspecified *p-* prefix on a disproportionately large number of words with initial *w-*, rejects Benedict's prefixal explanation due to insufficient evidence. However, a difficulty with an extrusional hypothesis over a prefixal one is that an account for the irregularity of the lenition process can no longer be made. Rather than seeking a precise phonological explanation, the evidence here suggests that the cause may be external.

5.2.4 <u>*Glottal ʔ-*</u>

A glottal initial *ʔ-* is noted in 1.2.6, 3.2 and 4.5 for Northern Chin, Old Burmese and Old Chinese. From a synchronic perspective, Benedict's (1972a:36) and Matisoff's (1997b:29;34) suggestion that this may represent a default onset rather than a distinct phoneme in Tibeto-Burman is not unreasonable: the distinct glottalic creak in Zahau, discussed in 1.2.6, is not necessarily of any diachronic significance; the discussion in 3.2 suggests orthographic အ *ʔ-* to be a vocalic place holder in Inscriptional/Written Burmese. However, a Sino-Tibetan system premised around two medials *-j-* and *-w-*, requires the glide initials *j-* and *w-* to be distinguished from the glottal initial and medial glide combinations *ʔj-* and *ʔw-*. Pulleyblank's (1995c:291-3) suggestion that the lack of Old Chinese initial *j-* results from it being treated as a vowel and assigned a default glottalic

[91] More specifically, Benedict suggests that *tʰ-* reflects *t-* when aspirated by default in initial position.
[92] Benedict's (1972a:46) comparison of Mizo sʊj^{IIB} *whittle* with OB ဆွး / သုယ် swɨj^{2} *whittle* appears exceptional, but its internal correspondences in Northern Chin are irregular; see [#76] *Follow* in Chapter 6.

onset to give *ʔj-* may alternatively represent a merger of *j-* and *ʔj-*,[93] but *w-* and *ʔw-* remain distinct.[94]

Benedict (1972a:33, 1988b:20) discusses another laryngeal initial *h-*, but treats it as very marginal. It is unattested in Old Chinese and its relative scarcity in Old Burmese is maintained throughout Lolo-Burmese; Matisoff (1988a:220, 1997b:38) and Thurgood (1977:188) only uncover three possible cases. Nevertheless, Matisoff (1997b, 2009) proposes several Tibeto-Burman correspondence sets with the cautionary note that the fragility of such initials may account for the lack of correspondences with broad support. Matisoff (2009:6) points to several cases of original *h-* in Northern Chin, proposed by Button (2009:240-5), but most of these now appear attributable to external influence or phonoaesthetics. Peiros & Starostin's (1996:V.iii-iv) proposal for a separate Sino-Tibetan uvular series to account for some of the alternations in daughter languages between *ʔ-, h-* and $k^{(h)}$*-/g-* is strongly repudiated by Benedict (1998:151). Sagart (2006a:212) takes up Peiros & Starostin's mantle to concur with Sagart & Baxter's (2009) proposals for Old Chinese, but this is rejected by Matisoff (2007:439, 2009:20-1) for Tibeto-Burman and is not adopted for Old Chinese in 4.5.

5.2.5 Labiovelar k^w- and $ŋ^w$-

The attestation of k^w- and $ŋ^w$- in Old Chinese suggests an original Sino-Tibetan source. Although in Old Burmese there appears to have been a merger with *kw-* and *ŋw-*, Matisoff (1978b:6-7, 1980:11, 1986, 2006:101), and Matisoff in Benedict (1979:27), reconstructs Lolo-Burmese k^w- to account for correspondences between velars and bilabials in daughter languages. The evidence here suggests that while the Old Burmese reflexes of k^w- merged with those of *kw-*, in Northern Chin k^w- remained distinct from *kw-* long enough to allow vowel lowering of *ə* to *a* in spite of the labial environment.

5.3 Tonality

	ST	*NC*	*OB*	*OC*
I	–	-¹	-¹	–
II	*-ʔ	-²	-²	-ʔ
III	*-s	-s	-ʔ	-s

5.3.1 Benedict's Two Tone System

I	LOW / FALLING
II	HIGH / RISING

[93] The tentative correlation of Old Chinese *ʔj-* with Tibeto-Burman $^{(h)}$*j-* requires confirmatory evidence.

[94] Although Pulleyblank's account of the emergence of a glottalic onset *ʔw-* is not adopted here, the co-occurrence of *w-* and *ʔw-* in *xiesheng* series does raise the possibility that there was an element of free-variation.

Benedict (1972b:27, 1973a, 1991a) proposes a Sino-Tibetan two tone system that corresponds to TC-I and TC-II here. Several irregularities in Benedict's correspondences of TC-I and TC-II lead Benedict (1972b:28-30;33) to propose that prefixal *s-* and suffixal *-n* may have caused a shift of TC-II to TC-I in Old Chinese.[95] However, Benedict notes exceptions for both cases, and Matisoff (1973:81-4, 1999:24-5) suggests the correspondences do not fully represent the situation. Sagart (2006a:212-3) speculates that Benedict's basic formulation may be correct if TC-II is assigned the same glottalic origin as in Old Chinese; Benedict (1984:65-6, 1988b:7), who is misled by the creaky phonation in Old Burmese discussed in 3.4, is reluctant to accept such a proposal but does modify his original proposal for low and high tones in TC-I and TC-II to falling and rising in an attempt to accommodate the evidence for glottality.

Benedict's treatment of TC-III in Old Chinese as a peripheral sandhi phenomenon, unrelated to Old Burmese TC-III for which Benedict (1983:16) prefers to follow Thurgood's (1977:166-8, 1981) prefixal *s-* proposals that are rejected in 3.4, is criticized by Weidert (1987:178). Benedict (1973a:128, 1991a:16) explicitly rejects the Old Chinese *-s* hypothesis on the basis of Benedict's (1972a:159;169, 1973b:4, 1979:28, 1987a:27-8) association of Tibeto-Burman root-final and suffixal *-s* with Old Chinese *-t*; see the discussion in 5.1.2.2.

5.3.2 Weidert's Four Phonation Types

I	VOICE
II	CREAK -ʔ
III	BREATH -ʰ
IV	WHISPER -ˢ

Weidert (1979, 1987) attempts to reconstruct four phontation types as the source of the Sino-Tibetan tonal system. Weidert (1987:83;95-6;115-34) identifies several significant problems: an apparent flip-flop of Lolo-Burmese TC-II and Old Chinese TC-III; discrepancies between TC-III and TC-IV which are distinguished to account for a merger of the latter with Lolo-Burmese TC-II; occasional inversions of Lolo-Burmese TC-I and TC-II. Matisoff (1982:6-17, 1994a) remains unconvinced as ultimately does Weidert (1987:491) who concludes that his system cannot be assigned to Sino-Tibetan as a whole but rather to later periods in different branches.

5.3.3 A Segmentally Derived Three Tone System

I	—
II	-ʔ
III	-*s*

[95] Benedict's proposal for suffixal *-n* is possibly influenced by Wolfenden's (1929b:64-5) ruminations on Burmese.

A distinction of TC-II from TC-I via a glottalic feature -*ʔ*, and a further derivational TC-III from suffixal -*s*, parallels the Old Chinese evidence discussed in 3.4 and 4.3. This supports Sagart's (2006a:212-3) hunch regarding Benedict's original identification of TC-I and TC-II while merging Weidert's category TC-IV with his category TC-III according to the discussion in 5.1.2.2. An account for remaining mismatches between categories TC-I and TC-II may be made accordingly: a better identification of loanwords or sporadic internal variation; an incompatability of TC-II with -*ŋ* in Old Chinese and Old Burmese as dicussed in 5.4.1; Weidert's (1987:51;166;213;337-8) discussion of particular uses of kinship terms; analogical levelling of tonal reflexes of numerals in a similar manner to their verbal inflections, mentioned at the start of Chapter 2, and Matisoff's (1997:100-2) prefixal runs.

5.4 Morphological Variation

Lexical variations among words that appear to be derived from the same root are noted by Benedict (1972a:68-9;83-5;124-7) who attributes them to unclearly defined phonological/morphological alternations. Matisoff (1978a:16-7) prefers to assume proto-variation and coins the term *allofam* to account for such words, but Peiros (1998:206-7) and Sagart (2006a:210-1) suggest such an approach to lack methodological rigour.[96] An account for many of these supposed variations can be made via recognition of external influence and removal of erroneous comparisons. Many others may be elucidated by a clearer understanding of Sino-Tibetan morphology.

5.4.1 Initials and Codas

The effects of the Sino-Tibetan prefixes *s*- and *m*- on initials, and the various reflexes of suffixal -*s* in terms of coda development are discussed in 5.1.2.2 and 5.2.

To the above may be added the role of glottalic TC-II on the velar nasal coda -*ŋ* which Weidert (1987:134) notes sometimes to cause its hardening to -*k*. Matisoff (1994a:257) is sceptical, but Weidert's proposal is borne out in Old Burmese providing that the rhyme is from original *ə*. Northern Chin generally retains the velar nasal in such an environment, although there are several cases in the word list of sporadic alternations between -*ŋ*^{II} and -*k*; Old Chinese retains the velar nasal but shifts TC-II to TC-I which helps explain the paltry evidence for Old Chinese -*əŋ*^{II}.[97]

5.4.2 Vocalism

Northern Chin surface vocalic alternations, discussed in 1.1, are unrelated to the Tibeto-Burman level where Benedict (1972a:68-9;83-5) reluctantly admits several vocalic alternations. Benedict's (1976a:178-9) attempt to remove some by extending the parameters of his original vocalic system is criticised by Matisoff (1978a:240-1) as being no better than assuming proto-variation. Better reconstructions of Tibeto-Burman and the

[96] Sagart (2006a:210-1) specifically criticises Matisoff for disregarding Benedict's (1972a:124) observation of an association in initial position of voicing with intransitivity and voicelessness with transitivity.
[97] See Sagart (1999b:61-2).

identification of loanwords account for Benedict's cases pertinent to the languages here. However, in the case of [#118] *Near* in Chapter 6, Benedict appears to be hitting on the basic *ə/a* vocalic alternation underlying Sino-Tibetan as a whole.

Pulleyblank (1963:220-1, 1965a:237-40) believes a morphological ablaut can be set up for Old Chinese that can be extended back to Sino-Tibetan as a whole. The idea of a morphological ablaut in Tibeto-Burman is first proposed by Shafer (1941:312-3) and first seriously investigated by Miller (1956:47-9) in his study of Burmese for which he suggests two systems of ablaut based on three different vowels in each.[98] Benedict (1972a:69) criticises Shafer's tentative suggestion, while Miller's proposals are strongly criticized by Nishida (1957:57-8), Benedict (1972a:69-70) and Matisoff (1975:166) who note that little attention has been paid to semantics. Benedict's (1972a:69-70) attraction to Pulleyblank's (1963:220-1, 1965a:237-40) *ə/a* ablaut is observed in 5.1.1.3, but he notes a lack of evidence. Morphologically, Pulleyblank's proposal for an extrovert/introvert distinction, discussed in an Old Chinese context in 4.2 and for which Pulleyblank (1965a:239) is unable to find Old Burmese examples, requires further work.[99] Phonologically, the reconstructions of Old Burmese, Old Chinese and Sino-Tibetan proposed in chapters 3,4 and 5 show that Pulleyblank's *ə/a* ablaut, albeit in modified form, has much to recommend it.

[98] Miller (1957:42-3) further proposes that vocalic mismatches, treated by Duroiselle (1919:15) as representing a language in transition, between early Inscriptional Burmese and Written Burmese are evidence for an original ablaut. As discussed at the start of Chapter 3, Ba Shin's (1962:36-9) identification of the regularities behind such alternations shows them to represent little more than orthographic variation before the script was standardised.

[99] Pulleyblank's (1965a:233-7) proposals for Written Tibetan are beyond the scope of this paper, but see Róna-Tas (1985:178-179).

Chapter 6
Comparative Sets

The following comparisons of Northern Chin with Old Burmese and Old Chinese are predominantly from the works of Benedict (1972a) and Matisoff (2003). However, no agreement should necessarily be assumed on their part for additional comparisons presented herein. Old Burmese and Old Chinese glosses that do not correspond neatly with their respective headwords are provided in the footnotes; all Northern Chin glosses may be found in Volume 2.

[#1] **Alive, Green *^{h}rjəŋ / *^{h}rjaŋ** [100]
NC ^{h}rɪŋ^{1}; OB ရှင် ^{h}rɐŋ^{1}; OC 生 s-rjaŋ, 青 s-^{h}rjaŋ

[#2] **Armpit** (Areal)[101]
NC jɐk; OB ဂျက်– / ချက်– k^{h}jɐk–; OC 腋/掖/亦 lak

[#3] **Ashamed** –[102]
NC j̊ɐ̆k; OB ရှက် ^{h}rak; OC 赫 ^{h}lrak

[#4] **Back *^{h}nwəŋ** [103]
NC ^{h}nʊ̄ŋ^{1}; OB နောင် ~ နှောင်း $^{(h)}$nwɨŋ$^{1/2}$, နောက် nwɨk

[#5] **Bamboo *wa^{ʔ}** [104]
NC rʊa^{1}; OB ဝါး wɐ^{2}; OC 笆 r-ba^{ʔ}

[#6] **Bamboo Rat** (Austroasiatic)[105]
NC bʊj^{1}; OB ပွး pwɨj^{2}

[#7] **Barking Deer *k^{h}jə**
NC k^{h}i^{1}; OB ချ / ခိယ် k^{h}ɨj^{1}

[#8] **Base** (Austronesian)[106]
NC bVL̄; OC 本 pwən^{ʔ}

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[100] OB *alive*. The simplification of ^{h}*rj*- to OB ^{h}*r*- accounts for Matisoff's (2008:52) allofamic variation.
[101] See Shorto (2006:128) and Schuessler (2007:252;568) for the Areal association.
[102] OC *glowing red*. Benedict (1972a:34;106;113) assigns NC and OB to separate roots; Matisoff (1972a:68, 1988a:1269) posits allofamic variation. A loan of Gong's (2000:45) OC comparison into TB is possible.
[103] See Luce (1981:86) for the OB variation between နောင် *hereafter* and နှောင် *late*; TC-II concurs well with a hardening -*ŋ* to -*k*.
[104] Weidert (1987:135-6) notes NC to be irregular when compared with Naga evidence reflecting TC-II. Schuessler (2007:152) suggests that OC may reflect a TB loan.
[105] See Luce (1959a:25, 1962:85-6), Shafer (1952:156) and Shorto (2006:398) for the AA association.
[106] See Matisoff (1976:286) for the AN association. Matisoff (2000a:179) notes internal irregularities in LB.

[#9] **Bat** (Austroasiatic)[107]
NC ᴘ-lak; OC –蝠 –pək

[#10] **Bean** (Austroasiatic)[108]
NC be²; OB ဝဲ / ပယ် pɐj²

[#11] **Bear *(n)* *wəm**
NC wɔm¹; OB ဝံ wɐm¹; OC 熊 wəm¹

[#12] **Bear *(v)* *wan** [109]
NC wɜ̈n¹; OB ဝန် wan¹

[#13] **Beautiful** (Sinitic)[110]
NC mɔj¹; OC 美 mrəj[ʔ]

[#14] **Bed** (Austroasiatic)[111]
NC kʰʊn¯; OB ခုံ kʰwɨm¹

[#15] **Bee** (Areal)[112]
NC kʰʊaj¹; OB ကွဲ / ကွယ် kwɐj²; OC 蜾– ˙kwaj[ʔ]–

[#16] **Belly** (Austroasiatic)[113]
NC pʊ̈k; OB ဝိုက် pɨk; OC 腹 pwək, 複 pʰwək

[#17] **Bend$_1$** (Austroasiatic)[114]
NC kᴠʟ¯; OB ကွး ~ ကွ့ kwɨj[²/ʔ], ကုန်း kwɨn²

[#18] **Bend$_2$, Knee** (Austronesian)[115]
NC kʰuk; OB ကောက် kwɨk; OC 鞠 kwək, 曲 kʰwak, 局 gwak

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[107] See Luce (1985:II.96) and Shorto (2006:200;564) for the AA association.
[108] See Luce (1940:284;292;297, 1959a:23, 1962:85-6;tableʙ), Hla Pe (1967a:78) and Benedict (1994:3) for the AA association.
[109] OB *load*. Matisoff's (2000a:141-2) comparison of OB ဝမ်း wam² *belly* to Mizo vɔn[III]sor[I] *have diarrhoea* is not supported.
[110] See Sagart (1995a:251, 1999b:173) for the Sinitic origin.
[111] Hla Pe's (1967a:83) treatment of OB *raised platform* as a Mon loanword may be extended to ခုံး kʰwɨm² *convex* which Benedict (1972a:78) compares with Mizo kʊm[I] *shrug, cup hand.*
[112] See Schuessler (2007:269) for the areal origin.
[113] OC *stomach; cave*. See Shorto (2006:148-9) for the AA association.
[114] See Shafer (1952:145) and Shorto (2006:121) for the AA association. See Thurgood (1981:48-9) and Nishi (1999b:98) for a discussion of the OB variation.
[115] OB/OC *bend*. See Sagart (2005a:164) for the AN link; see Wilkins (1996:284) for the semantics. Benedict (1972a:74) compares the nominalised form of the OB transitive derivative ကောက် kʰwɨk *fold* to Mizo kʰɔk *peel*, but Shorto (2006:170) notes MK influence.

[#19] **Bitter *k^{h}a^{ʔ}** [116]
NC k^{h}a^{2}; OB ခါး k^{h}ɐ^{2}; OC 苦 ˈk^{h}a^{ʔ}

[#20] **Black** (Areal)[117]
NC mvɲ^{2}; OB မင် / မှင် $^{(h)}$mɐŋ^{1}, မိုက် mik, မှိုင် ^{h}miŋ^{1}; OC 黑 ˈ^{h}mək, 墨 ˈmək

[#21] **Blood** (Sinitic)[118]
NC t^{h}i^{2}; OB သွေး / သုယ် swɨj^{2}; OC 血 ˈ^{h}məc

[#22] **Boat** (Austroasiatic)[119]
NC loŋ$^{-}$; OB လောင်း lwiŋ^{2}

[#23] **Boil *ʦ^{h}wə**
NC sɔw^{1}; OB ဆူ ʦ^{h}wɨ^{1}

[#24] **Bone$_{1}$ *rwəs** [120]
NC rʊs; OB ရိုး / ရိုဝ် rɨw^{2}

[#25] **Bone$_{2}$ *raŋ** [121]
NC raŋ^{1}; OB ခြင်– k^{h}rɐŋ^{1}–

[#26] **Break *tjat** [122]
NC ʦɛ̰t; OB ဆတ် ʦ^{h}ɐt; OC 折 tjat / djat

[#27] **Breast** (Areal)[123]
NC ^{h}nu^{-}; OB နို့ nɨw^{ʔ}; OC 乳 nwa^{ʔ}

[#28] **Bridge** (Austronesian)[124]
NC $^{(h)}$lɛj^{-}; OB လှ– ^{h}lij^{1}–; OC 梯 ˈ^{h}ləj

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[116] Miller (1974:197-8) rejects Benedict's (1972a:158;165) comparison of 肝 ˈkan *liver*.
[117] OB *ink; dark; downcast*; OC *black; ink*. See Hla Pe (1967a:82) and Luce (1973:listA) for the AA association. Benedict (1972:88;155) compares နှက် nɐk *black, deep*, but it is associated with နှက် ^{h}nɐk *cram*.
[118] See Sagart (1999a) for the Sinitic source. Sagart (1999a:178, 1999b:67) rejects Matisoff's (1978a:184, 1992:169) alternative comparison of 髓 s-^{h}lwaj^{ʔ} *marrow*.
[119] See Luce (1940:306), Shafer (1952:145) and Hla Pe (1976a:83) for the AA association.
[120] Sagart (2008b) rejects Benedict's (1972a:155) comparison of 骨 ˈk^{w}ət *bone*, which Sagart (2005a:163) links with AN, in favour of 律 ˈrwət as a counter for pitch-pipes; neither is supported here.
[121] Matisoff (1983:470-1) compares Mizo t^{lh}iŋ^{IIA} *marrow*, but OB ခြင်ဆီ k^{h}rɐŋ^{1}ʦ^{h}ɨ^{1} only attests this meaning via a literal sense of *bone fat*.
[122] OB *brittle*.
[123] See Matisoff (1976:270), Benedict (1994:1) and Schuessler (2007:446) for the areal origin.
[124] OB *stairs*; OC *ladder*. See Benedict (1967:282;311) for the AN association.

[#29] **Bud** (Austroasiatic)[125]
NC mvm̄; OB မုံ mwɨm¹

[#30] **Buffalo** (Tai-Kadai)[126]
NC loj¹; OB ကျဲ / ကြွယ် klwɐj²

[#31] **Call** (Austroasiatic)[127]
NC kv(w)¹; OB ခေါ် / ခဝ် kʰɐw¹, ကြော် krɐw¹; OC 號 ˊgaw¹

[#32] **Carry** (Austroasiatic) [128]
NC pʰʊ(l)̄; OB ဝိုး / ဝိုဝ် pɨw²; OC 負 bəʔ, 抱 ˊbəwʔ

[#33] **Cart** (Austroasiatic)[129]
NC leŋ²; OB လ့ည်း ʰlɐɲ²

[#34] **Chaff** –[130]
NC waj¹; OB ဖွဲ / ဖွယ် pʰwɐj²

[#35] **Chest *raŋ** [131]
NC kraŋ¹; OB ရင် rɐŋ¹

[#36] **Child *ʣəʔ** [132]
NC ʣa²; OB သား sɐ²; OC 子 ʦəʔ

[#37] **Circular** (Austroasiatic)[133]
NC wvl̄; OB ဝန်း wɐn²; OC 員 wən

[#38] **Clasp** (Austroasiatic)[134]
NC kɐp; OC 夾 ˊkrjap

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[125] See Shorto (2006:376-7) for the AA association.
[126] See Luce (1940:334) and Benedict (1967:301) for the TK association.
[127] See Shafer (1952:145) for the AA association; see also Shorto (2006:474).
[128] OB *carry on back*; OC *carry on back; carry in arms*. See Shafer (1952:153) and Schuessler (2007:245-6) for the AA association; see also Shorto (2006:97).
[129] See Luce (1962:tableʙ) for the AA association; Lehman (1963:38) associates [#22] *Boat* in NC. The OB inscriptional form with ʰ*r*- in WK (3.367) may evince scribal error rather than an external source.
[130] OB *husk*. The alternation between Mizo vaj^{l} *chaff* and pʰʊaj^{l} *shavings* suggests external influence. Matisoff's (2000b:365) compares OC 播 paj-s < par-s *sow* which Matisoff (2003:394;425) compares with the Mizo vɔrʔ *sow*.
[131] OB *breast, chest*. Luce (1962:85) notes problems with the initials; Matisoff (1976a:272) associates AN and TK. See [#47] *Distend.*
[132] See Matisoff (1978a:55, 1995:63) for Lahu support of an original LB variation between *ʣ*- and *z*-, corresponding to OB ʦ- and *s*-, respectively. Sagart (2006a:219) rejects Benedict's (1972a:158, 1972b:30) comparison of 親 ʦʰəŋ *parents, relatives*.
[133] OB *circular*; OC *circle*. See Shorto (1973:378-81, 2006:438-9;464-5) for the AA association.
[134] See Shafer (1952:157) and Shorto (2006:342) for the AA association.

[#39] **Congeal *k^{h}al^{ʔ}** [135]
NC k^{h}aʟ^{2}; OB ခဲ / ခယ် k^{h}ɐj^{2}

[#40] **Cover, Brood** (Austroasiatic)[136]
NC ᴋ^{h}ᴠᴍ$^{-}$; OB အုပ် ʔwɨp, ဝပ် wɐp; OC 合 ˙gwəp, 盍 ˙gwap

[#41] **Creeper *$^{(h)}$rwəj^{ʔ}**
NC $^{(h)}$rʊj^{2}; OB ငွေး / ရွယ် rwɨj^{2}; OC 臬 rwəj^{ʔ}

[#42] **Dare** –[137]
NC ɒᴀᴍ$^{-}$; OB ဝံ့ wɐm^{ʔ}; OC 敢 ˙kam^{ʔ}

[#43] **Day *rjak**
NC rɪak; OB ရက် / ရှက် rjɐk

[#44] **Die *sjə** [138]
NC t^{h}i^{1}; OB သေ / သိယ် sɨj^{1}; OC 死 sjə^{ʔ}

[#45] **Dig, Pierce *ʦwə^{ʔ}** [139]
NC ʦɔw^{2}; OB စူး ~ ဆူး ʦ$^{(h)}$wɨ^{2}

[#46] **Disperse *paj** [140]
NC paj^{-}; OB ပယ် ~ ဖယ် p$^{(h)}$ɐj^{1}; OC 披 p^{h}aj

[#47] **Distend** (Austroasiatic)[141]
NC krɐŋ$^{-}$; OB ရင့် rɐŋ^{ʔ}, ကြင့် krɐŋ^{ʔ}; OC 張 traŋ

[#48] **Dog** (Areal)[142]
NC ʔʊj^{2}; OB ခွေး / ခုယ် k^{h}wɨj^{2}; OC 犬 ˙k^{hw}əŋ^{ʔ} < ˙k^{hw}jən^{ʔ} < ˙k^{hw}jər^{ʔ}

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[135] The variation of liquid coda in NC suggests external influence.
[136] OB *cover, control; brood*; OC *join; cover*. See Shafer (1952:142), Schuessler (2007:274-5) and Matisoff (2009:16) for the AA association; see also Shorto (2006:339-40).
[137] See Schuessler (2007:250) for Vietnamese and Tai forms with initial *j-* from Maspero (1912:69).
[138] Schuessler (2007:47;478) suggests OC ᴛC-II to be derived.
[139] Luce (1981:32) conflates OB စူး *awl, pierce* and ဆူး *thorn*. Benedict (1972a:63-4) compares Thado sɔw^{1} (< sɔw^{1}) *panji*, but VanBik's (2009:160) comparison here is preferable.
[140] Okell (1969:208) suggests OB ပယ် *reject, decline* and ဖယ် *push/set aside* may reflect a lost transitivity distinction. OB ဝဲ့ pɐj^{ʔ} *break off* and OC 破 ˙p^{h}aj^{ʔ} *break, smash* are plausibly related, but Benedict's (1972a:59) comparison of Mizo pɛʔ (< p$^{(h)}$eC) *bore* is unlikely; Matisoff (2008:31-2) compares NC paj^{2} due to its common meaning of *pregnant*, but the root meaning is *carry on self* rather than *conceive*.
[141] OB *firm, mature; tense, tight*. See Schuessler (2007:605-6) for the AA association supporting Gong's (1995:74) comparison of OB တင်း tɐŋ^{2} *taut*.
[142] See Benedict (1996a) and Pulleyblank (1995a:179-80) for areal associations.

[#49] **Dove *k^{h}rəw** [143]
NC k^{h}ru^{1}; OB ခို / ခိုဝ် ~ ချိုး / ခြုဝ် k^{h}(r)ɨw$^{1/2}$; OC 鳩 k(r)əw

[#50] **Dream *məŋ^{ʔ}** [144]
NC mɐŋ^{2}; OB မက် mɐk; OC 夢 məŋ(-s)

[#51] **Dry** (Austroasiatic)[145]
NC kʌŋ$^{¯}$; OB ကင် kɐŋ^{1}

[#52] **Dumb *ʔa^{ʔ}** [146]
NC ʔa^{2}; OB အ ɐ^{ʔ}; OC 啞 ˙ʔ(r)a^{ʔ}

[#53] **Ear *$^{(h)}$nə** [147]
NC ^{h}na^{1}; OB နာ nɐ^{1}, နား nɐ^{2}; OC 耳 nə(ŋ)^{ʔ}

[#54] **Eight *$^{(h)}$rjat** [148]
NC ʟɪat; OB ရှစ် / ဟတ် ^{h}rjɐt; OC 八 ˙p-rjat

[#55] **Elephant** (Austroasiatic)[149]
NC wʊj^{1}; OC 爲 waj^{1}

[#56] **Emerge *t^{h}wak**
NC ts^{h}ʊak; OB ထွက် t^{h}wɐk

[#57] **Enclosure** (Austroasiatic)[150]
NC ^{h}(r)ʊaŋ^{1}; OB ဝင်း wɐŋ^{2}

[#58] **Erect *ʤwək** [151]
NC ʤʊ̆k; OB ဇောက် tswɨk

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[143] Matisoff (1969:168) suggests the vacillation of medial *-r-*, which Luce (1981:27) treats as variants in cases like WK (3.42) and SIP (43.30), to be due to onomatopoeia.
[144] OC TC-I is established by Mattos (1971:309). Benedict's (1972a:31) comparison of ꩡꩬ ^{h}mɐŋ^{I} *composure* in compounds concerning somnambulism is unrelated.
[145] See Schuessler (2007:261-3) for the AA association.
[146] Matisoff (1978b:25, 1998a:235) reconstructs LB TC-II. MC suggests OC medial *-r-*, but Schuessler (2007:550) attributes it to onomatopoeia.
[147] OB *listen; ear*. See Sagart (1995b:346-7, 1999b:61-2) and the discussion in 5.4.1 for OC *-ŋ*.
[148] See Nishi (1974:18) for the OB reconstruction.
[149] See Schuessler (2007:510) for the OC sense of *elephant* and the AA association. Matisoff's (1988b:10-3) proposal that Mizo saj^{I} *elephant* and zaj^{III} *temperament* may both be related to OC 才/財/材 ˙ʤə *material, talent* is rejected by Baxter (1994a:28-9).
[150] See Hla Pe (1967a:85) and Shorto (1973:377, 2006:233) for the AA association.
[151] OB *steep* with a transitive derivative ဆောက် ts^{h}wɨk *build, erect*. Benedict's (1972a:76-8) comparison of NC with OB ခိုက် tsɨk *plant* and OB with Mizo ts^{h}ʊk *descend* is not supported.

[#59] **Exchange** (Areal)[152]
NC lɛj²; OB လဲ ~ လှဲ ~ လှယ် [(h)]lɐj¹/²

[#60] **Excrement *[h]ljəʔ** [153]
OB ချေး / ခြေ် k[h]lij²; OC 屎 [h]ljəʔ

[#61] **Extinguish *mjət / *mjat** [154]
NC mɪt; OC 滅 məc < mjət, 蔑 ˙mjat

[#62] **Eye** (Austroasiatic)[155]
NC mɪt; OB မျက် mjɐk; OC 目 mwək

[#63] **Face, Lips** (Austroasiatic) [156]
NC [h]mVL¯; OC 吻 mwənʔ, 面 mjan-s

[#64] **Fall** (Austroasiatic)[157]
NC KLV²; OB ကျ / ၎ klɐʔ; OC 下 ˙graʔ(-s)

[#65] **Fat *saw** [158]
NC t[h]aw¹; OC 臊 ˙saw

[#66] **Father *paʔ** [159]
NC pa²; OB ဘ / ဖ p[h]ɐʔ; OC 父 baʔ / paʔ

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[152] See Benedict (1967:321-2) for AN and TK associations which Shorto (2006:408-9) links with AA; see Stewart & Dunn (1940-81:348) and Thurgood (1981:36) for the OB variants.

[153] Matisoff (1969:168;198) notes OB *k-* to be prefixal, but Shafer (1952:158), Benedict (1994:5) and Shorto (2006:238-9) assign an AA source to his comparison of NC ʔe² *defecate, excrement*.

[154] Matisoff (1983:472) compares OB ခိတ် [h]mɨt *shut eyes*, which Benedict (1972a:99) treats as a variant of ခိုန်း [h]mɨn² *have eyes closed, doze*, yet the discussion in 3.1.4 shows the rhymes *-in* and *-it* to be suggestive of external influence. OC 滅 has an MC ablaut in *a*.

[155] Luce (1985:II.78-9) notes evidence for *-k* in Southern Chin. Stewart & Dunn's (1940-81:280) MK association with OB is supported by Norman's (1984:181-5) discussion of two competing Min Chinese forms with *-t* and *-k* as a result of AA influence. Norman is more cautious regarding an AN link, as proposed by Shafer (1952:148), which is dismissed by Benedict (1967:275-6, 1991b:8) and Starostin (1995:230).

[156] OC *lips; face*. See Shafer (1952:142;154) and Schuessler (2007:515) for the AA association; see Matisoff (1976a:270) for possible AN and TK connections.

[157] OC *descend, below*. See Schuessler (2007:371) for the AA association; see also Shorto (2006:521-2;524;527). Sagart (2006a:214-5, 2008a:154) is misled by the shift of OB *-l-* to *-r-*.

[158] Matisoff (1974:189) tentatively compares ꩡ tsʰwɨ¹ *fat*, but Matisoff (2001:14) reverts back to Benedict's (1972a:63-4) original distinction.

[159] OB ဘ/ဖ *father*, ဖ *male suffix*; OC *father / honorific-suffix*.
See Weidert (1987:51;166;213) for the vocative and referential distinction between TC-II and derived TC-III within NC and across ST. Stewart & Dunn's (1940-81:267) suggestion that ဘဘေ / ဘဖိုယ် əpʰij¹ *father* may perhaps be a later variant is supported by similar forms under [#114] *Mother*.

[#67] **Fathom *$^{(h)}$ləm** [160]
NC $^{(h)}$lᴀm¹; OB လံ lam¹; OC 覃 ˙ləm¹, 尋 s-ləm¹

[#68] **Feed *ʥas** [161]
NC ʥɐs; OB စား ʦɐ²

[#69] **Fire *$^{(h)}$məjˀ** [162]
NC mɛj²; OB မီး mɨ²; OC 火 ˙ʰməjˀ

[#70] **Fish *$^{(h)}$ŋaˀ** [163]
NC $^{(h)}$ŋa²; OB ငါး ŋɐ²; OC 魚 ŋa

[#71] **Five *ŋaˀ** [164]
NC ŋa¹; OB ငါး ŋɐ²; OC 五 ˙ŋaˀ

[#72] **Flap, Flat** *(Austroasiatic)*[165]
NC (k)l$^{(h)}$ᴠp, $^{(h)}$lᴠᴍ¯, jap; OB လှပ် ~ လျှပ် ʰljɐp, လိပ် lɨp, ယပ် jɐp; OC 葉 lap, 牒/蝶 ˙ljap

[#73] **Flea *ʰljə** [166]
NC ʰli¹; OB လှေး / လှယ် ʰlɨj²

[#74] **Flesh *sjaˀ** [167]
NC sa²; OB သား sɐ²

[#75] **Flower, Burn** (Austroasiatic)[168]
NC ᴘar¹, p$\overset{E}{A}$ʟ¯, ʜᴠʟ¯; OB ဝါ wɐ¹, ပ paˀ, ပန်း pɐn²; OC 皤 ˙baj, 燔 ban

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[160] OC *extend; measure of length*. NC may be influenced by lam¹ *dance* via its characteristic style with arms outstretched.
[161] OB *eat*. Matisoff (1978b:11-2;31) reconstructs LB *ʥj-*, but notes Thurgood's (1977:193) ʥ- also to be supported; see Shafer (1952:138) and Shorto (2006:71) for a good AA association.
[162] See Sagart (1999b:158-9) for OC *ʰm-*; MC has an ablaut variant in *a*.
[163] Shafer's (1965:5-6) MK association with NC is represented as OB က kɐˀ in Hla Pe's (1967a:88-9) piscine loanwords from Mon, yet Hla Pe's (1967a:86) identification of တံငါ ~ တံငှါ tɐm¹⁽ʰ⁾ŋɐ¹ *fisherman* as a Mon loanword suggests possible AA influence and compares favourably with OC ᴛᴄ-ɪ.
[164] NC ᴛᴄ-ɪ is a result of the same analogical leveling attested in [#167] *Three* and [#80] *Four*.
[165] OB *thin, fine ~ flake off, flash; roll, curl; fan*; OC *leaf; tablet/butterfly*. See Stewart & Dunn (1940-81:346) for the variation between OB လှပ် and လျှပ်. See Shorto (2006:344;349;355-6) for the AA link.
[166] Weidert (1987:440-1) suggests ᴛᴄ-ɪ to be original; OB as a verb means *tiny*, with a nominalised sense of *insignificant thing, pest*, which suggests convergence of two separate forms.
[167] See Thurgood (1977:171) for LB support of *sj-* discussed in 3.3.1.4 and 5.2.2.
[168] OB *yellow; shine; flower*; OC *white; burn*. See Shorto (2006:441;416;439;468) for the AA association; see Schuessler (2006:156;408) for the semantics supported by the lack of a Loloish counterpart to OB ပန်း pɐn² *flower* and accounting for Weidert's (1987:125-6;132) difficulty in associating ᴛᴄ-ɪɪ with NC ᴛᴄ-ɪ.

[#76] **Follow** (Sinitic)[169]
NC JVL¯; OC 隨 s-lwaj

[#77] **Forest, Woods *rəm** [170]
NC rɐm¹; OC 林 rəm, 森 s-rəm

[#78] **Foot, Leg *p^{h}əj** [171]
NC p^{h}ɛj¯; OB ဘိ– / ဖိ– p^{h}i̯^{ʔ}–

[#79] **Fork** (Austroasiatic) [172]
NC ka(ŋ)¯, k^{h}a²; OB ကား kɐ², (တံ)ခါး (tɐm^{l})k^{h}ɐ², ခက် k^{h}ɐk; OC 戶 ˙ga^{ʔ}

[#80] **Four *ljə** [173]
NC li¹; OB ေလး / လိယ် li̯j²; OC 四 s-ljə-s

[#81] **Fruit$_{1}$ *səj^{ʔ}** [174]
NC t^{h}ɛj²; OB သီး si̯²

[#82] **Fruit$_{2}$, Rice** (Austronesian) [175]
NC rɐs; OC 糲 ˙ras

[#83] **Ginger** (Areal) [176]
NC t^{h}iŋ¹; OB ချင်း k^{h}jɐŋ²; OC 薑 kaŋ

[#84] **Give *pjə^{ʔ} / *pja^{ʔ}** [177]
NC pɛ̯a²; OB ေပး / ပိယ် pi̯j²; OC 畀 pjə-s

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[169] See Sagart (1995a:251) for the Sinitic association. Matisoff's (1992:164-5) comparison of သို့ siw^{ʔ} *to, thus* stems from his overly literal interpretation of ◌ုိ as ◌ု *u* and ◌ိ *i* as discussed in 3.1.3.

[170] Shafer (1952:139) and Schuessler (2007:358-9) suggest a MK link, but the forms in Shorto (2006:378) suggest different semantic fields. Schuessler (2007:359) notes different vocalism in OB ရုံ ~ ရုံး rwi̯m$^{1/2}$ *cluster, gather* which Hla Pe (1967a:85) and Shorto (2006:213) identify as a MK loan.

[171] Matisoff (1978b:30) rejects Nishida's (1968:22) proposal that OB *p^{h}*- corresponds to velar initials elsewhere. Hla Pe (1967a:84) identifies the second syllable of ဖိနပ် p^{h}i̯^{ʔ}nɐp *sandal* as a Mon loanword.

[172] OB *divaricate; door; branch*; OC *door*. See Shafer (1952:151-2) and Shorto (2006:177) for the AA link.

[173] OB TC-II attests the analogical leveling in [#167] *Three* and [#71] *Five*. Pulleyblank's (1973b:372, 1998b:205) observation of the dual MC reflexes sit and si^{h} shows OC suffixal *-s* hardening to *-t* in the same way as root-final *-s* in [#173] *Two* and [#138] *Seven*.

[174] Shorto (2006:257) makes an AA association.

[175] OC *coarse grain*. See Maspero (1933:69), Peiros & Starostin (1984:124), Matisoff (2003:437), Sagart (2005a:165) and Schuessler (2007:352) for the AN association. Benedict (1967:304, 1972a:17, 1996b:1) is sceptical, but the dual MC reflexes laj^{h} and lat attest the sporadic hardening of *-s* in numerals and loanwords.

[176] See Luce (1940:295, 1959a:23, 1962:86), Shafer (1952:157), Benedict (1967:303) and Matisoff (1968:886) for the areal association.

[177] Matisoff's (2000b:365) use of Baxter's (1992:603) reconstruction of OC *-t* to support Benedict's (1972a:101) ruminations of an association between Tibeto-Burman *-t* and NC *-k* is problematic: NC *-k* is a regular FORM-II derivation via suffixal *-s*; Baxter's OC *-t* is based on 鼻 bjə-s *nose* whose MC reflexes bjit and bji^{h} evince a special development of *-s* as discussed under [#80] *Four*, [#138] *Seven* and [#173] *Two*.

[#85] **Gobble** (Austroasiatic)[178]
NC ^{h}(r)ʌp; OB ဟပ် hɐp; OC 呷 ˊgap

[#86] **Grandfather *pəw** [179]
NC pu¹; OB ဘိုး / ဖိုဝ် p^{h}ɨw², ဖို / ဖိုဝ် p^{h}ɨw

[#87] **Grandmother *pjə** [180]
NC pi¹; OB ဘေး / ဖိယ် p^{h}ɨj²; OC 妣 pjə^{ʔ}

[#88] **Grease, Liquid *$^{(h)}$rjak** [181]
NC ^{h}rɪak; OB ရက် / ရျက် rjɐk

[#89] **Ground** (Austroasiatic)[182]
NC lɛj²; OB မြေ / မြိယ် mlɨj¹; OC 地 ljaj-s

[#90] **Hair (body) *$^{(h)}$mwəl^{ʔ}**
NC ^{h}mʊl²; OB မွေး / မုယ် mwɨj²

[#91] **Hair (head)** (Austronesian)[183]
NC sɐm²; OB ဆံ ʦ^{h}ɐm¹; OC 彡 ˊsram

[#92] **Head** (Austronesian)[184]
NC lu¹; OC 首 ^{h}ləw^{ʔ}

[#93] **Heavy *rjək** [185]
NC rɪk; OC 栗 rəc

[#94] **Hole** (Austroasiatic)[186]
NC ʜVŋ̄; OB ခေါင်း k^{h}wɨŋ²; OC 空 ˊk^{h}waŋ

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[178] OB *bite, snap at*; OC *suck up*. See Shorto (2006:356-7) for the AA link.
[179] OB *grandfather*; *masculine suffix*. See the discussion under [#87] *Grandmother* for OB TC-II.
[180] OC *deceased mother*. See Luce (1981:13) for the original sense of OB *grandmother*; see Weidert (1987:337-8) for the vocative and referential distinction between TC-I and TC-II. Matisoff (1991a:319-20, 2000a:172) associates Mizo pʊj^{IIA} *big (of female animals)*, an irregular reflex of NC pi², and 牝 bjə^{ʔ} *female of animals*.
[181] OB *liquid extract*. Confusion with ဢရက် ərɐk *liquor*, a Semitic loanword via Mon that is discussed by Hla Pe (1967a:81) and Stewart & Dunn (1940-81:303), may account for similarities with OC 液 lak *liquid*.
[182] See Shafer (1952:134;148) and Schuessler (2007:210) for the AA association. The OC comparison is from Sagart (2006a:218).
[183] See Matisoff (1976:271-2) for the AN association.
[184] See Peiros & Starostin (1984:125) and Sagart (1999b:155, 2005a:163) for the AN association.
[185] OC *dense, compact*. Benedict's (1972a:104) comparison of OB ဧဝး lij² *heavy* is not supported.
[186] See Matisoff (1976a:285) and Shorto (2006:237) for the AA association.

[#95] **Horse** (Areal)[187]
NC raŋ²; OB မြင်း mrɛŋ²; OC 馬 ˙mra[ʔ]

[#96] **Hot *tsʰa** [188]
NC sa¹; OB ဆာ tsʰɐ¹

[#97] **Hurt, ill *na** [189]
NC na¹; OB နာ nɐ¹

[#98] **I** (Areal)[190]
NC kɛj¹; OB ငါ ŋɐ¹; OC 吾 ˙ŋa, 我 ˙ŋaj[ʔ]

[#99] **Itch₂ *ja[ʔ]** [191]
NC jv²; OB ယား jɐ²

[#100] **Itch₁, breath *sək** [192]
NC tʰɐk; OB သက် sɐk; OC 息 sək

[#101] **Kill *sat**
NC tʰɐt; OB သတ် sɐt; OC 殺 srat

[#102] **Know *səj[ʔ]** [193]
NC tʰɛj¯; OB သိ sɨ[ʔ]

[#103] **Leech *wat** [194]
NC wɐ̯̀t; OB ကျွတ် / ကြွတ် krwɐt

[#104] **Left, Lame** (Austroasiatic)[195]
NC wɛ̯̆j¯; OB –ဝဲ –wɐj², ဘယ် bɐj¹; OC 跛 ˙paj[ʔ]

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[187] See Pulleyblank (1966a:11) and Shorto (2006:220) for the areal association.
[188] See Benedict (1972a:27) for the semantics of OB *hungry*.
[189] Matisoff's (1978a:110) comparison of နတ် nɐt *spirit* is misled by NC *-t* which represents a FORM-II derivation via suffixal *-s*. Benedict's (1972a:158-9) comparison of OC 難 ˙nan *difficult* is not supported.
[190] See Sagart (1995a:252) and Jacques (2007) for the areal association.
[191] Mizo/Zahau TC-IIA and the Tedim/Sizang irregular vocalism suggests external influence. The discussion in Matisoff (1970:31) suggests there may be a link with the AA loan [#2] *Armpit*.
[192] OB *slightly bitter*, *breath, life*; OC *breathe*. The OB semantic link could be due to accidental homophony, but နံ nɐm[ʔ] *odor, smell*, for which see [#147] *Smell*, and သံ sɐm¹ *sound, voice*, related to 心 səm¹ *heart, mind* by Benedict (1972a:51;184), seem to carry the semantic weight in the compounds အနံ့အသက် ənɐm[ʔ]əsɐk *odor* and အသံအသက် əsam¹əsak *voice*.
[193] Matisoff (1988a:1185) reconstructs Loloish TC-II.
[194] See Matisoff (1972a:65) and Thurgood (1977:149) for OB prefixal *k-* followed by medial *-r-*.
[195] OB *left*; OC *lame*. See Hla Pe (1967a:76;89) for the AA association.

[#105] **Length *dwəŋ** [196]
NC tʊ̆ŋ¹; OB တောင် twɨŋᴵ

[#106] **Liquor** (Sinitic)[197]
NC ju¹; OC 酉/卣 ləw²

[#107] **Liver *sjən**ʔ [198]
NC tʰɪn¯; OB သည်း sɐɲ²

[#108] **Louse *(h)rjək**
NC ʰrɪk; OC 蝨 s-rəc

[#109] **Maggot *lwəŋ**ʔ
NC lʊŋ²; OB လောက် lwɨk; OC 蟲 lrwəŋ

[#110] **Middle *laj**
NC laj¹; OB (အ)လယ် (ə)lɐj¹

[#111] **Monkey** (Austronesian)[199]
NC ʰlʊk; OB မျောက် mjwɨk

[#112] **Moon *las** [200]
NC klʰas; OB လ lɐʔ; OC 夜 la(k)-s, 夕 s-lak

[#113] **Mortar** (Tai-Kadai)[201]
NC sʊm²; OB ဆုံ tsʰwɨm¹

[#114] **Mother *məʔ** [202]
OB ဓ mɐʔ; OC 母 məʔ

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[196] The NC variation suggests external influence.
[197] See Sagart (1995a:251) for the Sinitic source.
[198] Weidert (1987:36) provides further support for TC-II. Benedict (1972a:180) compares 辛 səɲ < sjəŋ *bitter* but, phonological issues aside, Matisoff's (2004:357-8) association of *bitter* with *liver* via *bile* introduces a very different semantic field from Wilkins' (1996:284) areal associations of *liver* and *heart* as supported in NC and OB by Matisoff (1986).
[199] See Benedict (1967:278-9) for the AN association. Benedict (1972a:112) notes a liquid medial in Intha Burmese which Okell (1995:59;66) notes to be discordant with OB.
[200] OC *night; evening*. See Schuessler (2007:561) and [#163] *Sun* for evidence that OC *-k* was a later development.
[201] See Benedict (1967:295) for the TK association.
[202] See the discussion under [#66] *Father* for OB TC-III. Benedict's (1972a:66;193) comparison of Mizo məwᴵ *daughter/sister-in-law* is not supported phonologically or semantically. OB အဓိ əmɨʔ *mother*, whose TC-II form is still attested in Bradley's (1979:312-3) comparison of a compound with သား sɐ² *child* as သမီး səmɨ² *daughter*, and အမေ / အဓိယ် əmɨj¹ *mother*, suggested by Stewart & Dunn (1940-81:276) to be a later variant, shows similar vocalic alternations to those under [#66] *Father*.

[#115] **Mouth** (Austroasiatic) [203]
NC kɐm¹; OB ကမ်း ~ ခမ်း / ခမ် k^{h}ɐm²; OC 含 ˙gəm, 頷 ˙gəm^{ʔ}, 唵 ˙ʔəm^{ʔ}

[#116] **Nail, Claw *sjən^{ʔ}** [204]
NC tɪn²; OB (လက်)သည်း (lɐk)sɐɲ²

[#117] **Name *$^{(h)}$mjəŋ / *$^{(h)}$mjaŋ** [205]
NC ^{h}mɪŋ¹; OB မည် mɐɲ¹, မှည့် ^{h}mɐɲ^{ʔ}; OC 名 mjaŋ

[#118] **Near *$^{(h)}$nəj^{ʔ} / *$^{(h)}$naj^{ʔ}** [206]
NC $^{(h)}$naj²; OB နီး nɨ²; OC 邇 nəj^{ʔ}

[#119] **Neck** (Areal)[207]
NC $^{(h)}$rvɲ¯; OB လည် lɐɲ¹; OC 領 rjaŋ^{ʔ}

[#120] **New *sar** [208]
NC t^{h}ɐr¹; OB သ sɐ^{ʔ}; OC 鮮 san¹

[#121] **Nine *k^{w}əw^{ʔ}** [209]
NC kʊa²; OB ကိုး / ကို၀် kɨw²; OC 九 k^{w}ə^{ʔ} < k^{w}əw^{ʔ}

[#122] **Nose *^{h}nar** [210]
NC ^{h}nar¹; OB နှာ ^{h}nɐ¹; OC 嘆 ˙s-nan-s

[#123] **Onion** (Austroasiatic)[211]
NC sʊ̊an¯; OB –သွန် / –သွန် –swɐn¹; OC 蒜 ˙swan-s

[#124] **Otter *^{h}ram^{ʔ}** [212]
NC ^{h}rɛ̊m²; OB ဖျံ p^{h}jɐm¹

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[203] OB *bank, shore*; OC *hold in mouth; jaw; hold/put in mouth*. See Shorto (2006:361-2) for the AA link.
[204] French's (1983:190;469) observation that in Northern Naga this always occurs in a compound beginning with *hand* parallels the situation in OB and perhaps explains the lack of aspiration in NC.
[205] See Button (2010:24) for an OC *ə* ablaut.
[206] Matisoff's (1998:778) difficulty correlating Loloish naj² with OB stems from the *ə/a* ablaut; the MC reflex suggests an OC *a* ablaut.
[207] See Matisoff (1976:271) for the areal association.
[208] OB *titivate*; OC *fresh*. Gong's (1995:69) OB comparison may represent a transitive derivation from TC-I.
[209] Matisoff's (1980:17, 1997a:107) suggestion that NC developed via an *-a* suffix from kəw-a is criticised by Weidert (1981:10;12); Lehman's (1973:544) proposal for a lost *-l* is equally unlikely. The dissimilation of OC *-əw* to *-ə* after *k^{w}-* seems to have also occurred in NC to allow lowering of *-ə* to *-a*. The discussion in 5.2.5 presupposes a Lahu bilabial initial whose absence may be related to the special status of numerals.
[210] OC *sigh*.
[211] See Luce (1959a:tableIII), Hla Pe (1967a:78) and Benedict (1976b:90) for the AA association.
[212] Luce's (1962:84) suggestion of an MK association with OB, supported by Matisoff's (1989b, 2009b) suggestion that OB *p-* represents a reduced full-syllable borrowed from MK and compounded with the TB root, may explain the irregularities: medial *-j-* rather than *-r-*; TC-I rather than TC-II.

[#125] **Ox** (Austroasiatic)[213]
NC boŋ˧; OB ပြောင် prwɨŋ¹; OC 犎 prwaŋ

[#126] **Palm, Sole** (Areal)[214]
NC p^{h}ɐs; OB –ဝါး wɐ²; OC 扶 pa

[#127] **Parrot *gjəʔ** [215]
NC ki²; OB ကျီး / ကိယ် kɨj²

[#128] **Person *mjəʔ** [216]
NC mi²; OB မိန်း(မ) ~ မိမ္ဒ / မိယ်(မ) mɨj²(mɐʔ)

[#129] **Pheasant** (Sinitic)[217]
NC $^{(h)}$Lık; OB ရစ် rɐc; OC 翟 ˊljaq

[#130] **Pig *waq** [218]
NC wɔk; OB ဝက် wɐk; OC 豝 ˊpra

[#131] **Rain *was** [219]
NC r-wɐs; OB ရာ rwɐ¹; OC 雨 waʔ(-s)

[#132] **Ripe *^{h}mjən** [220]
NC ^{h}mın¹; OB မှည့် ^{h}mɐɲʔ

[#133] **Road *lamʔ**
NC lɐm²; OB လမ်း lɐm²

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[213] OB *mithun;* OC *wild humped bovine*. See Hla Pe (1967a:88) for the AA association.
[214] OC *breadth of four fingers*. See Sagart (2005a:163) and Schuessler (2007:240) for AN and TK associations respectively. OB ဖဝါး /ʰwɔ/ p^{h}əlwɐ² *palm, sole* probably stems from ဖလက်ဝါး p^{h}əlɐkwɐ² in which ဖလက် p^{h}əlɐk, from a MK root for *palm* in Shorto (2006:166), has been reanalysed as ဖ p^{h}ə, from abbreviated ဖိ p^{h}ɨʔ *foot* as discussed in [#78] *Foot, Leg* and လက် lɐk *hand* to give ဖဝါး pəwɐ² *sole* and လက်ဝါး ~ လက္ခါး lɐkwɐ² *palm*. See [#141] *Side*.
[215] Mizo/Zahau TC-IIA suggests external influence; Matisoff (1988a:506, 2003:189) does not reconstruct beyond the LB level.
[216] Written Burmese မိန်းမ *woman* superficially represents mɨn²mɐʔ, but its inscriptional form မိယ်မ mɨj²mɐʔ, in which the second syllable is a female suffix, is discussed by Nishi (1974:26-7). Pulleyblank (1995a:178-9) supports Benedict's (1972a:158) supposition of an *-n* suffix to compare 民 məɲ *people*, but Sagart's (1999b:135) connection with 氓 ˊmrjaŋ *people* suggests original mjəŋ rather than mjən.
[217] See Sagart (1995b:370-1) for the Sinitic source; Matisoff (1988a:1141, 2000c:223) notes phonological issues in LB.
[218] See Jacques (2004:263) for evidence of an original final uvular. Schuessler's (2007:152) suggestion that OC may have been influenced by MK provides a possible explanation for its bilabial initial.
[219] See Thurgood (1977:149;178) for the effect of prefixal *r-* on LB tones which may account for Weidert's (1987:97) observation that OB TC-I is an exception to the correlation of *-s* and LB TC-II discussed in 5.1.2.2. An OC *-s* coda would be expected, but TC-II suggests *-s* to be suffixal.
[220] The evidence in Matisoff (1988a:1017) shows OB TC-III to be derived from LB TC-I.

[#134] **Rodent** (Sinitic)[221]
NC ju²; OC 鼬 ləw-s

[#135] **Rot *səw^{ʔ}**
NC t^{h}u²; OB သိုး / သိုဝ် siw²

[#136] **Round *$^{(h)}$lwəm^{ʔ}**
NC ^{h}lʋm²; OB လုံး lwim²

[#137] **Seed *tsjə^{ʔ}** [222]
NC tsi²; OB –စေ့ / –စိယ့် –tsij^{ʔ}

[#138] **Seven *–$^{(h)}$njəs** [223]
NC Lɪs; OB –နှစ် / –ခုနှစ် –^{h}nɐc; OC 七 s-^{h}nəc

[#139] **Sharp *^{h}rjam** [224]
NC ^{h}rɪam¹; OB သံ sɐm¹; OC 銛 s-^{h}rjam¹

[#140] **Shut, Close** (Austroasiatic)[225]
NC tsʋp; OB စိပ် tsip, စပ် tsɐp

[#141] **Side** (Austroasiatic)[226]
NC p$^{(h)}$ɛŋ$^{-}$; OB ဘက် / ဖက် p^{h}ɐk, ဖင် p^{h}ɐŋ¹; OC 旁 ˙baŋ

[#142] **Silver** –[227]
NC ŋun¹; OB ငွ / ငှဉ် ŋwɨj¹; OC 銀 ŋrən

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[221] OC *weasel*. Sagart's (1995a:251) association of OC *l-* with Tibeto-Burman *j-* suggests a Sinitic source. Benedict's (1972a:32;158, 1972b:30) comparisons of ယုန် jwɨn¹ *hare* and 貚 ts$^{(h)}$ən(-s) *hare* are unlikely.

[222] The lack of aspiration in OB stems from its occurrence solely as a bound morpheme; see Luce (1973:49, 1981:11) for inscriptional examples. Sagart's (2006a:215) comparison of 資 ʣəj *granary* is not supported phonologically.

[223] See Matisoff (1997a:85) for the NC liquid initial. OB and OC manifest the same hardening of *-jəs* to *-jət* which, possibly for purposes of differentiation, happened earlier than in [#173] *Two*. Benedict (1972a:16;93) suggests that ခုနှစ် *seven* reflects a quinary system of *five* and *two*: Matisoff (1985b:432) suggests that ခု k^{h}wi^{ʔ} *unit* may refer to the five fingers of the hand and tentatively compares NC k$^{(h)}$ʊt *hand*; Luce (1977) notes inscriptional ခြောက်နှစ် *seven* curiously reflects ခြောက် k^{h}rwɨk *six*.

[224] Following Benedict (1972a:53, 1973b:6-7), a shift of *s-$^{(h)}$rj-* to LB *sj-* to Old Burmese *s-* may be assumed; see Chang (1972:440-1) for the semantics of OB *iron*. See Button (2010:22) for the OC rhotic initial. Benedict (1994:3-4) notes an AA link but suggests ST to be the source.

[225] OB *set close; join*. See Shorto (2006:342-4) for the AA association.

[226] See Shorto (2006:200) for the AA association. Contra Matisoff (1972a:43), the discussion in 3.2 shows the Written Burmese voiced bilabial plosive ဘ– to be of no reconstructional significance. See [#126] *Palm, Sole*.

[227] Benedict (1976b:69) notes the lack of OC labialisation to suggest a possible external source discussed in more detail by Sagart (1999b:202-3); Bradley (1978:332-3) notes OB to be a LB isolate.

[#143] **Six *rwək** [228]
NC ʟʊ̈k; OB ခြောက် k^{h}rwɨk; OC 六 rwək

[#144] **Sleep** (Austroasiatic)[229]
NC ʔɪc; OB အိပ် ʔɨp

[#145] **Slingshot *ljəʔ** [230]
NC li²; OB လေး / လိယ် lɨj²; OC 矢 ^{h}ljəʔ

[#146] **Small-bird** (Austroasiatic)[231]
NC ʔar¹; OC 鴳/鷃 ˋʔan-s

[#147] **Smell *nam** [232]
NC nɐm¹; OB နံ nɐm$^{1/2}$

[#148] **Smoke *k^{h}əwʔ** [233]
NC k^{h}u²; OB ခိုး / ခိုဝ် k^{h}ɨw²

[#149] **Snake *rwəlʔ** [234]
NC rul¹; OB ငွေ့ / မြွေ mrwɨj¹; OC 虫/虺 ˊ^{h}rwəjʔ

[#150] **Snot *^{h}nap** [235]
NC ^{h}nɐp; OB နှပ် ^{h}nɐp

[#151] **Sojourn *ʦam** [236]
NC ʦam¹; OB စံ ʦɐm¹

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[228] OB prefixal *k-* is noted by Benedict (1987:64) elsewhere in TB.
[229] Luce (1985:II.78-9) notes *-p* in SC; see Shafer (1952:124;158) for the AA association. See Thurgood (1977:150;165) and Matisoff (1986b:54) for Benedict's (1972a:37) suggestion that ꩻꩵ sɨp *compress, cram, put to sleep* is a causative derivative.
[230] OB *bow*; OC *arrow*. Matisoff's (2003:404;422) comparison of Mizo t^{h}ɐl^{IIA} *arrow* and Tedim t^{h}ɐl^{II} *bow* with OC is criticised by Sagart (2006a:218) with the phonologically tenous comparison of 彈 ˋdan *shoot pellets at*.
[231] See Schuessler (2007:556), supported by the forms in Shorto (2006:415), for the AA association.
[232] The OB tonal variation, marking a transitivity distinction, is supported in LB by Thurgood (1977:202); Benedict's (1991a:18-9) broader ruminations about transitivity and tones in TB are unlikely. See [#150] *Snot*.
[233] Benedict's (1972a:159, 1972b:30) comparison of 熏 ^{h}wən *smoke, steam* is phonologically unlikely.
[234] The OC comparison is from Jacques (2004:222) who reconstructs ^{h}*m-*. Luce (1962:tableA) shows prefixal *m-* to be retained in some SC languages; the NC and OB shift to TC-I is likely related to this prefix discussed further in Matisoff (2000a:170-1).
[235] See [#147] *Smell* for a possible association.
[236] The comparison is from VanBik (2009:165). OB lacks aspiration due to its occurrence solely as a bound morpheme; see Stewart & Dunn (1940-81:84).

[#152] **Soft$_1$ *nwəʔ** [237]
NC nɔw²; OB နှး nwɨ²; OC 柔 nwə

[#153] **Soft$_2$, Low** (Areal)[238]
NC $^{(h)}$nvm̄, ^{h}nɪam²; OB ညှံ ɲamʔ, နိဝ် ~ နိမ် nɨᴍ¹; OC 染 njamʔ(-s), 荏 njəmʔ

[#154] **Son-in-law *mak**
NC mak; OB –မက် –mɐk

[#155] **Sour** (Austroasiatic)[239]
NC t^{h}ur²; OC 酸 ˙swan

[#156] **Spindle *^{h}mwəjʔ**
NC ^{h}mʊj²; OB ဖွေ့ ^{h}mwɨjʔ

[#157] **Stand *djəŋ / *djaŋ**
NC dɪŋ¹; OB တည် tɐɲ¹; OC 亭 ˙djaŋ, 定 ˙djaŋ-s

[#158] **Stem** (Tai-Kadai)[240]
NC kvŋ̄; OB အကိုင်း əkɨŋ², ချောင်း k^{h}jwɨŋ²

[#159] **Stone *lwəŋʔ** [241]
NC lʊŋ²; OB ကျောက် / ကြောက် klwɨk

[#160] **Stretch *ʤan**
NC ʤan¹; OB စန့် tsɐnʔ

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[237] Luce (1981:33) treats OB နှး nwɨ² and နှံ nwɨʔ *soft*, attested in cases like OBEP (44e) and IB (107b.16) respectively, as variants. Matisoff (1978b:27) derives the latter from prefixal *s*-, but this is the source of နှး ^{h}nwɨ² *soften*; it possibly represents a back-formation of the Pali loan အဏု ənwɨʔ that refers to minute objects. Gong's (1980:480) OC comparison, with which Pulleyblank (1973:121) associates the ablaut variant 懦 nwa *weak, soft*, is tonally problematic; see [#153] *Soft$_2$, Low*.

[238] OB *soft; subside*; OC *soft*. Hla Pe (1960:83) and Stewart & Dunn (1940-81:198;200) identify နှိပ် nɨp *subside* as a Pali/Sanskrit loanword. It is related to နှိပ် ^{h}nɨp *press* and နိမ် nɨᴍ¹ *subside* with derivatives နှိမ့် nɨᴍʔ *low*, နှိမ် ^{h}nɨᴍ¹ *suppress* and နှိမ့် ^{h}nɨᴍʔ *lower*. See Schuessler (2007:442) for AA influence; see Pulleyblank (1973a:121) and [#152] *Soft$_1$* for several OC words for *soft* beginning with *n*- but with discrepant rhymes.

[239] See Schuessler (2007:484) for the AA association.

[240] OB *bough; counter of rod-like objects*. See Luce (1973:list$_A$) for the TK association. An association of Tedim keŋ^{II} *leg* with xe^{III} *foot*, as per Matisoff (2003:293), is rightly queried by Luce (1962:57). Benedict (1972a:76-7) and Weidert (1987:184) compare Mizo zʊŋ^{IIB} *finger* with OB ချောင်း k^{h}jwɨŋ² on the basis that the coda of the first syllable in လက်ချောင်း lɐkk^{h}jwɨŋ² *finger* has spread to the initial of the second syllable. However, in apite of Ohno (2005:277-9) not noting it in the inscriptions, Hla Pe (1967b:183-4) treats ချောင်း k^{h}jwɨŋ² as one of the main Burmese classifiers.

[241] See Thurgood (1977:153) for OB prefixal *k*-. See also the AA forms in Shorto (2006:163).

[#161] **Suck** (Areal)[242]
NC ʤʌp; OB စုတ် ~ စုပ် tswɨp

[#162] **Sulphur** (Indo-Aryan)[243]
NC kaN¯; OB ကန့် kɐn^{ʔ}

[#163] **Sun *njə** [244]
NC ni^{1}; OB ဓနု / နိယ် nɨj^{1}; OC 日 nəc < njək

[#164] **Swell –**[245]
NC PVM¯; OB ဖွဲ့ p^{h}wam^{ʔ}

[#165] **Tail *məj^{ʔ}** [246]
NC mɛj^{2}; OB မြီး mrɨ^{2}; OC 尾 məj^{ʔ}

[#166] **Thin –**[247]
NC pa(L)^{2}; OB ပါး pɐ^{2}

[#167] **Three *swəm** [248]
NC t^{h}ʊm^{1}; OB သုံး swɨm^{2}; OC 三 səm < swəm

[#168] **Tiger** (Austroasiatic)[249]
NC klʌ^{2}; OB ကျား / ဣာ klɐ^{2}; OC 虎 ˈ^{h}la^{ʔ}

[#169] **Tie *k^{h}jət / *k^{h}jat** [250]
NC k^{h}ɪt; OB (တန်)ကျစ် / ကျတ် (tɐn)kjɐt; OC 結 ˈkəc

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[242] See Benedict (1976c:93) and Shorto (2006:353) for the areal associations. NC tsʊap *lungs* may be related, but see Matisoff (1978a:113-9).
[243] See Matisoff (1985a:149) for the Indo-Aryan association.
[244] See [#112] *Moon* for OC suffixal *-k*. Sagart (1999a:175) suggests TB to reflect a Sinitic loan.
[245] Matisoff (1972a:47) notes LB alternations with *-p*.
[246] The source of OB medial *-r-* is discussed by Benedict (1972a:64) and Matisoff (1985a:31).
[247] There is a possible association with [#75] *Flower, Burn*.
[248] OB TC-II is a result of analogical levelling also attested in [#80] *Four* and [#71] *Five*. The MC reflex of OC shows an ablaut in *a*.
[249] Sagart (1999b:41) reconstructs OC ^{h}*r-*, while Norman & Mei (1976:286-8) and Pulleyblank (1983:427-8) favour ^{h}*l-*. See Blagden (1916a:94), Shafer (1952:137), Hla Pe (1967a:87), Norman & Mei (1976:286) and Benedict (1994:5-7) for the AA association. Luce (1962:86) and VanBik (2009:117) suggest that NC kɛj^{1} *tiger* may ultimately be related to OB, while Benedict (1972a:116) prefers to compare OB ချေး(သစ်) k^{h}ɨj^{2}(sɐc) *leopard*, but the semantic core is သစ် *leopard*; neither is particularly likely.
[250] OB lacks initial aspiration due to it being a bound morpheme. Benedict (1972a:145) compares OB ကျစ် kjɐc *compact, twist*, but Nishi (1974:5;36) reconstructs original *-k*.

[#170] **Tongue, Lick** (Areal)[251]
NC lɛj¹, lɪak; OB လျှာ ʰljɐ¹, လျက် ljɐk; OC 舌 lat, 舐 lja[ʔ]

[#171] **Tooth** (Austroasiatic)[252]
NC ha¹; OC 牙 ˙ŋra

[#172] **Tree *sjəŋ[ʔ]** [253]
NC tʰɪŋ²; OB သစ် sɛc; OC 薪 səŋ

[#173] **Two *[(h)]njəs** [254]
NC ʰnɪs; OB နှစ် ʰnɛc; OC 二 njəs

[#174] **Vagina *t[h]əw[ʔ]** [255]
NC ʦʰu²; OC 醜 tʰəw[ʔ]

[#175] **Village *k[hw]ə** [256]
NC kʰʊa¹; OC 丘 kʰʷə¹

[#176] **Viscous *[h]naŋ[ʔ]** [257]
NC ʰnaŋ²; OB နှင်း ʰnɛŋ²; OC 瀼/穰 naŋ[(ʔ)]

[#177] **Warm *[(h)]lwəm** [258]
NC [(h)]lʊm¹; OB လုံ lwɨm¹, လုံ့ ʰlwɨm¹, လုံ့ဓ ʰlwɨm[ʔ]; OC 融 lwəm

[#178] **Wash$_1$ *ʦ[h]jəl[ʔ]** [259]
NC sɪl²; OB ဆေး / ဆိယ် ʦʰɨj²; OC 洒 ˙s-ʦʰəj[ʔ]

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[251] OB/OC *tongue; lick*. See Shafer (1952:138;144), Sagart (2005a:163) and Shorto (2006:305;383-4) for the areal associations. See Button (2010:22) for a discussion of OC *l-*.
[252] See Norman & Mei (1976:288-92) for the AA association. VanBik's (2009:196) and Simon's (1954:512) respective comparisons of NC and OC with သွား swɐ² *tooth* are difficult to reconcile phonologically.
[253] OC *firewood*. Matisoff (1975:167, 1978a:174) rejects Miller's (1974:208) criticism of the semantics.
[254] See [#138] *Seven*.
[255] OC *anus*. Benedict's (1972a:53) comparison of စောက် cwɨk *vulva* is is kept separate by Matisoff (2008:130-4).
[256] Benedict (1972a:109) compares ရွာ / ရွာဟ် rwɐ¹ *village* by treating initial *r-* as a prefix and demoting NC *k-* to prefixal status. However, Bradley (1979:326) notes no Loloish correlates and the inscriptions attest a superfluous -ဟ် *-h* with the earliest example ရွောဟ် in MZ (A.8-9) attesting a curious *-waw* rhyme that violates OB phonotactic constraints. Duroiselle (1919:37), Ba Shin (1962:38-9), Nishida (1956:30, 1972:258) and Nishi (1997:994) tentatively associate -ဟ် *-h* with TC-II, discussed in 3.4, but ရွာ rwa¹ is in TC-I and Ohno (1967:88) is more sceptical.
[257] OB *dew, fog, mist*; OC *heavy with dew/grain*. See Schuessler (2007:439) for the OC TC-I/II distinction.
[258] See Bodman (1980:124) for the OC *-m* coda.
[259] The NC comparison is from Löffler (1966:134). The OC initial is supported by its phonetic 西 *west* which is homophonous with 棲 ˙s-ʦʰəj *nest, roost*; the merger with 洗 ˙səj[ʔ] < ˙sər[ʔ] *wash* occurred later. Pulleyblank (1962:132;215-6, 2001:48) and Sagart (2004:71-2) alternatively reconstruct OC *s-n-*.

[#179] **Wash₂** (Austroasiatic)[260]
NC su²; OC 溲/糔 srəwʔ

[#180] **Water *twəjʔ** [261]
NC tuj²; OB (တံ)တွေး / (တံ)ထုယ် (tam¹)tʰwɨj²; OC 水 s-twəjʔ, 氵 twəjʔ

[#181] **Weave *təq** [262]
NC tɐk; OB ရက် rɐk; OC 織 tək

[#182] **Weep *krəp** [263]
NC krɐp; OC 泣 kʰrəp

[#183] **Wind *ljə**
NC klʰi¹; OB လေ / လိယ် lɨj¹

[#184] **Wither *raw** [264]
NC raw¹; OB ရော် rɐw¹

[#185] **You** (Areal) [265]
NC nɐŋ²; OB နင် nɐŋ¹; OC 汝 naʔ, 爾 nəʔ, 乃 ˙nə(ŋ)ʔ

[260] See Weidert (1987:366-7) for the comparison and Schuessler (2007:543) for the AA association.
[261] OB *spittle*. The reconstruction of OC *t-* follows Starostin (1995:241). Sagart (1999b:157-8), following Benedict's (1972a:169, 1972b:30) association of 川 ˙kʰʷjən *river, stream*, reconstructs a lateral.
[262] See Jacques (2004:263) for ST *-q*. Jacques (p.c.) suggests a prefix may have caused lenition of *t-* to *r-* in OB. Benedict (1967:315-6, 1972a:19) suggests AN and TK links, but Matisoff (2003:76) is sceptical.
[263] Schuessler (2007:423) suggests the OC aspiration may have an onomatopoeic source.
[264] Benedict's (1972a:263) comparison of Mizo rɔwˡ *dry* is problematic.
[265] See Sagart (1995a:252) and Jacques (2007) for the areal association. Matisoff (1993:127) notes the *-ŋ* coda to be haphazardly attested in Tibeto-Burman; see [#53] *Ear* for a possible *-ŋ* in OC 乃. Hla Pe (1967:89) notes Schuessler's (2007:33) comparison of ညည်း ~ ည ɲɐj² *you (female term of address)* to be directly from Mon.

Chapter 7
Concluding Remarks

The establishment in the preceding chapters of regular sounds laws and morphological paradigms attempts to provide greater legitimacy to the Sino-Tibetan hypothesis. Most contentious is the reconstruction of an underlying *ə/a* vowel system that threatens the very nature of the dichotomy between vowels and consonants.

7.1 Vowelless Languages

Although languages attesting vertical vowel systems have been accorded some legitimacy by Ladefoged & Maddieson (1995:286), Colarusso's (1997:122-3) treatment of them as rare developments from original triangular systems only mildly tempers Szemerényi's (1967:74-5) charges of statistical insignificance.[266] The reconstruction of a Sino-Tibetan *ə/a* vowel system suggests that rather than being left languishing in a linguistic hinterland, vertical vowel systems are representative of a more primordial situation underlying the very phonological foundations of language. It is unlikely mere coincidence that the Indo-European language family, upon which the whole enterprise of historical linguistics was founded, is also suggestive of such a system.

7.1.1 Indo-European

Under the premise that *i* and *u* pattern as glides[267] and *a* is too insignificant to be a primary vowel, Saussure (1879:70-1;135) reduces the Indo-European vowel system to a single vowel a_1 with an ablaut variant a_2 for which he acknowledges a correlation with *e* and *o* in other analyses. The typological peculiarity of the remaining *e/o* vowel system leads Allen (1956:172-4, 1965), Pulleyblank (1965b:91-2, 1993b:68-74), and Colarusso (1981:499-501) to suggest that this may actually reflect a vertical *ə/a* system. It is ironic that this reanalysis represents an attempt to make the Indo-European vowel system typologically more reasonable by appealing to a construct generally dismissed as typologically anomalous. Interestingly, reconstructing *a* for *o* allows an account for the sporadic *a* vowel in Saussure's analysis to be made: Pulleyblank's (1965b:89, 1993b:73-4) and Colarusso's (1981:499-501;536) proposal that a new *a* vowel emerged from an original laryngeal to displace original *a* to *o* is supported by Villar (1993:152, 1993:148) who adds that the many *a* reflexes of original *o* in daughter languages make a shift from *a* to *o* as likely as one of *o* to *a*.[268] An association of *e* with *ə* is questioned by Villar (1993:157-8) due to a lack of direct evidence, but Allen (1965:116) and Colarusso (1981:499-500) note the salient features behind the vowel to reflect one that is neither back nor maximally open and that a shift from of *ə* to *e* nicely parallels that of *a* to *o*; Pulleyblank (1993b:74) further proposes that the phonological reanalysis of *j* and *w* as *i* and *u* would have triggered a shift from *ə* to *e* in accordance with the proposals in

[266] See Kuipers (1968:78-80) for a criticism of Szemerényi's position.
[267] Note also the observation in 1.1 that the distinction between sonorant consonants and vowels in Northern Chin is blurred.
[268] Pulleyblank (1993b:83) notes solid evidence in the evolution of Chinese.

Crothers (1978:109) that the common vowel system *i*, *u, e*, *a* derived from an original and *i*, *u, ə*, *a*.[269]

7.1.2 Northwest Caucasian

7.1.2.1 Abaza

Saussure's reduction of the Indo-European vowel system to a single vowel with an ablaut variant leads Jakobson (1958:23) to comment that such a unitary vowel system is not supported anywhere in the world. Allen (1958:28), referring back to Allen's (1956:142;172) earlier study of the Northwest Caucasian language Abaza, responds that the vertical *ə/a* vowel system attested there may be treated as only having one vowel *a* if *ə* is treated as an epenthetic product of syllabic stress placement that alternates with *zero* in unstressed positions. Jakobson (1958:34) responds that this violates established principles of phonemic differentiation but, as Kuipers (1968:83) remarks, this does not necessarily make the establishment correct. A more interesting line of query could have centred on the fact that Allen is treating *a* as the solitary vowel in Abaza while Saussure believes the Indo-European root vowel to be the one represented as *ə* in the analysis proposed here. Lehmann's (1952:112) quite valid proposal to treat the solitary Indo-European vowel as a default feature of syllabicity, due to it having nothing else with which to compare, essentially sets up a vowelless analysis of Indo-European to which Kuipers' (1960) study of another Northwest Caucasian language, Kabardian, provides an interesting comparison.

7.1.2.2 Kabardian

In his *ə/a* analysis of Kabardian, Kuipers (1960:50-1) takes Allen's approach one step further by suggesting that the vowel *a* should be reanalysed as a feature of openness rather than a vowel due to it having no other vocalic elements with which to compare. Halle (1970:99-103), who is accepting of Kuipers' *ə/a* analysis, dismisses both the analyses of *ə* by Allen and Kuipers as well as Kuipers' further analysis of *a* on the following grounds: the symbols for stress and juncture required to dispense with *ə* are merely notational distinctions;[270] treating *a* as a specific feature instead of a vowel represents a terminological readjustment that could be applied to any vowel phoneme. Kuipers (1976:106-7;111-4;119-20) responds accordingly: if *ə* is predictable in environments that are unequivocally identifiable as stress and juncture then marking an underlying *ə* violates basic phonemic principles; the feature openness, unlike closeness which is dependent on its position in the word, always yields a phonetic vowel but this is not valid grounds for establishing a consonant-vowel distinction. In purely synchronic terms, Kuipers' response seems justified, but the special treatment that must be accorded to *a* could have been more persuasively critiqued by Halle had he appealed to diachronic

[269] Crothers' analysis is also noted by Villar (1993:144;157-8) whose preference for treating *i* and *u* as vowel phonemes, regardless of their different function from *e* and *a*, leaves him no typological grounds for favouring any vocalic system other than *i, u, e, a*.

[270] According to Kuipers (1976:108-9), the issue of juncture does not concern Abaza. Nonetheless, Halle (1970:101) is able to level the same criticisms regarding stress.

evidence. In this regard, although Szemerényi's (1967:75-9) denunciation of Kuipers on typological grounds is countered by Kuipers' (1968:74-7) response that this represents a confusion of the phonetic with the phonemic and a lack of familiarity with Northwest Caucasian languages, Szemerényi's (1967:81) observation that the *ə/a* systems proposed for Indo-European and Kabardian are fundamentally incomparable is valid.[271] While Kuipers' vowelless analysis, upon which Pulleyblank's (1984a:57, 1984b) similar proposal for Mandarin is based, superficially appears to parallel the Indo-European evidence, this cannot be projected back to the Indo-European level where *a* is an apophonic derivative of *ə* that cannot be compared with *j* and *w* due to it being able to function as a syllabic base like *ə*; this differs from Kuipers' and Pulleyblank's synchronic analyses of Kabardian and Mandarin respectively where *a* is allowed to pattern as a feature of openness in the same way that *j* and *w* pattern as features of palatility and labiality that only become vocalised when occupying the requisite slot in the syllable.[272] A similar situation exists in the Sino-Tibetan reconstruction proposed here where *ə* and *a*, albeit with the former being underlyingly *zero*, represent the two basic building blocks for the syllable.

7.2 Indo-European versus Sino-Tibetan

Pulleyblank (1965b:95-8) proposes a controversial alternative approach by treating Indo-European *a* as a phonemic vowel with an originally defined morphological function rather than a result of undefined phonetic conditioning with secondary semantic differentiation. However, in addition to Szemerényi's (1967:83-4) querying of the semantic grounds for the *ə/a* alternation, Pulleyblank (1965b:98) himself notes the inherent paradox whereby if *ə* is originally *zero* then the vowel *a* would have existed phonemically beforehand. Following Pulleyblank's (1986a:9, 1989:8-14) proposals for Old Chinese, Pulleyblank (1993b:79-82) attempts to resolve the paradox by suggesting the *a* vowel to be a product of infixation rather than a derived ablaut. Pulleyblank's proposal is interesting but not conclusive even for Old Chinese; when transferred to Indo-European, Lehmann's (1993:119-120) criticism that supposed external parallels do not remove the need for solid internal reconstruction based on Indo-European evidence becomes all the more pertinent. Consequently, although the Sino-Tibetan and Indo-European evidence provides good support for a theory of *ə/a* as the underlying vocalic structure of language that is still manifested at the phonemic level in several languages around the world, at this stage of knowledge it can only tantalizingly hint at a complete rejection of the consonant/vowel distinction that will hopefully be achieved with further advancements in the field.

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[271] Kuipers' (1968:77) response suggests that in this case he has not fully grasped the significance of Szemerényi's point.

[272] A fundamental difference between Kuipers' and Pulleyblank's analyses is that Pulleyblank (1998a:5-13) does actually posit a syllabic glide phoneme *a̯*, corresponding to *a* in the same way *j* and *w* corresponds to *i* and *u*, while Kuipers' does not need to appeal to such a recourse in Kabardian.

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Proto Northern Chin

For Cingh No

Proto Northern Chin

Volume 2
An Etymological Dictionary of Northern Chin

Symbols & Abbreviations

i. *General*

~	Separates a Northern Chin FORM-I from its inflected FORM-II.
/	Separates alternative forms in free variation or complementary distribution.
–	Precedes a bound morpheme.
_	Underlines an irregular correspondence not pertaining to the discussions in Volume 1.

ii. *Lexical Categories*

n	noun
v	verb
v_b	benefactive verb
v_i	intransitive verb
v_t	transitive verb

iii. *Languages*

MI	Mizo
ZA	Zahau (reference is occasionally made to Laizo and Khualsim under LA and KH)
TH	Thado
ZO	Zo
TE	Tedim (reference is occasionally made to Saizang and Teizang under SA and TI)
SI	Sizang

iv. *Transcriptions*

e	Corresponds to *ɛ* in the same way as *i* to *ɪ* and *u* to *ʊ*.
o	Corresponds to *ɔ* in the same way as *i* to *ɪ* and *u* to *ʊ*.

A	Alternation of *ɐ*/*a*
E	Alternation of *ɛ*/*e*
I	Alternation of *ɪ*/*i*
O	Alternation of *ɔ*/*o*
U	Alternation of *ʊ*/*u*
V	Unspecified vowel

K	Alternation of *k* with *ʔ*/*h* (or rarely *t*)
Ŋ	Alternation of *ŋ* with *k*/*ʔ* (or rarely *w*)
T	Alternation of *t* with *d*
TS	Alternation of *ʦ* with *ʣ*
N	Alternation of *n* with *t*
P	Alternation of *p* with *b*/*w* (or rarely *f*)

M	Alternation of *m* with *p*
J	Alternation of *j* with *s*
L	Alternation of *l/r/n/d*
W	Alternation of *w* with *ʔ/h/b*
H	Alternation of *h* with *ʔ*
C	Unspecified consonant
n	Possible derivation from *-ŋ* as opposed to *-n*.

I	Tone category I
II	Tone category II
III	Tone category III
(I/II/III)	Sandhi altered tone with the presumed original tone category noted
1	Tone 1
2	Tone 2
-	Unspecified tone

Preface & Acknowledgements

This, along with Volume 1, is a thoroughly revised version of Button (2009) which was submitted as a Ph.D. dissertation to the School of Oriental and African studies, University of London.

The Northern Chin information presented herein was collected in Burma during 2006-07 and results from the immense efforts of many Chin people who willingly and patiently sacrificed their time. None of this would have been possible without them.

Wherever possible, Sino-Tibetan reconstructions from Volume 1 or external influences are noted. When external influences have not been discussed in Volume 1, they are noted in the footnotes here.

The reconstructed Northern Chin headwords are arranged in the following order:

Consonants *ʔ-, b-, d-, ʤ-, h-, j-, k-, k^h-, kl-, kl^h-, kr-, kr^h-, l-, ^{h}l-, m-, ^{h}m-, n-, ^{h}n-, ŋ-, ^{h}ŋ-, p-, p^h-, r-, ^{h}r-, s-, t-, t^h-, ʦ-, $ʦ^h$-, w-*

Vowels *ɐ, a, ɛ, e, ɪ, i, ɔ, o, ʊ, u*

ʔ

ʔɐl¹ — MI/TH/ZO/TE/SI ɐl^{I} ~ ɐl^{III}, ZA ʔɐl^{I} ~ ʔɐl^{III} *salty (v)*.

ʔɛ̆n² — MI ɐn^{IIA}, ZA ʔɐn^{IIA}– *vegetable (n)*; TH ɛn^{II}, TH/ZO/TE/SI ɐn^{II} *food (n)*.

ʔa² — (ST *ʔa^{ʔ}, *onomatopoeic*).[1] MI a^{IIA} ~ at^{IIB}, ZA ʔa^{IIA} ~ ʔat^{IIB} *foolish (v)*.

ʔaj² — MI aj^{IIA}, ZA ʔaj^{IIA}, TH/ZO/TE aj^{II}, SI aj^{II}– *crab (n)*.

ʔak — MI –ak^{IIB}, ZA –ʔak^{IIB}, TH –aʔ^{II} / ŋaʔ^{II}, ZO –aʔ$^{(II)}$, TE –ak$^{(II)}$, SI –ak^{II} *crow (n)*.

ʔam² — MI am^{IIA} ~ am^{III}, ZA –ʔam^{IIA} ~ ʔam^{III}, TE/SI am^{II} ~ am^{III} *greedy (v)*; TH/ZO am^{II} ~ am^{III} *emulous (v)*.

ʔar¹ — *(Austroasiatic)*.[2] MI ar^{I}, ZA ʔar^{I}, TH aʔ^{I}, ZO a^{I}, TE/SI ak^{I} *fowl (n)*.

ʔar¹ — MI ar^{I}–, ZA ʔar^{I}–, TH aʔ$^{(I)}$–, ZO a^{I}–, TE/SI ak^{I}– *star (n)*.

ʔat — MI/ZA at^{IIB} ~ ɐʔ, TE at^{II} ~ at^{III} *cut (v)*; TH/ZO at^{II} ~ at^{III} *notch (v)*; SI at^{II} ~ at^{III} / a^{III} *cleave (v)*.

ʔɛj¹ — MI ɛj^{I} ~ ɛj^{III}, ZA ʔɛj^{I} ~ ʔɛj^{III} *eat (v)*.[3]

ʔɛk — MI/TE ɛk ~ ɛʔ *chop (v)*; ZA ʔɛk ~ ʔɛʔ *pluck a banana (v)*; TH ɛʔ ~ e^{III}, SI ɛk ~ e^{III} *tear, chop (v)*; ZO ɛʔ ~ e^{III} *tear (v)*.

ʔɛn² — MI ɛn^{IIB}, ZO/TE/SI ɛn^{II} ~ ɛt *look (v)*.

ʔɛŋ¹ — MI/TH ɛŋ^{I} ~ ɛn^{III}, ZA ʔɛŋ^{I} ~ ʔɛn^{III} *yellow (v)*; ZO ɛŋ^{I} ~ ɛn^{III}, TE ɛŋ^{I} ~ ɛn^{III} *green (v)*; SI ɛŋ^{I} ~ ɛn^{III} *yellow, green, blue (v)*. *cf.* **ʔeŋ²**

ʔe² — *(Austroasiatic)*.[4] MI e^{III} ~ ek^{IIB}, ZA ʔek^{IIB}, SI e^{II} ~ ɛak^{II} *defecate (v)*. MI ek^{IIB}, ZA ʔek^{IIB}, TH/ZO eʔ^{II}, TE ek^{II}, SI ɛak^{II} *faeces (n)*.

ʔel¹ — MI/SI el^{I}, ZA ʔel^{I} *lower back (n)*; ZO/TE el^{I} *back (n)*. *cf.* **ʔEL⁻**

ʔeŋ² — MI eŋ^{IIA} ~ en^{III}, TH/ZO eŋ^{II} ~ en^{III}, SI ɛaŋ^{II} ~ en^{III} *envy (v)*; TE eŋ^{II} ~ en^{III} *idolise (v)*. *cf.* **ʔɛŋ¹**

ʔEL⁻ — MI ɛr^{I} *plot against (v)*;[5] ZA ʔel^{IIA} ~ ʔel^{III}, TH ɛl^{II} ~ ɛl^{III} *contradict (v)*; ZO/TE/SI ɛl^{I} ~ ɛl^{III} *clash in personality (v)*; ZO ɛl^{II}–, TE ɛl^{II} ~ ɛl^{III} *contemptuous (v)*. *cf.* **ʔel¹**

ʔɪc — *(Austroasiatic)*.[6] ZA ʔɪt ~ ʔɪʔ, TH ɪʔ ~ i^{III}, TE ɪʔ *sleep (v)*.

ʔɪn¹ — MI ɪn^{I} ~ ɪn^{III} *drink (v)*; ZA ʔɪn^{I} ~ ʔɪn^{III} *drink ($v_{i/t}$)*, ʔɪn^{IIB} *drink (v_{b})*.

ʔɪn² — MI ɪn^{IIA}, ZA ʔɪn^{IIA}, TH/ZO/TE/SI ɪn^{II} *house (n)*.

ʔo² — *(onomatopoeic)*. MI o^{IIB}, ZA ʔo^{IIA}, TH/ZO/TE/SI o^{II} *voice (n)*.

ʔol⁻ — MI/TH/ZO/TE/SI ɔl^{I} ~ ɔl^{III}, ZA ʔɔl^{I} ~ ʔɔl^{III} *easy (v)*. MI ol^{IIA} ~ ol^{III}, TH/ZO/TE/SI ol^{II} ~ ol^{III} *unengaged (v)*; ZA ʔol^{IIA} ~ ʔol^{III} *unengaged (v_{i})*, ʔɔlʔ *relieve (v_{t})*.

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[1] See Vol.1, Ch.6, #52.
[2] See Vol.1, Ch.6, #146.
[3] ZA has an abbreviated form ʔi^{I} ~ ʔi^{III}.
[4] See Vol.1, Ch.6, #60.
[5] MI ɛr^{I} from VanBik (2009:154).
[6] See Vol.1, Ch.6, #144.

ʔʊ̈aŋ¹ — MI ʊaŋ^{I} ~ ʊan^{III}, ZA ʔʊaŋ^{I} *boast (v)*; TH oʊŋ^{III} *exaggerate (v)*; ZO ʊoŋ^{III} ~ ʊot, TE ʊaŋ^{III} ~ ʊat, SI uɐŋ^{III} *boast, exaggerate (v)*. TH oŋ^{III} ~ ɔʔ, ZO oŋ^{III} ~ ɔʔ / ɔt, TE oŋ^{III} ~ ɔt, SI ɔk– / ɔt– *shout (v)*.

ʔʊj² — *(areal)*.[7] MI ʊj^{IIA}, ZA ʔʊj^{IIA}, TH/TE/SI ʊj^{II}, ZO uj^{II} *dog (n)*.

ʔʊk — ZA ʔʊk, TH/ZO ʊʔ, TE/SI ʊk *govern (v)*.

ʔʊ̈m² — MI ɔm^{IIA} ~ ɔm^{III}, ZA ʔʊm^{IIA} ~ ʊm^{III}, TH ʊm^{II} ~ ʊm^{III}, ZO/TE/SI ɔm^{II} ~ ɔm^{III} *exist (v)*.

ʔu¹ — MI/TH/ZO/TE/SI u^{I}, ZA ʔu^{I} *elder sibling (n)*.

ʔvr¹ — MI ɪr^{I} *throat (n)*; ZA ʔɪr^{I} *outer throat of human (n)*. MI ɪrʔ, ZA ʔɪrʔ, ZO ɪa^{III}, TE ɪk (~ ɪʔ), TH ɪʔ, SI ɪk ~ i^{III} *burp, hiccup (v)*.[8] MI ɔr^{I} *outer throat (n)*; ZA ʔɔr^{I} *outer throat of animal (n)*. MI ɔrʔ, ZA ʔɔrʔ, zo ɔʔ ~ o^{III}, TH/SI o^{III}, TE ɔk ~ɔʔ *wear around neck (v)*.

[7] See Vol.1, Ch.6, #48.
[8] TE ɪʔ from Bhaskararao (1996:50).

b

ba¹ — MI/TH/ZO/TE/SI ba^{I} ~ bɐt *owe (v)*.

bal⁻ — MI/ZA/TE bal^{III} ~ bɐlʔ, TH bal^{III}, SI bal^{III} ~ bɐl^{III} *dirty (v)*. ZA/ZO bal^{III} *dirt (n)*.

ban¹ — MI/ZA/TH/ZO/SI ban^{I} *arm (n)*; TE ban^{I} *upper arm (n)*. TE/SI bɐn^{I} ~ bɐn^{III} *take shortcut (v)*. MI ban^{III} ~ bɐn^{IIB} *reach for, arrive (v)*; TH/ZO/TE ban^{III} ~ bɐt *reach for (v)*.

bar¹ — MI/ZA bar^{I} ~ bar^{III}, TH baʔ^{I} ~ bɐʔ, ZO ba^{I} ~ ba^{III}, TE/SI bak^{I} ~ bak^{III} *feed ($v_{i/t}$)*; MI bɐrʔ, TH bɐʔ, ZO ba^{III}, TE bak^{III} ~ bɐʔ, SI bak^{III} *feed (v_{b})*; ZA bar^{III} *feed child (v_{b})*, bɐrʔ *feed guest (v_{b})*

bɛj¹ — TH/TE bɛj^{I} ~ bɛj^{III} *used up (v_{i})*; ZO bɛj^{I} ~ bɛj^{III} *finished (time) (v_{i})*; TE bɛj^{III} *use up (v_{t})*.

bɛl² — ZO/TE/SI bɛl^{II} ~ bɛl^{III} *do thoroughly (v)*.

bɛŋ¹ — MI/TE bɛŋ^{I} *ear (n)*; ZA bɛŋ^{I} *ear wax (n)*; TH –bɛŋ^{III} *hare (n)*.

be² — *(Austroasiatic)*. [9] MI/ZA be^{IIB}, TH/ZO/TE/SI be^{II} *bean (n)*.

bel¹ — MI/ZA/TH/ZO/TE/SI bel^{I} *pot (n)*.

bɛŋ⁻ — MI bɛŋ^{I} ~ bɛn^{III} / bɛn^{IIB}, ZA bɛŋ^{III} ~ bɛŋ^{IIB}, TH/ZO bɛŋ^{III} ~ bɛʔ, TE bɛŋ^{III} ~ bɛt, SI bɛaŋ^{III} ~ bɛk / bɛt *clap, slap (v)*. TH/TE bɛŋ^{II} ~ bɛn^{III} *herd by slapping, scare off (v)*; SI bɛŋ^{II} ~ bɛn^{III} *scare off (v)*. MI bɛŋ^{IIB} *press with hands (v)*.

bɪal¹ — MI bɪal^{I} ~ bɪal^{III} *circular (v)*; ZA bɪal^{I} ~ bɪal^{III} *rounded (edges) (v)*; TE – bɪal^{I} ~ bɪal^{III} *sit on floor/cushion (v)*.

bɪaŋ¹ — MI/ZA/TE bɪaŋ^{I}, TH beɪŋ^{I}, ZO bɪeŋ^{I}, SI biɐŋ^{I} *cheek (n)*.

bɪas — MI bɪa^{III} ~ bɪak^{IIB}, ZA bɪa^{IIB} ~ bɪak^{IIB} *converse (v)*; TH beɪ^{III} ~ beɪʔ^{II}, ZO bɪe^{III} ~ bɪeʔ^{II}, TE bɪa^{III} ~ bɪak$^{II/III}$, SI biɐ^{III} ~ biɐk^{II} *propitiate (v)*.[10]

bɪl² — TH bɪl^{II} *outer ear (n)*; ZO/TE/SI bɪl^{II} *ear (n)*.

bɔk — MI/ZA/TE bɔk ~ bɔʔ, TH bɔʔ, ZO bɔʔ ~ bo^{III}, SI bɔk ~ bo^{III} *prostrate (v)*.

bɔw² — ZA/TH/ZO/TE/SI bɔw^{II} ~ bɔw^{III} *swell (v)*.

boŋ⁻ — *(Austroasiatic)*. [11] MI boŋ^{IIB}, TH/ZO/TE boŋ^{I} *ox (n)*.

bʊ̊a⁻ — MI bo^{IIB}, ZA bʊa^{III}, TH/ZO/TE/SI bo^{II} *sperm (n)*.

bʊal¹ — MI/TE bʊal^{I} ~ bʊal^{III}, TH boʊl^{I} ~ boʊl^{III}, ZO bʊol^{I} ~ bʊol^{III}, SI buɐl^{I} ~ buɐl^{III} *wallow (v)*; ZA bʊal^{I} ~ bʊal^{III} *wash body (v)*. MI/TE bʊal^{III}, TH boʊl^{III}, ZO bʊol^{III}, SI buɐl^{III} *wallow (n)*.

bʊas — MI bʊa^{III} ~ bʊak$^{IIB/III}$, TH boʊ^{III} ~ boʊʔ^{III} *pour (v)*;[12] ZO bʊo^{III} ~ bʊoʔ^{III}, TE bʊa^{III} ~ bʊak^{III}, SI buɐ^{III} ~ buɐk^{II} *pour (v_{i})*; ZO bʊoʔ^{II} ~ bʊo^{III}, TE bʊak^{II} ~ bʊak^{III} / bʊaʔ, SI buɐk^{III} ~ buɐ^{III} *pour (v_{t})*.

[9] See Vol.1, Ch.6, #10.

[10] TE bɪak^{III} from Bhaskararao (1994:336;340).

[11] See Vol.1, Ch.6, #125.

[12] MI bʊak^{IIB} from Hillard (1975:19).

bʊj¹ — *(Austroasiatic)*.[13] MI/TH/TE/SI bʊj^{I}, ZA –bʊj^{I}, ZO buj^{I} *bamboo rat (n)*.

bʊs — MI/ZA/TE bʊʔ, TH/ZO bu^{III} *cooked rice (n)*.

bu² — MI/ZA bu^{IIB}, TH/ZO/TE/SI bu^{II} *nest (n)*.

bu¯ — ZO bu^{I} ~ bʊt, TE/SI bu^{III} ~ bʊk *hide (v)*.

bVL¯ — *(Austronesian)*.[14] MI/ZA bʊl^{IIA}, TH/ZO/TE/SI bʊl^{II} *base (n)*. MI bɪl^{IIA} ~ bɪl^{III}, ZA bɪl^{III}, LA bʊl^{III}, ZO bɔl^{II} ~ bɔl^{III}, SI bʊl^{I}– *blunt (v)*. MI bul^{III} ~ bʊlʔ *lopped off (v)*; TE/SI bɪl^{III} *stunted (v)*; TE buj^{III} ~ bʊjʔ *maimed (v)*.

bVL¯ — MI bʊn^{IIB} *put on hand/foot ($v_{i/t}$), affix (v)*; ZA bʊn^{III} *affix (v)*; TH/ZO/SI bʊl^{III}, ZO/SI bʊn^{III} ~ bʊt, TE bʊlʔ *put on hand/foot (v)*. MI/TE bel^{III} ~ bɛlʔ, TH/ZO bel^{III} ~ bɛl^{III}, SI bɛal^{III} ~ bɛl^{III} *seek refuge (v)*; MI bɛl^{IIB} *daub (v), put on (v_{b})*; ZA bɛlʔ *patch, add more (v)*; TH/ZO/SI bɛl^{III}, TE bɛlʔ *stick (v)*.

bVŋ¯ — MI bʊŋ^{III}–, ZA bɪŋ^{III}–, TH/ZO/TE/SI bʊŋ^{I} *container (n)*; SI bʊŋ^{III} *counter for containers (n)*. MI bɪŋ^{IIB} *sacrificial container (n)*.

[13] See Vol.1, Ch.6, #6.
[14] See Vol.1, Ch.6, #8.

d

dɐj⁻ — ZO/TE/SI dɐj^{I} ~ dɐj^{III} *shallow (vessel) (v)*. ZO/TE dɐj^{II} ~ dɐj^{III}, SI dɐj^{II} *shallow (v)*.

dɐm¹ — MI/TH/ZO/TE/SI dɐm^{I} ~ dɐm^{III} *heal (v)*; ZA dɐm^{I} ~ dɐm^{III} *heal* (v_i), dɐm^{IIB} *heal* (v_t).

dɐŋ¹ — MI/ZA/TH/ZO/TE/SI dɐŋ^{I} *palate (n)*.

dɐŋ² — MI dɐŋ^{IIA} ~ dɐn^{III} TH/ZO/TE/SI, dɐŋ^{II} ~ dɐn^{III} *different (v)*; ZA dɐŋ^{IIA} ~ dɐn^{III} *differentiate (v)*; TH/TE/SI dɐn^{III} ~ dɐt *discriminate (v)*; ZO dɐn^{III} ~ dɐt *partition (v)*.

dɐs — MI/ZA dɐʔ, TH/SI da^{III} *addle (v)*; ZO da^{III} *sad (v)*; TE dɐʔ *addle, sad (v)*.

da*n*⁻ — MI/ZA/TH/ZO/TE/SI dan^{III} *method (n)*.

dAM⁻ — MI dap^{IIB} ~ dɐʔ, MI dɐm^{IIB}, ZA dɐm^{III}, TH dap^{II} ~ dap^{III} (/ dɐ̲p), ZO dap^{II} (~ dɐ̲p), TE/SI dɐp *overlay (v)*. MI/ZA dam^{III}, TE dam^{III} ~ dɐp *shaded (v)*; TH/ZO dam^{III} *secluded place in forest (n)*. ZA/TH/SI dɐp *chilly (v)*; ZO dɐp *deathly silent (v)*.

dɛj² — ZO/TE/SI dɛj^{II} ~ dɛj^{III} *segregate (v)*.

dɛm² — TH/ZO/TE/SI dɛm^{II} ~ dɛm^{III} *compete (v)*.

dɛs — MI/ZA dɛʔ *crack a flea (v)*; TH/ZO/SI de^{III}, TE dɛʔ *crack a flea, sting (v)*.

de¹ — ZA/TH/ZO/TE/SI de^{I} ~ dɛt *light a wick (v)*.

deŋ¹ — MI deŋ^{I} ~ den^{III} / dɛn^{IIB}, TE deŋ^{I} ~ den^{III}, SI dɛaŋ^{I} ~ den^{III} *throw (v)*; ZA deŋ^{I} ~ den^{III} *throw* ($v_{i/t}$), dɛn^{IIB} *throw* (v_b); TH/ZO deŋ^{I} ~ den^{III} *strike over arm with stick (v)*.

dɛp — MI dɛp ~ dɛʔ *adjacent (v)*; TH dep^{I} ~ dep^{III}, ZO/TE dep^{II} ~ dep^{III}, SI dɛap^{II} ~ dɛap^{III} *overshadow (v)*.

dɪm² — TH/ZO/TE/SI dɪm^{II} ~ dɪm^{III} *full* (v_i), dɪm^{III} ~ dɪp *fill* (v_t).

dɪŋ¹ — (ST *djəŋ).[15] MI/ZA dɪŋ^{I} ~ dɪn^{III} *stand* (v_i), dɪn^{IIB} *establish* (v_t); TH/ZO/TE/SI dɪŋ^{I} ~ dɪn^{III} *stand (v)*.

dɪɲ² — MI/ZA/TE/SI dɪk, TH/ZO dɪʔ *correct, true (v)*; MI/ZA dɪŋ^{IIB} *straight (v)*.

dil² — MI, TH dil^{II} *lake (n)*; TE –dil^{II}, SI –dil$^{(II)}$ *lakeside village name (n)*.

dip — TH dip^{II} ~ dip^{III} *inhale deeply (v)*, SI dip^{II}– *regurgitate (v)*; ZO/TE dip^{II} , *solar plexus (n)*.

dit — MI dit^{IIB} ~ dɪʔ *gnaw (v)*; ZO/TE dit^{II} ~ dit^{III}, SI dit^{II} ~ dit^{III} / di^{III} *shave (v)*.

dɔw¹ — MI/ZA/TH/ZO/TE/SI dɔw^{I} ~ dɔw^{I} *fight (v)*.

doj¹ — MI doj^{III} *ensorcel (v)*; SI dɔaj^{I} ~ dɔaj^{III} *trouble indirectly (v)*. MI/ZA doj^{III} *sorcery (n)*; TH/ZO/TE doj^{III}, SI dɔaj^{III} *spirit (n)*.

dot — ZA dot^{IIB} ~ dɔʔ, TH/ZO/TE dot^{II} ~ dot^{III}, SI dot^{II} ~ dot^{III} / do^{III} *pierce (v)*.

[15] See Vol.1, Ch.6, #157.

dɔk — MI dɔk ~ dɔʔ *slip out, stretch (v)*; MI dok^{IIB} ~ dɔʔ *slip off (v)*; ZA dɔk ~ dɔʔ *leak (v)*; ZO dɔʔ ~ do^{III}, TE dɔk ~ dɔʔ, SI dok^{II} ~ dok^{III} / do^{III} *pull out (v)*; TH/ZO doʔ^{II} ~ do^{III}, TE dok^{II} ~ dok^{III}, SI dɔk / dok^{I} *protude (v)*; TE dok^{I} *jut (v)*.

dɔm² — MI dom^{II} ~ dom^{III} *hold, support (v)*; MI/ZA dɔm^{IIB}, SI dɔm^{II} ~ dɔm^{III} *support below (v)*; TH dɔm^{II} ~ dɔm^{III} / dɔp, TE dɔm^{II} ~ dɔm^{III} *lift (v)*, ZO dɔm^{II} ~ dɔp *support below, lift (v)*. TH/ZO/TE/SI dom^{III} ~ dɔp *handle carefully (v)*.

dʊm¹ — MI/ZA dʊm^{I} ~ dʊm^{III} *black (v_i)*, dʊm^{IIB} *blacken (v_t)*; TH/TE dʊm^{I} ~ dʊm^{III} *blue, green (v)*; ZO dʊm^{I} ~ dʊm^{III} *black (v)*; TH/ZO/TE/SI *blacken (v_i)*.

dʊs — MI dʊʔ *want (v)*; ZA dʊʔ *love familially (v)*; TH/ZO/SI du^{III}, TE dʊʔ *crave food (v)*.

dum² — MI dum^{IIA} *stream pool (n)*; TH dum^{II} *nook (n)*; MI dum^{IIA} ~ dum^{III}, TH dum^{II} *pool (v)*.

dvk — *(onomatopoeic)*. MI duk^{I} ~ duk^{III}, SI dup^{I} ~ dup^{III} *suck an egg (v)*; ZA dok^{I} ~ dok^{III} *guzzle (v)*; ZA dik^{I} ~ dik^{III} *peel with teeth (v)*; ZO diʔ^{I} ~ diʔ^{III}, TE/SI dik^{I} ~ dik^{III} *inhale (v)*. *cf.* **dvN¹**

dvL¯ — MI/TH/ZO/TE/SI daj^{I} *fence, hedge (n)*. MI dal^{IIA} ~ dal^{III}, ZA dal^{IIA}, TH/ZO/TE/SI dal^{II} ~ dal^{III} *defend (v)*. MI/ZA dol^{IIA} ~ dol^{III} *dam (v)*; MI dol^{III} *succeed (v)*; SI dol^{III} ~ dɔl^{III} *layer (v)*. MI dol^{III} *dam (n)*; ZO/TE/SI dol^{III} *storey, layer (n)*. MI dɐl^{IIA} *membrane (n)*; ZO/TE/SI dɐl^{II} *sheet (n)*; TE dal^{II} *iron sheet (n)*; SI dal^{III} *fence (n)*. MI daj^{III}, ZA daj^{IIB}, TH/ZO/TE/SI daj^{I} *dew (n)*. MI/ZA daj^{III} ~ dɐjʔ, TH/SI daj^{III} ~ dɐj^{III} *quiet, cool (v)*; ZO daj^{III} ~ dɐj^{III}, TE daj^{III} ~ dɐjʔ *quiet (v)*.

dvN¹ — *(onomatopoeic)*. MI dut^{I} ~ dut^{III}, dot^{I} ~ dot^{III} *suck up (v)*; MI don^{I}, TH/ZO/TE/SI don^{I} ~ don^{III}, TI dut^{I} ~ dut^{III} *drink (v)*.[16] MI dot^{I} *tube (n)*. *cf.* **dvk**

[16] MI don^{I} from VanBik (2009:77).

ʤ

ʤɐŋ² — MI/ZA fɐŋ^{IIA}, TH ʧɐŋ^{II}, ZO/TE/SI tɐŋ^{II} *axe head (n)*.

ʤɚ˞r¹ — MI fɐr^{I}, ZA fɔr^{I} *drip (n)*; MI fɐr^{I} ~ fɐr^{III}, ZA fɔr^{I} ~ fɔr^{III}, ZO ta^{I} ~ ta^{III}, TE tak^{I} ~ tak^{III} *drip (v)*; SI tak^{I} ~ tak^{III} *drop (v)*.

ʤɐs — (ST *ʤas).[17] MI/ZA fɐʔ *feed regurgitatively (v)*; ZO ta^{III} *feed elderly/sick (v)*; TE tɐʔ *feed via hand (v)*. *cf.* **ʦɐs**

ʤa² — (ST *ʤəʔ).[18] MI/ZA fa^{IIB}, TH ʧa^{II}, ZO/TE/SI ta^{II} *offspring (n)*.

ʤaj² — MI faj^{IIA} ~ faj^{III} *clean (v)*; ZA faj^{IIa} ~ faj^{III} *clean (v$_i$)*, fɐjʔ *clean (v$_t$)*; TH ʧaj^{II} ~ ʧaj^{III} / ʧɐj^{III}, ZO/TE/SI taj^{II} ~ taj^{III} *husked (v)*; ZO tɐj^{III} *wash away (v$_t$)*; TE tɐjʔ *wash away, plane (v$_t$)*.

ʤan¹ — (ST *ʤan).[19] MI fan^{I} ~ fan^{III} *stretch (v)*; ZO/TE/SI tan^{III}– *spacious (v)*.

ʤar¹ — MI/ZA far^{I}, TH ʧaʔ^{I}, ZO ta^{I}, TE/SI tak^{I} *pine (n)*.

ʤʌŋ⁻ — MI/ZA fɐŋ^{IIA}, TH ʧɐŋ^{II}, ZO/TE/SI tɐŋ^{II} *rice grain (n)*. MI/ZA faŋ^{I}, TH ʧaŋ^{I}, ZO/SI taŋ^{I} *rice (n)*; TE taŋ^{I} *millet (n)*.

ʤɛj² — MI/ZA fɛj^{IIA}; ZO/TE/SI tɛj^{II} *spear (n)*.

ʤɛl² — MI/ZA fɛl^{IIA} ~ fɛl^{III} *certain, righteous (v)*; ZO/TE/SI tɛl^{II} ~ tɛl^{III} *understand (v)*.

ʤeᴍ¹ — MI fep^{I} *long feathers near bird's tail (n)*; MI/ZA fem^{I}, TH ʧep^{I}, ZO/TE tep^{I}, SI tɛap^{I} *fringe (n)*; SI tɛam^{I} tɛam^{III} *underdeveloped (v)*.

ʤeŋ¹ — MI feŋ^{I} ~ fen^{III}, TH ʧeŋ^{I} ~ ʧen^{III}, ZO/TE teŋ^{I} ~ ten^{III}, SI tɛaŋ^{I} ~ ten^{III} *put on lower body (v)*; ZA –fen^{III} *child's skirt (n)*.

ʤɛ̯ɪ̯aC — MI fɛʔ *go to fields (v)*; ZA fɛʔ, TH ʧeɪ^{III} *go (v)*; TE ʧɪaʔ, SI ʧɪɐ^{III} *return (v$_i$)*.

ʤɪam¹ — MI fɪam^{I}, TH ʧeɪm^{I} ~ ʧeɪp *play (v)*; ZO ʧɪem^{III}– , TE ʧɪam^{III}–, SI ʧɪɐm^{I}– *joke (v)*.

ʤɪŋ⁻ — MI fɪŋ^{III} ~ fɪn^{IIB}, TE ʧɪŋ^{III} ~ ʧɪt *wise (v)*; TH ʧɪŋ^{III} ~ ʧɪʔ, ZO ʧɪŋ^{III} ~ ʧɪʔ / ʧit *generous (v)*; SI ʧɪŋ^{III} ~ ʧɪk *obedient (v)*. *cf.* **ʤim¹**

ʤim¹ — MI fim^{I} ~ fim^{III} *clear (v)*; ZA fim^{I} ~ fim^{III}, SI ʧim^{I} ~ ʧim^{III} *wise (v)*; TH ʧim^{I} ~ ʧim^{III} *clever (v)*; ZO ʧim^{I} ~ ʧim^{III} *clever, clear (v)*; TE ʧim^{I} ~ ʧim^{III} *obedient, intelligent (v)*. *cf.* **ʤɪŋ⁻**

ʤʊal² — MI/ZA fʊal^{IIA} ~ fʊal^{III}, TH ʧoʊl^{II} ~ ʧoʊl^{III}, ZO tʊol^{II} ~ tʊol^{III}, TE tʊal^{II} ~ tʊal^{III}, SI tuɐl^{II} ~ tuɐl^{III} *overlong (v)*.

ʤʊ̯k — (ST *ʤwək).[20] MI fʊk *erect (v)*; MI/ZA fɔk, TH ʧʊʔ, TE/SI tʊk *erect (phallus) (v)*.

[17] See Vol.1, Ch.6, #68.
[18] See Vol.1, Ch.6, #36.
[19] See Vol.1, Ch.6, #160.
[20] See Vol.1, Ch.6, #58.

ʤu¹ — MI/ZA fu^{I}, TH ʧu^{I}, TE/SI tu^{I} *sugarcane (n)*; ZO –tu^{I} *village name (n)*.

ʤun² — MI fun^{IIA} ~ fun^{III}, TH ʧun^{II} ~ ʧun^{III}, ZO/TE/SI tun^{II} ~ tun^{III} *wrap (v)*; ZA fun^{IIA} ~ fun^{III} *wrap (v_t)*, fun^{IIB} *wrap (v_b)*.

ʤur¯ — MI/ZA fur^{III}, TH ʧʊʔ, ZO tʊa^{III}, TE/SI tuk^{III} *rainy season (n)*.

ʤus — MI fu^{III}, TE/SI tu^{III} ~ tʊk *perch (v_i)*.[21]

ʤvp — *(areal)*.[22] MI/ZA fep^{IIB} ~ fɛʔ, TH ʧep^{II} ~ ʧep^{III}, ZO/TE tep^{II} ~ tep^{III}, SI tɛap^{II} ~ tɛap^{III} / te^{III} *suck on (v)*. MI fop^{IIB} ~ fɔʔ, TH ʧop^{II} ~ ʧop^{III}, ZO/TE top^{II} ~ top^{III}, SI top^{II} ~ top^{III} / to^{III} *suck up (v)*; ZA fop^{IIB} ~ fɔʔ *suckle (v_i)*; ZA fɔʔ *suckle (v_t)*. TH ʧip^{II} ~ ʧip^{III} *slurp, lap up (v)*.

[21] MI fu^{III} from Chhangte (1993:42).
[22] See Vol.1, Ch.6, #161.

h

hɛ̰l² — TH/ZO hɐlᴵᴵ ~ hɐlᴵᴵᴵ, TH/TE/SI hɛlᴵᴵ ~ hɛlᴵᴵᴵ *mix (v)*.

hɐm¹ — MI hɐmᴵ ~ hɐmᴵᴵᴵ *claw (v)*; ZA/TH/ZO/TE/SI hɐmᴵ ~ hɐmᴵᴵᴵ *scoop into arms (v)*. ZA hɐmᴵᴵᴮ *make run into mouth (by mythical human-eating snake) (v)*.

hɐr¹ — MI/ZA hɐrᴵ ~ hɐrᴵᴵᴵ, TH haʔᴵ ~ hɐʔ, ZO haᴵ ~ haᴵᴵᴵ, TE/SI hɐkᴵ– *difficult (v)*.

ha¹ — *(Austroasiatic)*.[23] MI/ZA/TH/ZO/TE/SI haᴵ *tooth (n)*.

haj¹ — MI/ZA/TH/ZO/TE/SI hajᴵ *mango (n)*.

haj¹ — MI hajᴵ ~ hajᴵᴵᴵ / hɐjʔ, ZA hajᴵ ~ hajᴵᴵᴵ, TH/ZO/SI hɐjᴵᴵᴵ, TE hɐjʔ *forget (v)*.[24]

har⁻ — MI harᴵᴵᴵ *pewter, solder (n)*; TH hɐʔ, ZO haʔᴵᴵᴵ, TE/SI hakᴵᴵᴵ *lead (n)*.

hɑ̊w¹ — MI hawᴵ ~ hawᴵᴵᴵ / hɐwʔ *reprove (v)*; TH howᴵ ~ howᴵᴵᴵ *reprove, quarrel (v)*; TI hawᴵ ~ hawᴵᴵᴵ, ZO/SI hawᴵ ~ hawᴵᴵᴵ *quarrel (v)*.

hem¹ — MI hemᴵ ~ hemᴵᴵᴵ *wobble, wag (v)*; TH/ZO/SI hemᴵᴵᴵ ~ hɛp *shift (v)*; TE hemᴵ ~ hemᴵᴵᴵ *squint* (v_i), hemᴵᴵᴵ ~ hɛp *shift* (v_t).

hiŋ¹ — MI hiŋᴵ ~ hinᴵᴵᴵ *sour (v)*; ZA hiŋᴵᴵᴵ hɪŋᴵᴵᴮ *stink (v)*; ZO/TE hiŋᴵᴵᴵ ~ hɪt, SI hiŋᴵᴵᴵ ~ hɪk *ferment (v)*.

hɔj⁻ — TH/ZO/SI hɔjᴵᴵᴵ, TE hɔjʔ *beautiful (v)*. *cf.* **mɔjᴵ**

hoŋ¹ — MI/ZA/TE hoŋᴵ *bark (n)*. *cf.* **kʰok**

hʊn² — MI hʊnᴵᴵᴮ, TH/ZO/TE/SI hʊnᴵᴵ *time (n)*.

HVk — *(onomatopoeic)*. MI hakᴵᴵᴮ *gasp (v)*; ZA hakᴵᴵᴮ, TE hakᴵᴵ ~ hakᴵᴵᴵ, SI hakᴵᴵ ~ hakᴵᴵᴵ / haᴵᴵᴵ, ZA ʔokᴵ, TH oʔᴵ, ZO oʔᴵ ~ oʔᴵᴵᴵ, TE/SI okᴵ ~ okᴵᴵᴵ *choke (v)*. MI okᴵᴵᴮ ~ ɔʔ, ZA ʔokᴵᴵᴮ ~ ʔɔʔ, TH/ZO oʔᴵᴵ ~ oᴵᴵᴵ, TE okᴵᴵ ~ okᴵᴵᴵ, SI okᴵᴵ ~ okᴵᴵᴵ / oᴵᴵᴵ *halter (v)*; MI okᴵᴵᴬ ~ okᴵᴵᴵ *retch (v)*.

HVL⁻ — *(Austroasiatic)*.[25] MI ɐlʔ *flame (n/v)*; ZA ʔɐlʔ *flame (v)*; TH/SI ɐlᴵᴵᴵ, TE ɐlʔ *red hot (v)*; ZO ɐlᴵᴵᴵ *cinder (n)*. MI urᴵ *fumigate (v)*.[26] TH/ZO/TE/SI ʊlᴵ ~ ʊlᴵᴵᴵ *stuffy (v)*. MI halᴵᴵᴬ ~ halᴵᴵᴵ, TH/ZO/TE/SI halᴵᴵ ~ halᴵᴵᴵ *burn (v)*; ZA halᴵᴵᴬ ~ halᴵᴵᴵ *thirst (v)*. MI hɔlᴵᴵᴬ, ZA – hɔlᴵᴵᴬ, TH/ZO/TE/SI hɔlᴵᴵ *charcoal (n)*; MI hɔlᴵᴵᴬ ~ hɔlᴵᴵᴵ *calescent (v)*. MI hʊlᴵᴵᴬ ~ hʊlᴵᴵᴵ *dry, watertight (v)*; MI hɪlᴵ ~ hɪlᴵᴵᴵ, ZA hʊlᴵᴵᴬ, TH/ZO hʊlᴵᴵ ~ hʊlᴵᴵᴵ *dry to touch (v)*; TE hʊlᴵᴵ ~ hʊlᴵᴵᴵ *boil off (v)*; SI hʊlᴵᴵ ~ hʊlᴵᴵᴵ *boil off, watertight (v)*; ZA hilᴵ ~ hilᴵᴵᴵ *dry to touch (food) (v)*; MI/ZA hulᴵ ~ hulᴵᴵᴵ *dry food over fire (v)*; TH hʊlᴵ ~ hʊlᴵᴵᴵ *dry, steam (v)*; ZO/TE hʊlᴵ ~ hʊlᴵᴵᴵ *singe (v)*, SI hʊlᴵ ~ hʊlᴵᴵᴵ *wilt (v)*. *cf.* **Par¹**

hVŋ² — MI hoŋᴵᴵᴬ, TH hʊŋᴵᴵ, ZO hɪŋᴵᴵ–, TE/SI hɔŋᴵᴵ– *come (v)*; ZA hʊŋᴵᴵᴬ *come up (v)*.

HVŋ⁻ — *(Austroasiatic)*.[27] MI/TH/SI hɔŋᴵ ~ hɔnᴵᴵᴵ, ZA ʔɔŋᴵ ~ ʔɔnᴵᴵᴵ *open (v)*; ZO/TE hɔŋᴵ ~ hɔnᴵᴵᴵ *open* ($v_{i/t}$), ZO/TE hɔnᴵᴵᴵ ~ hɔt *open* (v_b). MI oŋᴵᴵᴮ *holey (v), hole (n)*; ZA ʔɔŋᴵᴵᴮ *hole*; TH oŋᴵᴵ ~

[23] See Vol.1, Ch.6, #171.
[24] MI hɐjʔ from Chhangte (1996:87).
[25] See vol.1. ch.6, #75.
[26] MI urᴵ from Schuessler (2007:514).
[27] See vol.1. ch.6, #94.

on^{III} *vacant (v)*; ZO/TE/SI oŋ^{II} ~ on^{III} *vacant (v$_i$)*, on^{III} ~ ɔt *vacate (v$_t$)*. MI heŋ^{I} ~ hen^{III} *hollow (v)*; TE heŋ^{I} ~ hen^{III} *perforate, cavitied (v)*; SI hɛaŋ^{I} *cavitied (v)*, hoŋ^{I} ~ hon^{III} *hollow, perforate (v)*.

j

jɐk — *(Austroasiatic)*.[28] MI/ZA zɐk, TH ʒaʔ, TE/SI zɐk– *armpit (n)*.

jɛ̯k —[29] MI/ZA zɐk ~ zɐʔ, TH ʒa^{III}–, ZO za^{III}– / ze^{III}–, TE zɐʔ– / zɛʔ–, SI zɐk– ~ za^{III} *ashamed, humble (v)*.

jɐŋ⁻ — TH ʒɐŋ^{III} ~ ʒɐʔ, ZO zɐŋ^{III} ~ ʒɐʔ / zɐt, TE zɐŋ^{III} ~ zɐt, SI zɐŋ^{III} ~ ʒɐk / zɐt *use (v)*.

ja² — TH ʒa^{II} ~ ʒaʔ^{II}, ZO za^{II} ~ zaʔ^{II}, TE/SI za^{II} ~ zak^{II} *hear (v)*.

jaŋ¹ — MI zaŋ^{I} *upper back (n)*; ZA/ZO/TE/SI zaŋ^{I} *dorsum (n)*; TH ʒaŋ^{I} *crown of head (n)*. TH ʒaŋ^{I} ~ ʒan^{III}, ZO/TE/SI zaŋ^{I} ~ zan^{III} *level (v)*.

jaŋ² — MI/ZA zaŋ^{IIA}, TH ʒaŋ^{II}, ZO/TE/SI zaŋ^{II} *lightweight (v)*.

jap — *(Austroasiatic)*.[30] MI zap^{IIB} ~ zɐʔ, ZA zap^{IIB}, TH ʒap^{II} ~ ʒap^{III}, ZO/TE zap^{II} ~ zap^{II}, SI zap^{II} ~ zap^{II} / za^{III} *flap (v)*. *cf.* **(k)l$^{(h)}$vp**, **$^{(h)}$lvm⁻**

jas — MI/ZA/ZO/TE/SI za^{III}, TH ʒa$^{II/III}$ *hundred (n)*.[31]

jaw¹ — MI zaw^{I} ~ zaw^{III} *vast (v)*; ZA zaw^{I} ~ zaw^{III} *lie down (v)*; TH ʒaw^{I} ~ ʒaw^{III} *wide (v)*; ZO zaw^{III} *fields within region (n)*; SI zaw^{I} ~ zaw^{III} *sprawl on back (v)*; TH ʒaw^{III} *surroundings (n)*.

jɛp — TH ʒɛp ~ ʒe^{III}, ZO zɛp ~ ze^{III}, TE zɛp ~ zɛʔ *wedge (v)*.

jɪn² — MI zɪn^{IIA} ~ zɪn^{III}, TH ʒɪn^{II} ~ ʒɪn^{II} ZO/TE zɪn^{II} ~ zɪn^{III}, SI zɪn^{III} *travel (v)*; TH ʒɪn^{II}, ZO/TE zɪn^{II} *traveller (n)*.

jɔŋ¹ — MI/TE/SI zɔŋ^{I} ~ zɔn^{III} *seek (v)*. *cf.* **joŋ¹**

jɔw¹ — MI/ZA/ZO/TE/SI zɔw^{I}, TH ʒɔw^{I} *Zo*.

jɔw² — MI zɔw^{IIA} ~ zɔʔ, ZA –zɔw^{IIA} *finish (v)*; TH ʒɔw^{II} ~ ʒo^{III}, ZO/SI zɔw^{II} ~ zo^{III} TE zɔw^{II} ~ zɔʔ *finish, win (v)*.

Jol⁻ — MI sol^{I} ~ sol^{III}, ZA/ZO/TE/SI zol^{II} ~ zol^{III}, TH ʒol^{II} ~ ʒol^{III} *oval (v)*.

jom² — TH ʒom^{II} ~ ʒom^{III} *weak (v)* ZO/TE/SI zom^{II} ~ zom^{III} *languid (v)*.

jon¹ — TH ʒon^{I}, ZO/TE zon^{I} *rod for corncobs (n)*.

joŋ¹ — TE zoŋ^{I} ~ zon^{III} *carry jointly (v)*.[32] ZO/TE zon^{III} ~ zɔt *summon assistance (v)*. *cf.* **jɔŋ¹**

joŋ¹ — MI/ZA/ZO/TE/SI zoŋ^{I}, TH ʒoŋ^{I} *monkey (n)*

joŋ¹ — ZO/TE/SI zoŋ^{I} ~ zon^{III} *poor (v_i)*; TH ʒoŋ^{I} ~ ʒon^{III} *ill-natured (v_i)*.

jot — MI zot^{IIB} ~ zɔʔ *ask (v)*; ZA zot^{IIB} *follow animal tracks (v)*; TH ʒot^{II} ~ ʒot^{III} *walk (v)*; TE zot^{II} ~ zot^{III}, SI zot^{II} ~ zot^{III} / zo^{II} *ask, grope (v)*.

jʊaŋ¹ — MI zʊaŋ^{I} ~ zʊan^{III} *leap (v_i)*,[33] zʊan^{III} *leap on (v_t)*; TE –zʊaŋ^{I} *fly (v)*.[34] TH ʒoʊn^{III} ~ ʒɔt, ZO zʊon^{III} ~ zɔt, TE zʊan^{III} ~ zʊat *head for pastures new*

[28] See Vol.1, Ch.6, #2.
[29] See Vol.1, Ch.6 #3.
[30] See Vol.1, Ch.6, #72.
[31] TH ʒa^{III} from Luce (1962:tableB).
[32] TE joŋ^{I} ~ zon^{III} from Bhaskararao (1996:103).
[33] MI zʊaŋ^{I} ~ zʊan^{III} from VanBik (2009:285).
[34] TE –zʊaŋ^{I} from Khoi Lam Thang (2001:143).

(v), SI zuɐn^{III} ~ zɔt *elope, leave mother to live with father (v)*.

jʊar¹ — *(Austroasiatic)*.[35] MI/ZA zʊar^{I} ~ zʊar^{III} *sell ($v_{i/t}$)*, zɔrʔ *sell (v_b)*; TH ʒoʊʔ^{I} ~ ʒoʊʔ^{III}, ZO zʊa^{I} ~ zʊa^{III}, TE zʊak^{I} ~ zʊak^{III}, SI zuɐk^{I} ~ zuɐk^{III} *sell (v)*.

jʊk — MI/ZA/TE/SI –zʊk, TH –ʒʊʔ, SI –zʊʔ *sambur deer (n)*.

jʊm¹ — MI/ZA/ZO/TE/SI zʊm^{I} ~ zʊm^{III}, TH ʒʊm^{I} ~ ʒʊm^{III} *taper (v_i)*; MI/ZA zʊm^{IIB}, TE/SI zʊm^{III} ~ zʊp *taper (v_t)*.

jʊŋ¹ — MI/SI zʊŋ^{I} ~ zʊn^{III} *urinate (v)*; TH ʒʊŋ^{I} ~ ʒʊn^{III}, ZO zʊŋ^{I} ~ zʊn^{III} *melt (v)*. MI/ZA/ZO/TE/SI zʊn^{III}, TH ʒʊn^{III} *urine (n)*.

ju¹ — *(Sinitic)*.[36] MI/ZA/ZO/TE/SI zu^{I}, TH ʒu^{I} *liquor (n)*.

ju² — *(Sinitic)*.[37] MI –zu^{IIB}, ZA zu^{IIA}–, TH ʒu^{II}, ZO/TE zu^{II}; SI zʊ– *rodent (n)*.

jus — MI zu^{III}– (~ zʊk), TH ʒu^{III} ~ ʒʊʔ, ZO zu^{III} ~ zʊʔ / zʊt, TE zu^{III} ~ zʊk, SI zu^{III} ~ zʊk / zʊt *rain (v)*.

jut — *(Austroasiatic)*.[38] MI/ZA zut^{I} ~ zut^{III}, TH ʒut^{I} ~ ʒut^{III}, ZO/TE/SI zut^{II} ~ zut^{III} *stroke (v)*.

jv² — (ST *ja^{ʔ}).[39] MI/ZA za^{IIA} ~ zat^{IIB}, TH ʒa^{II} ~ ʒat^{II}, ZO za^{II} ~ zat^{II}, TE zɪa^{II} ~ zɪat^{II}, SI ze^{II} ~ zet^{II} *itch (v_i)*. MI zɪat^{IIB} ~ zɪaʔ, ZA zɪat^{I} LA zɪat^{IIB} *file (v)*; TE zɪat^{II} *tickle (v)*.

jvj¯ — MI zaj^{I}, TH ʒɐj^{I}–, ZO/TE/SI zɐj^{I}– *song (n)*; MI zaj^{I} ~ zaj^{III} *sing (v)*; MI zɛj^{IIA} ~ zɛj^{III}, ZA zɐj^{I} ~ zɐj^{III} *skilful (v)*; MI zaj^{III} *temperament (n)*.

jvl¯ — MI zar^{I} ~ zar^{III}, TH ʒɐl^{I} ~ ʒɐl^{III}, ZO/SI zɐl^{I} ~ zɐl^{I}, SI zal^{I} ~ zal^{III}, TE zɐl^{II} ~ zɐl^{III} *spread out (v)*; ZA zar^{I} ~ zar^{III} *hang out/down (v)*; TH ʒaʔ^{I} *lay out (v)*; TH ʒɛʔ^{I} ~ ʒɛʔ, ZO zeʔ^{I} ~ zeʔ^{III} *spread wings (v)*; TE zak^{I} ~ zak^{III} *spread (v)*; TE zek^{I} ~ zek^{III}, SI zɛak^{I} ~ zɛak^{III} *distribute (v)*; MI –zɐrʔ *reveal (v)*; TE zɐlʔ / zɛlʔ *flatten out (v)*. MI –zɐl^{I} *smooth (v)*; MI zal^{I} ~ zal^{III} *recline, level (road) (v)*; MI zol^{I} ~ zol^{III} *level (land) (v)*; TH ʒal^{I} ~ ʒal^{III}, SI zal^{I} ~ zal^{III} *recline (v)*; TE zal^{I} ~ zal^{III} *sleep (v)*. MI zar^{I}, ZO zal^{I} *branch (n)*; TH ʒal^{I} *shelf (n)*; TH ʒol^{I}, ZO/TE/SI zol^{I} *beam (n)*. MI zaj^{IIA} ~ zaj^{III} *proliferate (v)*; ZO/TE/SI zɐj^{II} ~ zɐj^{III} *wide (v)*.

JVL¯ — *(Sinitic)*.[40] MI zɪr^{I} ~ zɪr^{III}, ZA zɪr^{I} ~ zɪrʔ, TH ʒɪl^{I} ~ ʒɪl^{III} *learn (v)*; ZA zɪrʔ *teach (v)*; ZO/TE zɪl^{I} ~ zɪl^{III} *recall, retrace (v)*; SI zɪl^{I} ~ zɪl^{III} *imitate (v)*. MI zul^{I} ~ zul^{III} / zʊlʔ *follow course (v)*; ZA zul^{I} ~ zul^{III} *pool resources (v)*; TH ʒʊl^{II} ~ ʒʊl^{III} *dissolve (v)*; TH ʒʊn^{II} ZO zʊl^{II} ~ zʊl^{III}, TE/SI zʊn^{II} ~ zʊn^{III} *squishy (fruit) (v)*; ZA zʊn^{IIB} *leak (v)*. MI zʊj^{IIB}, TH ʒuj^{II} ~ ʒuj^{III}, ZO zuj^{II} ~ zuj^{III}, TE zuj^{II} ~ zʊjʔ, SI zʊj^{II} ~ zʊj^{III} *follow (v)*; MI zʊjʔ *taper (v)*. ZA zɛlʔ *peel fruit skin with knife (v)*; TH ʒɛl^{III}, ZO zel^{III} ~ zɛl^{III}, TE zel^{III} ~ zɛlʔ, SI zɛl^{III} *permeate (v)*. TH/TE/SI sul^{II}– *pursue (v)*. ZO suj^{I} ~ suj^{III} *search (v)*. TE zul^{II} ~ zul^{III}, SI zul^{III} ~ zʊl^{III} *skim past target (v)*. MI sʊj^{IIB} ~ sʊjʔ, TH suj^{II} ~ suj^{III} / sʊj^{III}, ZO suj^{II} ~ suj^{III}, TE suj^{II} ~ sʊjʔ, SI sʊj^{II} ~ sʊj^{III} *whittle (v)*.

[35] See Shorto (2006:450).
[36] See Vol.1, Ch.6, #106.
[37] See Vol.1, Ch.6, #134.
[38] See the data in Shorto (2006:296).
[39] See Vol.1, Ch.6, #99.
[40] See Vol.1, Ch.6, #76.

jvm¹ — MI zam^{I} ~ zam^{III} *sprawl, float* (v_i), MI zɐm^{IIB} *spread* (v_t); ZA zam^{I}, TH ʒam^{I} ~ ʒam^{III}, ZO/TE/SI zam^{I} ~ zam^{III} *sprawl (v)*. ZA zɐm^{I} ~ zɐm^{III} *fly (v)*; TH ʒɐm^{I} ~ ʒɐm^{III} *lie across/on-back (v)*; TE –zɐm^{I} ~ zɐm^{III} *swim (v)*, *droop (eyelids) (v)*; SI zɐm^{I} ~ zɐm^{III} *go far (projectile)* (v_i); TH ʒɐm^{I}, ZO/SI zɐm^{I} *strand (n)*; TH ʒɐm^{III} ~ ʒɐp, ZO/TE/SI zɐm^{III} ~ zɐp *reach for (v)*. MI zɔm^{IIB}, TH ʒɔm^{III} ~ ʒɔp, ZO/TE/SI zɔm^{III} ~ zɔp *join (v)*.

jvŋ¹ — TH –ʒɐŋ^{I}, ZO zɐŋ^{I}–, SI –zɐŋ^{I} *intestines (n)*; TE zɐŋ^{I}– *intestines, strand (n)*. MI/ZA zʊŋ^{I}, TH ʒɪŋ^{III}, ZO/TE/SI zɪŋ^{III} *partition (n)*. *cf.* **jvŋ²**

jvŋ² — MI/ZA zʊŋ^{IIA} *finger (n)*; TH ʒʊŋ^{II}, ZO zʊŋ^{II} *root (n)*, TE/SI zʊŋ^{II} *finger, root (n)*. MI zɐŋ^{IIA}, SI zɐŋ^{II} *penis, bee stinger (n)*; ZA zɐŋ^{IIA}, TH ʒɐŋ^{II}, ZO/TE zɐŋ^{II} *penis (n)*. *cf.* **jvŋ¹**

jvŋ⁻ — MI/ZA/TH/ZO/TE/SI ziŋ^{I} *morning (n)*; MI ziŋ^{I} ~ zin^{III} *be early morning, gather (clouds) (v)*; ZA ziŋ^{I} ~ zin^{III} *gather (morning clouds) (v)*; TH ʒiŋ^{I} ~ ʒin^{III} *dark (v)*; ZO/TE/SI ziŋ^{I} ~ zin^{III} *gloomy (v)*. MI –zoŋ^{I}, ZA –zoŋ$^{(I)}$ *dusk (n)*. MI/ZA/TH/ZO/TE/SI zan^{III} *night (n)*; TE zan^{III} ~ zɐt *be night (v)*. MI zɪŋ^{IIA} ~ zɪn^{III}, TH ʒiŋ^{II} ~ ʒin^{III}, ZO/TE/SI ziŋ^{II} ~ zin^{III} *dense (v)*.

k

kɐm¹ — *(Austroasiatic).*[41] MI/ZA/TH/ZO/TE/SI kɐm^{I} *mouth (n)*. MI/ZA kɐm^{IIB}, TH/ZO/TE/SI kɐm^{I} ~ kɐm^{III} *set trap (v)*.

kɐp — *(Austroasiatic)*.[42] MI/ZA kɐp *crotch (n)*. *cf.* **kə̊p**

kaN⁻ — *(Indo-Aryan)*.[43] MI/ZA/TH/ZO/TE kat^{I}, SI kɐn^{III} *sulphur (n)*.

kaŋ² — MI –kaŋ^{IIA}, TH/ZO/TE/SI –kaŋ^{II} *mosquito (n)*.

ka(ɒ)⁻ — *(Austroasiatic)*.[44] MI kaŋ^{IIA} ~ kan^{III} *elevated (v)*; MI kak^{IIB} *fork of tree (n), fork (v)*; ZA kaŋ^{IIA} ~ kan^{III}, ZA kak^{IIA} ~ kak^{III} *apart (v)*; TH kaŋ^{II} ~ kan^{III} *rise, convalesce, apart (v)*; ZO/TE kaŋ^{II} ~ kan^{III} *convalesce (v)*; SI kaŋ^{II} ~ kan^{III} *convalesce, apart (v)*. TH/ZO/TE/SI ka^{II} ~ kat^{II} *fork (v)*. MI/ZA ka^{I} *mouth (n)*. TH ka^{I} ~ kɐt / kɐʔ, TE ka^{I} ~ kat^{II}, SI ka^{I} ~ kɐt *open mouth (v)*. ⇨ **k^{h}aŋ²**. *cf.* **k^{h}a²**

kap — MI/ZA kap^{IIB} ~ kɐʔ, TH/ZO/TE kap^{II} ~ kap^{III}, SI kap^{II} ~ kap^{III} / ka^{III} *shoot (v)*.

kə̊p — MI/ZA/TH/ZO/TE/SI kɔp *couple (n)*. TH/ZO/TE/SI kap^{II} *couple of oxen (n)*. *cf.* **kɐp**

kaw¹ — MI/TH/ZO/SI kaw^{I} ~ kaw^{III}, ZA kaw^{III} ~ kɐwʔ *divaricate (v)*.

kAj⁻ — MI/ZA kɐj^{III}–, TH/ZO/TE/SI kaj^{III}– *prawn (n)*.

k$\underset{\sim}{\text{A}}$k — MI kɐk, TH/ZO keʔ^{II} ~ ke^{III}, SI kɛk ~ ke^{III} *crack (v)*; ZA kɛk ~ kɛʔ *crack (v$_{i}$)*, kak *crack (v$_{t}$)*; TE kek^{II} ~ kek^{III} *tear (v)*. MI kɛʔ *shatter (v)*; TH/ZO/SI ke^{III}, TE kɛʔ *leaky (v)*. MI kek^{IIB} ~ kɛʔ *pull out/apart (v)*. *cf.* **k^{h}vŋ**

kAL⁻ — MI kar^{IIB}, TH kaʔ^{I} ~ kɐʔ, ZO kaʔ^{I} ~ kaʔ^{III} *widen, stride (v)*; ZA kar^{I} *stride (v)*; TE/SI kak^{I} ~ kak^{III} *widen (v)*. MI/TE kɐl^{I} ~ kɐl^{III} *walk (v)*. MI kɐl^{IIA}, TH/ZO/TE/SI kɐl^{II} *kidney (n)*; ZA kɐl^{IIA}– *groin (n)*; ZA/ZO kɐl^{I}, LA kar^{I} *footstep (n)*; TH/SI kɐl^{I} *footstep, groin (n)*. MI kar^{I}, TH/ZO/TE/SI kal^{I} *interval (n)*; ZA kɐr^{III} *between (v)*. MI/ZA kɐlʔ, TH/ZO/SI kɐl^{III} *lever, bolt (v)*; TE kɐl^{III} ~ kɐlʔ *lever (v)*, kɐlʔ *bolt (v)*. MI/ZA kan^{IIB}, TH/ZO/TE/SI kan^{II} ~ kan^{III} *traverse (v)*; TH kɐl^{I} ~ kɐl^{III} *ascend, traverse (v)*. M/ZO/TE/SI kaj^{I} ~ kaj^{III}, TH kaj^{I} ~ kaj^{III} / kɐj^{III} *ford (v)*. *cf.* **ƛaj¹**

kAŋ⁻ — *(Austroasiatic)*.[45] MI kaŋ^{I} ~ kan^{III}, MI kɐŋ^{IIB}, ZA kɐŋ^{I} ~ kɐn^{III}, TH/ZO/TE/SI kɐŋ^{II} ~ kɐn^{III} *evaporate (v)*; MI kaŋ^{I} ~ kan^{III}, MI kaŋ^{III} ~ kɐn^{IIB} *burn (v)*; ZA kaŋ^{III} ~ kɐŋ^{IIB} *burn (v$_{i}$)*, kɐŋ^{IIB} *burn (v$_{t}$)*. MI/ZA/TH/ZO/TE/SI kɐŋ^{I} ~ kɐn^{III} *fry (v)*; TE kaŋ^{III} ~ kɐt / kat^{II}, SI kaŋ^{III} ~ kɐt *scorch (v)*.[46]

kɛj¹ — *(areal)*.[47] MI/ZA/TH/ZO/TE/SI kɛj^{I} *I*.[48]

kɛj¹ — MI/ZO kɛj^{I}, SI –kɛj^{I} *tiger (n)*; ZA –kɛj^{I} *mythical tiger (n)*; TH kɛj^{I} *lion (n)*; TE –kɛj^{I} *leopard (n)*.

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[41] See Vol.1, Ch.6, #115.
[42] See Vol.1, Ch.6, #38.
[43] See Vol.1, Ch.6, #162.
[44] See Vol.1, Ch.6, #79.
[45] See Vol.1, Ch.6, #51.
[46] TE kɐt from Bhaskararao (1996:51).
[47] See Vol.1, Ch.6, #98.
[48] ZA has an abbreviated form ki^{I}.

kɛj⁻ — MI kɛjʔ, ZO kɛj^{III}, TE kɛj^{III} ~ kɛjʔ *bite (v)*.

kɛŋ¹ — MI/ZA kɛŋ^{I} ~ kɛn^{III} *bring (v$_t$)*, kɛn^{IIB} *bring (v$_b$)*; TH/ZO/TE/SI kɛŋ^{I} ~ kɛn^{III} *bring (v)*. *cf.* **(k)l$^{(h)}$vŋ⁻**

kɛp — MI/ZA/TH/ZO/TE/SI kɛp *mollusc (n)*.

kel⁻ — MI/TH/ZO/TE kel^{III}, SI kɛal^{III} *goat (n)*.

kew⁻ — MI kew^{IIB} ~ kɛwʔ, ZA/TE kɛwʔ, TH kew^{III} ~ kɛw^{III}, ZO/SI kɛw^{III} *hatch (v)*.

kɪam² — MI/TE kɪam^{II} ~ kɪam^{III}, TH keɪm^{II} ~ keɪm^{III}, ZO kɪem^{II} ~ kɪem^{III}, SI kiɐm^{II} ~ kiɐm^{III} *decrease (v$_i$)*. ⇨ **k^{h}ɪam²**

kɪl² — MI/TE kɪlʔ, TH/ZO/SI kɪl^{III} *fasten (v)*; ZA kɪl^{IIA} ~ kɪl^{III} *guard (v)*.

kɪM⁻ — MI kɪm^{IIA} ~ kɪm^{III} *complete (v)*; TH kɪm^{II}, TE kɪm^{II} ~ kɪm^{III}, SI kɪm^{II} (~ kɪm^{III}) *equal (v)*. ZA/TH/ZO/TE/SI kɪm^{I} ~ kɪm^{III} *entire (v)*. MI kɪp *every (v)*; TH/ZO/TE/SI kɪp *stable (v)*.

ki² — MI/ZA ki^{IIB}, TH/ZO/TE/SI ki^{II} *horn (n)*.

ki² — (ST *gjəʔ).[49] MI –ki^{IIA}, ZA ki^{IIA}–, TH/ZO/TE/SI ki^{II} *parrot (n)*.

kir² — MI/ZA kir^{IIA} ~ kir^{III}, TH kiʔ^{II} ~ kɪʔ, ZO kɪa^{II} ~ kɪa^{III}, TE kik^{II} ~ kik^{III} *return (v$_i$)*; SI kik^{II} ~ kik^{III} / ki^{III} *discolour (v)*.[50] ⇨ **k^{h}ir²**. *cf.* **kVL⁻**

kɪŋ⁻ — MI kɪk, ZA kiŋ^{III} ~ kɪŋ^{IIB}, SI kiŋ^{III} ~ kɪk *knock (v)*.

kɪw⁻ — MI/ZA/ZO/TE kiw^{III}, TH kɪw^{III} *elbow (n)*.

kɔk — *(Austroasiatic)*.[51] ZA kɔk ~ kɔʔ *fade (v)*; TH kɔʔ, ZO kɔʔ ~ ko^{III}, TE kɔk^{I}, SI kɔk^{I} ~ ko^{III} *peel (v$_i$)*. ⇨ **ʞ^{h}vk**

kɔl² — MI kɔl^{IIA}, TH/ZO/TE/SI kɔl^{II} *yoke, hand-cuffs (n)*.

kɔL² — *(Indo-Aryan)*.[52] MI –kɔr^{IIA}, TH/ZO/TE –kɔl^{II} *horse (n)*.

kɔŋ¹ — MI kɔŋ^{I} *path, doorway (n)*; ZA kɔŋ^{I} *path (n)*; TE kɔŋ^{I} *door (n)*; SI kɔŋ^{I} *entrance, road home (n)*. *cf.* **kɔt**

kɔt — MI kɔt *dooryard (n)*; ZA kɔt *gate (n)*; TH/ZO kɔt *door (n)*. *cf.* **kɔŋ¹**

kɔw² — MI kɔw$^{I/IIA}$, TH/TE/SI kɔw^{II} *shoulder (n)*.

kol¹ — MI/ZA/TH/ZO/TE/SI kol^{I} *Burman (n)*.

kom¹ — MI kom^{I} *pod, shell (n)*; ZA kom^{I} *husk (n)*; TH kom^{I} *cob (n)*; ZO/TE kom^{I} *wall (n)*. TH/ZO kom^{I} ~ kom^{III} *visit person (v)*; TE kom^{I} ~ kom^{III} *gather (relatives) (v$_i$)*, SI kom^{I} ~ kom^{III} *in touch (v)*. ⇨ **k^{h}om¹**

koŋ² — MI koŋ^{IIB} *loins (n)*; ZA koŋ^{IIB} *upper leg (n)*; TH/ZO/TE/SI koŋ^{II} *waist (n)*. *cf.* **kVŋ⁻**

[49] See Vol.1, Ch.6, #127.
[50] See VanBik (2009:324) for the possible association with **kVL⁻**.
[51] See Shorto (2006:170).
[52] See Matisoff (2003:400).

kʊa² — (ST *k^{w}əw^{ʔ}).[53] MI kʊa^{IIA} ~ kʊa^{III}, ZA kʊa^{IIA} ~ kʊat^{IIB}, TH koʊ^{II}, ZO kʊo^{II}, TE kʊa^{II}, SI kuɐ^{II} *nine (v)*.

kʊaŋ¹ — MI/ZA/TE kʊaŋ^{I}, TH koʊŋ^{I}, ZO kʊoŋ^{I}, SI kuɐŋ^{I} *coffin (n)*.

kʊar¹ — ZO kʊoʔ^{I} ~ kʊoʔ^{III}, TE kʊak^{I} ~ kʊak^{III} *hollow (v$_i$)*. ZA kʊar^{I} *hollow (n)*. ⇨ **k^{h}ʊar¹**

kʊas — MI/ZA/TE kʊa^{III}, TH koʊ^{III}, ZO kʊo^{III}, SI kuɐ^{III} *burrow (n)*.

kʊl¹ — *(Austroasiatic)*.[54] ZA/SI kʊl^{I} *twenty (n)*.

kʊs — MI/ZA/TE –kʊʔ, TH/ZO –ku^{III}, SI –ku$^{(III)}$ *porcupine (n)*.[55]

kʊl¯ — MI/ZA kʊlʔ *stockade (v)*; MI/TE kʊlʔ, TH/ZO/SI kʊl^{III} *city wall (n)*.

kVL¯ — *(Austroasiatic)*.[56] MI kʊal^{I} ~ kʊal^{III}, ZA kʊal^{IIA} ~ kʊal^{III}, TH koʊl^{II} ~ koʊl^{III}, ZO kʊol^{II} ~ kʊol^{III}, TE kʊal^{II} ~ kʊal^{III}, SI kuɐl^{II} ~ kuɐl^{III} *coil (v)*. MI kʊal^{I}, TH koʊl^{III}, TE kʊal^{III}, SI kuɐl^{II} *coil (n)*. MI/ZA kʊaj^{III} ~ kɔjʔ *bend (v)* TH koʊj^{I}, ZO kʊej^{I} ~ kʊej^{III} *ready for harvesting (rice) (v)*; TE kʊaj^{I} ~ kʊaj^{III}, SI kuɛj^{I} ~ kuɛj^{III} *sag (v)*. MI koj^{III} ~ kɔjʔ, ZA koj^{IIB} ~ koj^{III}, TH koj^{II} ~ koj^{III} / kɔj^{III}, ZO/TE koj^{II} ~ koj^{III}, SI kɔaj^{II} ~ kɔaj^{III} *bend (v)*. MI kul^{I} ~ kul^{III} / kʊlʔ, ZA kul^{III}, TE kʊl^{III} ~ kʊlʔ, SI kul^{III} ~ kʊl^{III} *bend (v)*. MI kɪl^{IIA} *angled (v)*; TH/TE/SI kil^{II} ~ kil^{III} *curl (hair) (v$_i$)*. MI kɪl^{IIA}, TE kil^{I} *edge, corner (n)*; ZA kil$^{I/IIB}$ *corner (n)*; ZO/SI kil^{I} *edge (n)*. MI kɛl^{II} ~ kɛl^{III} *remote (v)*; ZA kɛl^{IIB} *corner (v)*. MI kun^{IIA} ~ kun^{III}, TH/ZO/TE kun^{II} ~ kun^{III} *bow (v)*; SI kun^{II} ~ kun^{III} *bow at neck (v)*; ZA kun^{IIA} ~ kun^{III} *bow, hunchbacked (v)*; TH kon^{II} ~ kon^{III} *bend (v)*; ZO kon^{II} ~ kon^{III} *hunchbacked (v)*; SI kon^{II} ~ kon^{III} *bow at waist (v)*. TH/ZO/TE/SI kɔn^{I} ~ kɔn^{III} *crouch (v)*. MI kon^{III} *saddle of hill (n)*. ZA kaj^{IIA} ~ kaj^{III} *askew (v)*, TH kaj^{IIA} ~ kaj^{III} / kɐj^{III} , ZO kaj^{IIA} ~ kaj^{III} *low (sun) (v)*, TE/SI kaj^{II} ~ kaj^{III} *askew/low (eyes/sun) (v)*. *cf.* **ɲʊ(a)j¯**, **wVL¯**, **kir²**

kVŋ¯ — *(Tai-Kadai)*.[57] MI kuŋ^{IIA} *trunk (n)*, kuŋ^{IIB} *branches (n)*; MI kʊaŋ^{IIA} *stalk (n)*; ZA kuŋ^{IIA} *trunk, stalk (n)*; TH/ZO/TE kʊŋ^{II}, SI kuŋ^{II} *stalk (n)*; TH kɐŋ^{I}, ZO/TE kʊŋ^{I} *rod (n)*, TH/TE kɐŋ^{II} *leg (n)*, ZO kɐŋ^{II} *foot, leg (n)*; SI kuŋ^{I} *rod-shaped handle (n)*. *cf.* **koŋ²**

kVm¯ — MI kʊm^{I} ~ kʊm^{III} *shrug, cup hand (v)*; ZA k^{h}ʊm^{I} *concave (v)*; ZO/TE kum^{I} ~ kum^{III} *concave, cup hand (v)*. MI/ZA/TH/ZO/TE/SI kʊm^{III} *year (n)*.[58] MI kʊam^{IIA} ~ kʊam^{III}, TH/ZO/TE/SI kɔm^{I} ~ kɔm^{III} *indented (v)*. MI kɔm^{IIA} ~ kɔm^{III}, TH kɛm^{I} ~ kɛm^{III} *bend (v)*. MI/TE kʊam^{III}, TH kɔm^{I}, ZO kʊom^{III}, SI kuɐm$^{I/III}$ *valley (n)*; MI kɔm^{IIA} *shallow depression (n)*; ZA hom^{IIA}, ZO/TE/SI hom^{II} ~ hom^{III} *empty (v)*; TH hom^{I} ~ hom^{III} *hollow (v)*; TH/ZO/TE hom^{I} *hole (n)*. MI hʊm^{I} *pit trap (n)*.

kV(w)¹ — *(Austroasiatic)*.[59] MI kɔw^{III} ~ kɔwʔ, ZA kɔw^{I} ~ kɔwʔ *call (v)*; TH kɔw^{III} *call, inform (v)*; ZO/TE/SI kɔw^{I}

[53] See Vol.1, Ch.6, #121.
[54] See Shorto (2006:570).
[55] Shafer (1965:4) suggests an Austroasiatic link.
[56] See Vol.1, Ch.6, #17.
[57] See Vol.1, Ch.6, #158.
[58] See Matisoff (1972a:35) for similar semantics.
[59] See Vol.1, Ch.6, #31.

~ kɔw^{III} *disparage (v)*; TE kɔw^{III} ~ kɔwʔ, ZO/SI kɔw^{III} *inform (v)*. MI aw^{I} ~ aw^{III} *shout* ($v_{i/t}$), MI ɐwʔ *shout* (v_{b}); ZA ʔaw^{I} ~ ʔaw^{III} *shout* ($v_{i/t}$), ʔɐwʔ *shout* (v_{b}); SI aw^{I} ~ aw^{III} *shout (v)*; TH ew^{I} ~ ew^{III}, TH/ZO aw^{I} ~ aw^{III} *vociferous (v)*. TH/TE/SI ku^{II} ~ kut^{II} *exclaim (v)*.

k^h

k^hɛɮ⁻ — MI k^hɐlʔ *herd, overtake (v)*; ZA k^hal^{III} ~ k^hɐlʔ *watch over herd (v)*; TH xɐl^{III} / xɛl^{III}, ZO xɛl^{III}, TE –xɛlʔ *overtake (v)*.

k^hɐm⁻ — ZO/TE xɐm^{III}, SI k^hɐm^{III} *gold (n)*.

k^hɐt — MI/ZA/SI k^hɐt, TH/ZO/TE xɐt *one (v)*. MI/ZA k^hɐt ~ k^hɐʔ *full (v)*; TH/TE xɐt, SI k^hɐt *same (v)*; ZO xɐt *co-occur (v)*.

k^ha² — MI/ZA k^ha^{IIB}, TH/ZO/TE xa^{II}, SI k^ha^{II} *jaw, chin (n)*. *cf.* **ka(ŋ)⁻**

k^ha² — (ST *k^ha^{ʔ}).[60] MI k^ha^{III} ~ k^hak^{IIB}, ZA k^ha^{IIB} ~ k^hat^{IIB}, TH/ZO xa^{II} ~ xat^{II}, TE xa^{II} ~ xat^{II} / xak^{II}, SI k^ha^{II} ~ k^hat^{II} *bitter (v)*. TH/ZO/TE –xa^{III}, SI –k^ha^{III} *bile (n)*.

k^ha(ĸ) — *(onomatopoeic)*. MI k^ha^{III} ~ k^hak^{IIB}, ZA k^hak^{I} *phlegm (v)*. MI k^hak^{IIA}, ZA k^hak^{I}, TH xaʔ^{II} / xat^{II}, ZO xaʔ^{II}– / xat^{II}–, TE xak^{II}–, SI k^hak^{II} *phlegm (n)*.

k^haʟ² — (ST *k^hal^{ʔ}).[61] MI k^hɐl^{IIB} *congeal (v)*, ZA k^hɐl^{IIA} ~ k^hɐl^{III}, TH xɐl^{III}, ZO xɐl^{II} ~ xɐl^{III}, TE xɐl^{III} ~ xɐlʔ, SI k^hɐl^{III} *solid, congeal (v)*. MI/ZA k^har^{IIA} ~ k^har^{III}, TH xaʔ^{II} ~ xa^{III}, ZO xa^{II} ~ xa^{III}, TE xak^{II} ~ xak^{III}, SI k^hak^{II} ~ k^hak^{III} / k^ha^{III} *close, shut (v)*. MI k^har^{IIA} *crust, dam (n)*; ZA k^har^{IIA} *glutinous mass (n)*.

k^ham¹ — MI/ZA k^ham^{III} *precipice (n), precipitous (v)*; SI k^ham^{I} *steep (v)*.

k^haŋ² — MI/ZA k^haŋ^{IIA} ~ k^han^{III} *lay over gap (v)*; TH xaŋ^{IIA} ~ xan^{III}, SI k^haŋ^{II} ~ k^han^{III} *raise, lay over (gap) (v)*; ZO/TE xaŋ^{IIA} ~ xan^{III} *raise (v)*. ⇨ **kaŋ²**

k^hap — *(Austroasiatic)*.[62] MI k^hap^{I}, ZA k^hap^{IIB}, TH/ZO/TE xap^{II}, SI k^hap^{II} *handspan (n)*. MI k^hap^{I} ~ k^hap^{III} *span with hand (v)*.

k^haw¹ — MI k^haw^{I} *bark used for rope (n)*; TH/ZO/TE xaw^{I}, SI k^haw^{I} *rope (n)*.

k^hᴀᴍ⁻ — MI/ZA k^hɐm^{I} ~ k^hɐm^{III} *block (v)*; TH/ZO xɐm^{I} ~ xɐm^{III}, TE xɐm^{I} ~ xɐm^{III} / xɐp, SI k^hɐm^{I} ~ k^hɐm^{III} / k^hɐp *terrace (v)*. MI k^hɐm^{III} ~ k^hɐm^{IIB}, ZA k^hɐm^{III}, TH/ZO/TE xɐm^{III} ~ xɐp, SI k^hɐm^{III} ~ k^hɐp *pillow (v)*. MI k^hɐp, SI k^ham^{II} *prohibit (v)*; ZA k^hɐp *gird (v)*; TH/ZO xam^{I}, TE xam^{II} *obstruct (v)*. MI k^hɐm^{IIA} ~ k^hɐm^{III} *sate, ache (v)*; ZA k^hɐm^{IIA} ~ k^hɐm^{III} *ache (v)*; TH/ZO/TE xɐm^{II} ~ xɐm^{III}, SI k^hɐm^{II} ~ k^hɐm^{III} *sate, nauseate (v)*.

k^hɛj² — MI k^hɛj^{IIA} ~ k^hɛj^{III}, ZO/TE xɛj^{II} ~ xɛj^{III}, SI k^hɛj^{II} ~ k^hɛj^{III} *ferret (v)*; ZA k^hɛj^{IIA} ~ k^hɛj^{III} *sift (v)*. *cf.* **kl^{h}ɛj²**

k^hɛl² — TH/TE xɛl^{II} ~ xɛl^{III} *cunning (v)*; ZO xɛl^{II} ~ xɛl^{III}, SI k^hɛl^{II} ~ k^hɛl^{III} *witty (v)*.

k^hel² — MI k^hel^{IIB}, TH/ZO xel^{II} *hip (n)*.

k$^{(h)}$es — MI/ZA ke^{III}, TE xe^{III} *foot (n)*.

ĸ^{h}ᴇw⁻ — MI k^hɛwʔ *pick with finger nail (v)*; ZA k^hɛwʔ *scratch with hands (v)*, TH xɛw^{II} ~ xɛw^{III}, ZO xɛw^{III}, TE xɛwʔ, SI k^hɛw^{III} *scrape (v)*. MI/ZA hew^{I} ~ hew^{III}, TH/ZO/TE hew^{II} ~ hew^{III}, SI hɛw^{II} ~ hɛw^{III} *deplete (v)*. TH hɛw^{II} ~ hɛw^{III}, ZO hɛw^{III}, TE hɛwʔ, SI hɛw^{III}

[60] See Vol.1, Ch.6, #19.
[61] See Vol.1, Ch.6, #39.
[62] See the data in Shorto (2006:567).

prune (v). ZO hɛw^{II} ~ hɛw^{III} *shave, cut hair (v)*. TH/ZO/TE t^{h}ew^{II} ~ t^{h}ew^{III}, SI t^{h}ɛaw^{II} ~ t^{h}ɛaw^{III} *diminish (rain) (v)*; ZA t^{h}ɛwʔ, TH t^{h}ɛw^{II} ~ t^{h}ɛw^{III}, ZO t^{h}ɛw^{III} *graze (v)*.

k^{h}ɪam² — ZO xɪem^{III} ~ xɪep, TE xɪam^{III} ~ xɪap, SI k^{h}iɐm^{III} ~ k^{h}ɛp *decrease (v$_{t}$)*. ⇨ **kɪam²**

ĸ^{h}ɪm¹ — MI/ZA/TH t^{h}ɪm^{I} ~ t^{h}ɪm^{III}, ZO/TE –sɪm^{I} *soul (n)*; SI ʧ^{h}ɪm^{I} ~ ʧ^{h}ɪm^{III} *dark (sky), quiet (people) (v$_{i}$)*. ZA t^{h}ɪm^{IIB} *black (inside of fruit) (v)*; TH t^{h}ɪp, ZO/TE sɪp *quiet (v)*; SI ʧ^{h}ɪp *quieten (v$_{t}$)*. TE xɪm^{III}– *pitch black (v)*; ZO xɪm^{III}–, SI k^{h}ɪm^{III}– *dark (v)*.[63] *cf.* **t^{h}um²**

k^{h}ɪt — (ST *k^{h}jət).[64] ZA k^{h}ɪt ~ k^{h}ɪʔ *bind (v)*; TH xɪt ~ xi^{III}, TE xɪʔ, SI k^{h}ɪt ~ k^{h}i^{III} *tie (v)*; ZO xi^{III} *tie, bind (v)*.

k^{h}i¹ — (ST *k^{h}jə).[65] MI/ZA/SI –k^{h}i^{I}, TH/ZO/TE –xi^{I} *barking deer (n)*. *cf.* **k^{h}i²**

k^{h}i² — ZA k^{h}i^{IIB} ~ k^{h}ik^{IIB} *gore (v)*. *cf.* **k^{h}i¹**

k^{h}iŋ⁻ — MI k^{h}iŋ^{III} *surprisingly heavy (v)*; MI k^{h}in^{III} ~ k^{h}ɪn^{IIB} *weigh (v)*; ZA k^{h}iŋ^{III} *heavy (human) (v)*.

k^{h}ir² — MI/ZA k^{h}ɪrʔ *return (v$_{t}$)*. ⇨ **kir²**

k^{h}ɔL⁻ — MI/SI k^{h}ɔn^{I} ~ k^{h}ɔn^{III}, TH/ZO/TE xɔn^{I} ~ xɔn^{III} *collect (v)*. TH/ZO/TE xɔl^{II} ~ xɔl^{III}, SI k^{h}ɔl^{II} ~ k^{h}ɔl^{III} *store (v)*. ZA k^{h}ɔn^{III} *lumber (n)*.

k^{h}ɔM² — MI k^{h}ɔp, ZO xɔm^{II} ~ xɔm^{III} *sufficient (v)*; ZA k^{h}ɔp *satiated (v)*; TH xɔm^{II} ~ xɔp, TE xɔm^{II} ~ xɔm^{III}, SI k^{h}ɔm^{II} ~ k^{h}ɔm^{III} *sufficient (consumables) (v)*.

k^{h}om¹ — MI/ZA k^{h}o̲m^{IIB}, TH/ZO/TE xom^{III} ~ xɔp, SI k^{h}om^{III} ~ k^{h}ɔp *gather (v$_{t}$)*. ⇨ **kom¹**. *cf.* **ĸ^{h}VM⁻**

k^{h}ʊa¹ — (ST *k^{hw}ə).[66] MI/ZA k^{h}ʊa^{I}, TH xoʊ^{I}, ZO xʊo^{I}, TE xʊa^{I}, SI k^{h}uɐ^{I} *village (n)*.

k^{h}ʊaj¹ — *(areal)*.[67] MI/ZA k^{h}ʊaj^{I}, TH xoʊj^{I}, ZO xʊej^{I}, TE xʊaj^{I}, SI k^{h}uɛj^{I} *bee (n)*.

k^{h}ʊal⁻ — MI/ZA k^{h}ʊal^{III}, TH xoʊl^{III}, ZO xʊol^{III}, TE xʊal^{III}, SI k^{h}uɐl^{III} *stranger (n)*.

k^{h}ʊaŋ¹ — MI/ZA k^{h}ʊaŋ^{I}, TH xoʊŋ^{I}, ZO xʊoŋ^{I}, TE xʊaŋ^{I}, SI k^{h}uɐŋ^{I} *drum (n)*.[68]

k^{h}ʊaŋ¹ — MI/ZA k^{h}ʊaŋ^{I} ~ k^{h}ʊan^{III}, TH xoʊŋ^{I} ~ xoʊn^{III}, ZO xʊoŋ^{I} ~ xʊon^{III}, TE xʊaŋ^{I} ~ xʊan^{III}, SI k^{h}uɐŋ^{I} ~ k^{h}uɐn^{III} *crow (v)*.

k^{h}ʊar¹ — MI k^{h}ʊar^{I} ~ k^{h}ʊar^{III}, ZA k^{h}ʊar^{I} *hollow (v$_{t}$)*; TH xoʊ^{III}, ZO xʊoʔ^{I} ~ xʊoʔ^{III}, TE k^{h}ʊak^{I} ~ k^{h}ʊak^{III} *hollow (v$_{t}$)*. MI k^{h}ʊar^{I}, TH xoʊʔ^{I} *hollow (n)*. ⇨ **kʊar¹**. *cf.* **k^{h}UL¹**

k^{h}ʊat — TH xoʊt^{II} ~ xoʊt^{III}, ZO xʊot^{II} ~ xʊot^{III}, TE xʊat^{II} ~ xʊat^{III}, SI k^{h}uɐt^{II} ~ k^{h}uɐt^{III} *scratch, itch (v$_{t}$)*.[69]

[63] See Shorto (2006:372).
[64] See Vol.1, Ch.6, #169.
[65] See Vol.1, Ch.6, #7.
[66] See Vol.1, Ch.6, #175.
[67] See Vol.1, Ch.6, #15.
[68] Shafer (1952:155) suggests an Austroasiatic link.
[69] VanBik (2009:146) has initial *h-* in Lai.

k^{h}ʊn^{-} — *(Austroasiatic)*.[70] MI k^{h}ʊm^{III}, ZA k^{h}ʊn^{III}, SI –k^{h}ʊn^{III}, TH/ZO/TE xʊn^{III} *bed (n)*.

k^{h}ʊp — MI k^{h}ʊp (~ khʊʔ), ZA/SI k^{h}ʊp, TH/ZO/TE xʊp *upturn, close book (v)*.

k^{h}ʊs — MI/ZA k^{h}ʊʔ, ZO xu^{III}, TE xʊʔ, SI k^{h}u^{III} ~ k^{h}ʊk *cough (v)*. *cf.* **ʞ^{h}u²**

k$^{(h)}$ʊt — MI/ZA kʊt, TH/ZO/TE xʊt, SI k^{h}ʊt *hand (n)*.

ʞ^{h}u² — (ST *k^{h}əw^{ʔ}, *onomatopoeic*).[71] MI k^{h}u^{III} ~ k^{h}uk^{IIB}, ZA k^{h}u^{IIB} ~ k^{h}ut^{IIB}, ZO/TE xu^{II} ~ xut^{II}, SI k^{h}u^{II} ~ k^{h}ut^{II} *smoke (v)*; TH xu^{II} ~ xut^{II} *smoke, cough (v)*. MI k^{h}u^{IIB}, ZA k^{h}u^{IIB}, TH/ZO/TE xu^{II}, SI k^{h}u^{II} *smoke (n)*. MI hu^{III} ~ huk^{IIB} *steam (v)*; ZA hu^{IIA} ~ hut^{IIB} *steam food (v)*. MI hu^{IIB}, TH/ZO/TE/SI hu^{III} *steam (n)*. *cf.* **k^{h}ʊs**

k^{h}uk — *(Austronesian)*.[72] MI k^{h}u̲p^{IIB}, ZA k^{h}uk^{IIB}, TH/ZO xu̲p^{II}, TE xuk^{II}, SI k^{h}u̲p^{II} *knee (n)*.

k^{h}us — TH xʊʔ, ZO xu^{III} ~ xʊʔ, TE xu^{III} ~ xʊk, SI k^{h}u^{III} ~ k^{h}ʊk *cover head (v)*. MI/ZA k^{h}ʊʔ, TH/ZO xu^{III}, TE xʊʔ *cover (v)*.

k^{h}UL¹ — MI/ZA k^{h}ʊr^{I}, TH/ZO xuʔ^{I}, TE xuk^{I}, SI k^{h}uk^{I} *man-made hole (n)*. TH/TE xul^{I} *cave (n)*.[73] *cf.* **k^{h}uar¹**

ʞ$^{(h)}$vj^{-} — MI hʊjʔ / hʊj^{IIB} *rake, skim off (v$_{t}$)*; ZA hʊjʔ *carry debris (wind) (v)*; TH haj^{II} ~ haj^{III} / hɐj^{III}, ZO haj^{II} ~ haj^{III}, TE hoj^{II} ~ hoj^{III} *skim off (v$_{t}$)*. MI hɐj^{IIB} *dig with hands (v)*; ZA haj^{IIB} *brush aside debris (v)*. MI/TE hʊjʔ, TH/SI hʊj^{III}, ZO huj^{III} *wind (n)*; ZA hʊjʔ *wind carrying debris (n)*. TH kuj^{III} ~ kʊj^{III}, ZO kuj^{III}, TE kuj^{III} ~ kʊjʔ, SI kʊj^{III} *rake (v)*. MI k^{h}ʊjʔ *comb (n/v)*.

ʞ^{h}vk — *(Austroasiatic)*.[74] MI k^{h}ɔk ~ k^{h}ɔʔ, ZA t^{h}ɔʔ, MI/ZA k^{h}ɛʔ, TH/ZO xe^{III}, TE xɛʔ, SI k^{h}e^{III} *peel (v)*;[75] TH xɔʔ, ZO xɔʔ ~ xo^{III}, TE xɔk ~ xɔʔ, SI k^{h}ɔk ~ k^{h}o^{III} *peel (v$_{t}$)*. MI/ZA hok^{IIB} ~ hɔʔ, TH/ZO hoʔ^{II} ~ ho^{III}, TE hok^{II} ~ hok^{III}, SI hok^{II} ~ hok^{III} / ho^{III} *skin (v)*. ⇨ **kɔk**. *cf.* **hoŋ¹**

ʞ^{h}vl¹ — MI/TH t^{h}ɪl^{I} ~ t^{h}ɪl^{III}, ZA t^{h}ʊl^{I} ~ t^{h}ʊl^{III} ZO sɪl^{I} ~ sɪl^{III}, TE xɪl^{I} ~ xɪl^{III}, SI k^{h}ɪl^{I} ~ k^{h}ɪl^{III} *thread (v)*.

ʞ^{h}vM^{-} — *(Austroasiatic)*.[76] MI k^{h}ʊm^{IIB} / k^{h}ɪm^{IIB}, ZO/TE xɪm^{III} ~ xɪp, SI k^{h}ɪm^{III} ~ k^{h}ɪp *put on head (v)*;[77] ZA k^{h}ʊm^{IIB} *put on head, shut up animals in a pen (v)*; TH/ZO xʊm^{II} ~ xʊm^{III} *herd into (v)*; TE xʊm^{II} ~ xʊm^{III}, SI k^{h}ʊm^{II} ~ k^{h}ʊm^{III} *insert, herd into (v)*. ZO xʊm^{III} ~ xʊp, SI k^{h}um^{III} ~ k^{h}ʊp *disappear from view (v)*; TE xʊm^{III} ~ xʊp *put on head, submerge, disappear from view (v)*. TE xʊm^{I} ~ xʊm^{III}, SI k^{h}ʊm^{I} ~ k^{h}ʊm^{III} *attempt sex with sleeping woman, target (v)*. TH xʊm^{I} *lidded pot (n)*; SI k^{h}ʊm^{I} *basket (n)*. MI/TH/ZO/TE/SI um^{I}, ZA ʔum^{I} *gourd (n)*. TH/ZO/TE/SI um^{II} *surround (v)*. MI/TH/ZO/TE/SI om^{I}, ZA ʔom^{I}, TH ɔp, ZO op^{II} *chest (n)*. MI/TH/ZO/TE/SI ɔp, ZA ɔpʔ *brood (v)*. MI ʊp, ZA ʔʊp *cover pot (v)*; TH/ZO ʊp *put vegetables on hot rice (v)*; TE ʊp *cover (v)*; SI ʊp *put back strained*

[70] See Vol.1, Ch.6, #14.
[71] See Vol.1, Ch.6, #148.
[72] See Vol.1, Ch.6, #18.
[73] TH xul^{I} from VanBik (2009:140); TE xul^{I} from Khoi Lam Thang (2001:116).
[74] See Shorto (2006:170).
[75] ZA t^{h}ɔʔ from Osburne (1975:138).
[76] See Vol.1, Ch.6, #40.
[77] MI k^{h}ɪm^{IIB} from Chhangte (1993:99).

rice on stove (v). MI/ZO/TE/SI ʊm^{I} ~ ʊm^{III} *cover to ferment (v)*. MI ʊam^{I} ~ ʊam^{III}, ZA ʔʊam^{I} ~ ʔʊam^{I} *cover fruit (v)*. MI ʊap^{IIB}, ZA ʔʊap^{IIB} *swaddle (v)*; TH oʊp^{II} ~ oʊp^{III} *nurse, attend funeral (v)*; ZO ʊop^{II} ~ ʊop^{III} *attend, console (v)*; TE ʊap^{I} ~ ʊap^{III} *attend (v)*; SI uɐp^{I} ~ uɐp^{III} *attend funeral/wedding, console (v)*. MI ɔm^{III} ~ ɔm^{IIB} *babysit (v)*; ZA ʔɔm^{IIB}, TH/ZO om^{I} ~ om^{III}, TE om^{III} ~ ɔp *serve tea (v)*; SI ɔm^{III} ~ ɔp *babysit, serve tea (v)*. MI ip^{IIA} ~ ip^{III}, TH ip^{II} ~ ip^{II} ZO/TE/SI ip^{I} ~ ip^{III} *retain urine/laughter (v)*; TH im^{II} ~ im^{III} / ɪp, ZO/TE/SI im^{III} ~ ɪp *keep secret (v)*. MI/ZO/TE/SI ɪp, ZA/TH d̲ɪp *bag (n)*. MI/ZA hʊm^{I} ~ hʊm^{III} *protect (v)*, MI/ZA hʊp ~ hʊʔ *conceal (v)*; TH/ZO hum^{II} ~ hum^{III}, TE/SI hʊm^{II} ~ hʊm^{III} *conceal with hands (v)*. MI/ZA/TH/ZO/TE/SI hum^{III} *husk (n)*. TH hoʊm^{I}, ZO hʊom^{I} *bud (n)*; ZO hʊom^{I} ~ hʊom^{III} *inclusive (v)*. *cf.* **k^{h}om^{1}**

k^{h}vŋ$^{-}$ — MI/ZA k^{h}ɪŋ^{IIB}, TH/ZO xaŋ^{I} ~ xan^{III} *crack (v)*. *cf.* **kvk**

ʞ^{h}vŋ^{1} — MI k^{h}eŋ^{I} ~ k^{h}en^{III} / k^{h}ɛn^{IIB}, ZA k^{h}eŋ^{I} ~ k^{h}en^{III}, TH/ZO/TE xen^{III} ~ xɛt *hammer (v)*; TH xeŋ^{I} ~ xen^{III} *forge (v)*; MI/ZA t^{h}ɐŋ^{I} ~ t^{h}ɐn^{III}, ZO/TE xeŋ^{I} ~ xen^{III}, TE xoŋ^{I} ~ xon^{III} *resound (v)*; TH/SI t^{h}oŋ^{II} ~ t^{h}on^{III}, ZO/TE t^{h}on^{III} ~ t^{h}ɔt *echo (v)*; TE t^{h}oŋ^{II} ~ t^{h}on^{III} *hear an echo (v)*.[78]

[78] TE t^{h}oŋ^{II} ~ t^{h}on^{III} from Bhaskararao (1996:98).

kl

klɐj¹ — MI tˡɐjᴵ ~ tˡɐjᴵᴵᴵ, TH ʰlɐjᴵ ~ ʰlɐjᴵᴵᴵ, ZO tɐjᴵ ~ tɐjᴵᴵᴵ *satiate (v)*.

k(l)aj¹ — MI kajᴵ ~ kajᴵᴵᴵ *rise (v)*; ZA tˡajᴵ ~ tˡajᴵ *hang (vi)*; ZO/TE/SI kajᴵ ~ kajᴵᴵᴵ, TH kajᴵ ~ kajᴵᴵᴵ / kɐjᴵᴵᴵ *rise, hang (vi)*. MI/TE kajᴵᴵᴵ ~ kɐjʔ, TH/ZO/SI kajᴵᴵᴵ ~ kɐjᴵᴵᴵ *pull (v)*; ZA kajᴵᴵᴵ ~ kɐjʔ *hold (v)*. ⇨ **k(l)ʰaj¹**. *cf.* **kAL⁻**

klaj² — MI/ZA tˡajᴵᴵᴬ ~ tˡajᴵᴵᴵ, SI –taj⁽ᴵᴵ⁾ ~ tajᴵᴵᴵ *late (v)*.

klaŋ¹ — MI –tˡaŋᴵ, ZA tˡaŋᴵ, TH ʰlaŋᴵ ZO/TE taŋᴵ–, SI taŋᴵ *public (n)*.

klaŋ¹ — MI/ZA tˡaŋᴵ *mountain (n)*; TH ʰlaŋᴵ *mountain range (n)*; ZO/TE taŋᴵ *hill (n)*.

klAL⁻ — MI/ZA tˡanᴵᴵᴬ ~ tˡanᴵᴵᴵ, TH ʰlɐjᴵ ~ ʰlɐjᴵᴵᴵ, ZO/TE/SI tajᴵ ~ tajᴵᴵᴵ *run (v)*.

klɛj² — MI tˡɛjᴵᴵᴬ ~ tˡɛjᴵᴵᴵ, TH/ZO tɛjᴵᴵ ~ tɛjᴵᴵᴵ *obedient (v)*; ZA tˡɛjᴵᴵᴬ ~ tˡɛjᴵᴵᴵ *rearable by foster mother (v)*; SI tɛjᴵᴵ ~ tɛjᴵᴵᴵ *capable (v)*.

klɛp — MI tˡɛp *turned (edge of knife) (v)*; ZA tˡɛp *shrink when cooked (v)*.

kle² — MI/ZA tˡeᴵᴵᴬ ~ tˡetᴵᴵᴮ, TH teᴵᴵ ~ tetᴵᴵ *bright (v)*; MI de̲ᴵᴵᴬ ~ detᴵᴵᴮ, TE/SI teᴵᴵ ~ tetᴵᴵ *twinkle (v)*.

kleŋ⁻ — MI tˡeŋᴵᴵᴵ ~ (tˡɛnᴵᴵᴮ), LA tˡeŋᴵᴵᴵ, TH ʰleŋᴵᴵᴵ ~ ʰlɛʔ *rinse (v)*; ZA tlɛŋᴵᴵᴮ *transfer from pot to pot (v)*.

k(l)ɪak — MI tˡɪakᴵᴵᴮ ~ tʰˡɪaʔ, ZA kɪakᴵᴵᴮ ~ kɪaʔ, TI ʧʰiɐkᴵᴵ ~ ʧiɐkᴵᴵᴵ *snap (vi)*. ⇨ **k(l)ʰɪak**

kl(ɪ)aŋ¹ — MI tˡɪaŋᴵ ~ tˡɪanᴵᴵᴵ *glossy (v)*; ZO/SI taŋᴵ ~ tanᴵᴵᴵ *radiate (v)*; TE taŋᴵ ~ tanᴵᴵᴵ *radiate (vi)*, tanᴵᴵᴵ ~ tɐt *irradiate, flash at (vt)*.[79]

klɪŋ¹ — MI tˡɪŋᴵ ~ tˡɪnᴵᴵᴵ, TH ʰlɪŋᴵ ~ ʰlɪŋᴵ, ZO ʧɪŋᴵ ~ ʧɪnᴵᴵᴵ *complete (v)*. ZA tˡɪŋᴵ ~ tˡɪnᴵᴵᴵ, TE/SI ʧɪŋᴵ ~ ʧɪnᴵᴵᴵ *complete (vi)*; ZA tˡɪnᴵᴵᴮ, TE/SI ʧɪnᴵᴵᴵ *complete (vt)*.

klɔr¹ — MI tˡɔrᴵ, ZO toʔᴵ ~ toʔᴵᴵᴵ, TE/SI tokᴵ ~ tokᴵᴵᴵ *greasy (v)*.[80]

klɔw¹ — MI tˡɔwᴵ ~ tˡɔwᴵᴵᴵ, TH ʰlɔwᴵ ~ ʰlɔwᴵᴵᴵ, ZO/TE tɔwᴵ ~ tɔwᴵᴵᴵ *durable (v)*.

klʊm¹ — MI tˡʊmᴵ ~ tˡʊmᴵᴵᴵ, TH ʰlʊmᴵ~ ʰlʊmᴵᴵᴵ *sink (v)*; ZO/TE/SI tʊmᴵ ~ tʊmᴵᴵᴵ *sink, enter (v)*.

klV² — *(Austroasiatic)*.[81] MI tˡaᴵᴵᴵ ~ tˡakᴵᴵᴮ *prowl (v)*. ZA tˡaᴵᴵᴮ– *leopard (n)*; TH ʰloᴵᴵ *mythical tiger (n)*; ZO toᴵᴵ *tiger (n)*; TE/SI to– *mythical man-tiger (n)*.

KLV² — *(Austroasiatic)*.[82] MI tˡaᴵᴵᴵ ~ tˡakᴵᴵᴮ, ZA tˡaᴵᴵᴮ ~ tˡakᴵᴵᴮ *drop (vi)*. ZO –taᴵᴵᴵ ~ tatᴵᴵ, TE –taᴵᴵᴵ ~ takᴵᴵ, SI –ta⁽ᴵᴵ⁾ ~ takᴵᴵ / tatᴵᴵ *free (vi)*. MI tˡuᴵᴵᴵ ~ tˡukᴵᴵᴮ, ZA tˡuᴵᴵᴮ ~ tˡukᴵᴵᴮ, TH ʰluᴵᴵᴵ ~ ʰluʔᴵᴵ, TE tukᴵᴵ *fall (vi)*.[83] ZO kɪeᴵᴵᴵ ~ kɪeʔᴵᴵ / kɪetᴵᴵ , TE kɪaᴵᴵᴵ ~ kɪatᴵᴵ/ᴵᴵᴵ, SI kiɐᴵᴵᴵ ~ kiɐtᴵᴵ *drop (vt)*.[84] MI ʈɪakᴵᴵᴮ ~ ʈɪaʔ, ZA ʈɪakᴵᴵᴮ *disperse (vi)*. ⇨ **KLʰV²**.

klVm¹ — MI tˡemᴵ ~ tˡemᴵᴵᴵ, TH ʰlomᴵ ~ ʰlomᴵᴵᴵ, ZO/TE/SI tomᴵ ~ tomᴵᴵᴵ *few (v)*.

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[79] TE tanᴵᴵᴵ ~ tɐt from Henderson (1965:83) and Bhaskararao (1996:92).
[80] MI tˡɔrˡ from VanBik (2009:295).
[81] See Vol.1, Ch.6, #168.
[82] See Vol.1, Ch.6, #64.
[83] TE tukᴵᴵ from Bhaskararao (1996:96).
[84] TE kɪatᴵᴵᴵ from Bhaskararao (1994:336;345).

kl^{h}

kl^{h}ɐŋ¹ — MI t^{lh}ɐŋ^{I} *west (n)*; ZA t^{lh}ɐŋ^{I}, TH ^{h}lɐŋ^{I}, ZO ^{h}lɐŋ^{I}, TE xɐŋ^{I}, SI t^{h}ɐŋ^{I} *south (n)*.

kl$^{(h)}$ɛ̈ŋ¹ — MI/ZA t^{hl}ɐŋ^{I} ~ t^{hl}ɐn^{III}, TH ^{h}lɛŋ^{I} ~ ^{h}lɛn^{III}, ZO/TE/SI tɛŋ^{I} ~ tɛn^{III} *choose (v)*. *cf.* **kl^{h}ƐƆ²**

kl^{h}a¹ — MI/ZA t^{lh}a^{I}, TH/ZO ^{h}la^{I}, TE xa^{I}, SI t^{h}a^{I} *spirit (n)*.

kl^{h}aj⁻ — MI/ZA t^{lh}aj^{III} *vegetable (n)*; TE xaj^{III}, SI t^{h}aj^{III} *seed (n)*.

k(l)^{h}aj¹ — MI k^{h}aj^{I} ~ k^{h}aj^{III}, TH xaj^{I} ~ xaj^{III} / xɐj^{III} *carry, hoist, hang (v$_{t}$)*; ZA k^{h}aj^{I} ~ k^{h}aj^{III} *carry, hoist (v$_{t}$)*, k^{h}ɐj$^{?}$ *carry (v$_{b}$)*; ZA t^{hl}aj^{I} ~ t^{hl}aj^{III} *hang (v$_{t}$)*, t^{hl}ɐj$^{?}$ *hang (v$_{b}$)*; ZO/TE xaj^{I} ~ xaj^{III}, SI k^{h}aj^{I} ~ k^{h}aj^{III} *hang (v$_{t}$)*. ZO xɐj^{III}, TE xɐj$^{?}$ *siphon (v)*. TE xaj^{III}, SI k^{h}aj^{III} *unspecified mass (n)*. ⇨ **k(l)aj¹**.

k(l)^{h}aj² — ZA k^{h}aj^{IIA} ~ k^{h}aj^{III}, TH ^{h}laj^{II} ~ ^{h}laj^{III} / ^{h}lɐj^{III}, ZO ^{h}laj^{II} ~ ^{h}laj^{III}, SA xaj^{II} ~ xaj^{III}, SI t^{h}aj^{II} ~ t^{h}aj^{II} *chew (v)*.

kl^{h}am¹ — MI/ZA t^{lh}am^{I}, TH/ZO ^{h}lam^{I} *jhoom hut (n)*; TE xam^{I} *bachelor's bed, temporary hut (n)*; SI t^{h}am^{II} *sleeping platform (n)*, t^{h}o̲m^{II} *bachelor's quarters (n)*.

kl^{h}aŋ¹ — TH/ZO ^{h}laŋ^{I} *jaw (n)*.

kl^{h}as — (ST *k-las).[85] MI/ZA t^{lh}a^{III}, TH/ZO ^{h}la^{III}, TE xa^{III}, SI t^{h}a^{III} *moon (n)*.

kl^{h}ɛj² — MI/ZA t^{lh}ɛj^{IIA} ~ t^{lh}ɛj^{III}, TH ^{h}lɛj^{II} ~ ^{h}lɛj^{III} *sift (v)*; ZO ^{h}lɛj^{II} ~ ^{h}lɛj^{III} *remove temporarily from container (v)*; xɛj^{II} ~ xɛj^{III} *slit belly open (v)* , SI t^{h}ɛj^{II} ~ t^{h}ɛj^{III} *choose (v)*. *cf.* **k^{h}ɛj²**

kl^{h}ɛk — MI t^{lh}ɛk, ZO ^{h}lɛ$^{?}$, xɛk, SI k̲^{h}ɛk *stunted (v)*.

kl^{h}em² — MI/ZA t^{lh}em^{IIA} ~ t^{lh}em^{III}, TH ^{h}lem^{II} ~ ^{h}lem^{III} / ^{h}lɛp, ZO ^{h}lem^{II} ~ ^{h}lem^{III}, TE xem^{II} ~ xem^{III}, SI t^{h}ɛam^{II} ~ t^{h}ɛam^{III} *deceive (v)*.

kl^{h}eŋ⁻ — MI t^{lh}eŋ^{III}, TH ^{h}leŋ^{III} *dish (n)*.

kl^{h}ƐƆ² — MI/ZA t^{lh}ɛŋ^{IIB}, ZO ^{h}lɛŋ^{II} ~ ^{h}lɛn^{III}, TH ^{h}le$^{?II}$ ~ ^{h}le^{III}, TE xɛŋ^{II} ~ xɛn^{III} xek^{II} ~ xek^{III}, SI t^{h}ɛak^{II} ~ t^{h}ɛak^{III} / t^{h}e^{III} *exchange (v)*; TH ^{h}lɛŋ^{II} ~ ^{h}lɛn^{III} *substitute (v)*. *cf.* **kl$^{(h)}$ɛ̈ŋ^{I}**

k(l)^{h}ɪak — MI t^{lh}ɪak^{IIB} ~ t^{lh}ɪa$^{?}$, ZA k^{h}ɪak^{IIB} ~ k^{h}ɪa$^{?}$, TH ^{h}leɪ$^{?II}$ ~ ^{h}leɪ^{III}, ZO ^{h}lɪe$^{?II}$ ~ ^{h}lɪe^{III}, TE xɪak^{II} ~ xɪak^{III} / xɪa$^{?}$, SI ʧ^{ʰ}iɐk^{II} ~ ʧ^{ʰ}iɐk^{III} / ʧ^{ʰ}iɐ^{III} *snap (v$_{t}$)*. ⇨ **k(l)ɪak**

kl^{h}ɪm¹ — MI t^{lh}ɪm^{I} ~ t^{lh}ɪm^{III} *stealthy (v)*; MI t^{lh}ɪm^{IIB}, TH/ZO ^{h}lɪm^{I} ~ ^{h}lɪm^{III} *put to sleep (v)*.

kl^{h}i¹ — (ST *k-ljə).[86] MI/ZA t^{lh}i^{I}, TE –xi^{I} *wind (n)*; TH ^{h}li^{I} *breeze (n)*.

kl^{h}i¹ — MI/ZA t^{hl}i^{I}, TH/ZO ^{h}li^{I}, TE xi^{I}, SI ʧ^{ʰ}i^{I} *tears (n)*. MI t^{lh}i^{I} ~ t^{lh}ɪt, TH/ZO ^{h}li^{I} ~ ^{h}lɪt, TE (xi^{I} ~) xɪt, SI ʧ^{ʰ}ɪt ~ ʧ^{ʰ}i^{III} *strain (v)*.

kl^{h}ɪƆ² — MI t^{lh}iŋ^{IIA}, ZA t^{lh}ɪk, TH ^{h}lɪn^{II} *marrow (n)*.

kl^{h}ɔŋ⁻ — MI t^{lh}ɔn^{III} ~ t^{lh}ɔn^{IIB}, ZA t^{lh}ɔŋ^{III} ~ t^{lh}ɔŋ^{IIB}, TH/ZO ^{h}lɔŋ^{III} ~ ^{h}lɔ$^{?}$, TE xɔŋ^{III} ~ xɔt, SI t^{h}ɔŋ^{III} ~ t^{h}ɔk *dislocate (v)*.

[85] See Vol.1, Ch.6, #112.

[86] See Vol.1, Ch.6, #183.

(k)l^{h}ɔw^{2} — MI/ZA t^{lh}ɔw^{IIA} ~ t^{lh}ɔʔ, TH/ZO ^{h}lɔw^{II} ~ ^{h}lo^{III}, TE xɔw^{II} ~ xɔʔ, SI t^{h}ɔw^{II} ~ t^{h}o^{III} *weed (v)*. MI/ZA lɔw^{IIA} ~ lɔʔ, TH/ZO/SI lɔw^{II} ~ lo^{III}, TE lɔw^{II} ~ lɔʔ *pluck (v)*. *cf.* **lɔw^{2}**, **^{h}lɔw^{1}**

kl^{h}ʊak — MI/ZA t^{lh}ʊak^{IIB}, TH ^{h}loʊʔ^{II}, ZO ^{h}lʊoʔ^{II}, TE xʊak^{II}, SI t^{h}uɐk^{II} *brain (n)*.

kl^{h}ʊm^{1} — MI t^{lh}ʊm^{I} ~ t^{lh}ʊm^{III}, TH/ZO ^{h}lʊm^{I} ~ ^{h}lʊm^{III}, TE xʊm^{I} ~ xʊm^{III}, SI t^{h}ʊm^{I} ~ t^{h}ʊm^{III} *sweet (v)*; ZA t^{lh}ʊm^{I} ~ t^{lh}ʊm^{III} *sweet (v$_{i}$)*, t^{lh}ʊm^{IIB} *sweeten (v$_{t}$)*.

KL^{h}V^{2} — *(Austroasiatic)*.[87] MI t^{lh}a^{III} ~ t^{lh}ak^{IIB}, ZA t^{lh}a^{IIB} ~ t^{lh}ak^{IIB} *drop (v$_{t}$)*; TH ^{h}la^{III} ~ ^{h}laʔ^{II} *drop, free (v$_{t}$)*; TH ^{h}laʔ^{II}, ZO ^{h}la^{III} ~ ^{h}laʔ^{II}, TE xa^{III} ~ xak^{II}, SI t^{h}a^{III} ~ t^{h}ak^{II} *send (v$_{t}$)*. TH ^{h}laʔ^{II}, ZO –^{h}laʔ^{II} *descendant (n)*. MI/ZA t^{lh}ɐʔ *free (v$_{t}$), descendant (n)*; ZO ^{h}la^{III}, TE xɐʔ, SI t^{h}a^{III} *free (v$_{t}$)*. MI t^{lh}u^{III}, ZA t^{lh}u^{IIB} *fell (v$_{t}$)*. ZO xɪe^{III} ~ xɪeʔ^{II} / xɪet^{II} , TE xɪa^{III} ~ xɪat$^{II/III}$, SI k^{h}iɐ^{III} ~ k^{h}iɐt^{II} *drop (v$_{t}$)*.[88] MI ʈ^{h}ɪat^{IIB} ~ ʈ^{h}ɪaʔ *demolish, fell (v$_{t}$)*; ZA ʈ^{h}ɪat^{IIB} *demolish (v$_{t}$)*; MI ʈ^{h}ɪaʔ, TE xiaʔ *pound rice again (v)*. ⇨ **KLV^{2}**

(k)l$^{(h)}$vŋ$^{-}$ — *(Austroasiatic)*.[89] MI/ZA t^{lh}ɛŋ^{I} ~ t^{lh}ɛn^{III}, SI t^{h}ɛŋ^{I} ~ t^{h}ɛn^{III} / t^{h}ɛt, TH ^{h}lʊŋ^{II} ~ ^{h}lʊn^{III}, ZO/TE tʊŋ^{II} ~ tʊn^{III} *arrive (v$_{i}$)*; ZO ^{h}lɛŋ^{I} ~ ^{h}lɛn^{III} *arrive (time) (v$_{i}$)*; SI tʊŋ^{II} ~ tʊn^{III} *attain (v)*; ZA t^{l}ʊŋ^{IIA} ~ t^{l}ʊn^{III} *return (v$_{i}$)*, ZA t^{l}un^{IIB} *return (v$_{t}$)*; MI/ZA t^{lh}ɛn^{IIB}, TH ^{h}lʊn^{III} ~ ^{h}lʊt, SI t^{h}ɛn^{III} *arrive, bring (v$_{t}$)*. ZO/TE/SI tʊn^{III} ~ tʊt *reach (symptom time) (v)*. TE xɛŋ^{I} ~ xɛn^{III} *overtake, overshoot (v)*. ZA t^{l}oŋ^{I} ~ t^{l}on^{III} *travel (v)*. MI t^{lh}ʊŋ^{I} ~ t^{lh}ʊn^{III}, TH/ZO ^{h}lʊŋ^{I} ~ ^{h}lʊn^{III}, TE xʊŋ^{I} ~ xʊn^{III}, SI t^{h}ʊŋ^{I} ~ t^{h}ʊn^{III} *suspend across (v)*. MI/ZA laŋ^{I} ~ lan^{III} *go and return the same day (v)*; MI leŋ^{I} ~ len^{III} *visit, epidemic (v)*; ZA leŋ^{I} ~ len^{III} *visit (v)*; TH laŋ^{I} ~ lan^{III} *epidemic (v)*; ZO/TE/SI laŋ^{I} ~ lan^{III} *haunt, epidemic (v)*; TH/ZO/TE leŋ^{I} ~ len^{III} *visit, fly (v)*; SI lɛaŋ^{I} ~ len^{III} *jump, fly (v)*. *cf.* **kɛŋ^{1}**

(k)l$^{(h)}$Vp — *(Austroasiatic)*.[90] MI t^{lh}ɛp ~ t^{lh}ɛʔ, ZA t^{lh}ɛp, TH ^{h}lɛp, ZO ^{h}lɪp, TE xɛp, SI t^{h}ɛp ~ t^{h}e^{III} *fold (v)*. MI ^{h}lip^{I} ~ ^{h}lip^{III}, MI ^{h}lip^{IIB} ~ ^{h}lɪʔ, ZA ^{h}lip^{I} ~ ^{h}lip^{III}, TH/ZO/TE lip^{I} ~ lip^{III} *curl (v)*; SI lip^{II} ~ lip^{III} *curl (v$_{i}$)*, lip^{I} ~ lip^{III} *curl (v$_{t}$)*. MI ^{h}lɪp, ZA lɪp, TH/ZO/TE/SI lɪp *scales (n)*. MI lip ~ liʔ *skin (v)*. MI/ZA ^{h}lɛp ~ ^{h}lɛʔ *pare (v)*. MI lep^{I} ~ lep^{III} *dice (v)*. ZA t^{l}ap^{II}, TH ^{h}lep^{II} *sheet (n)*. *cf.* **$^{(h)}$lVM^{-}**, **jap**

[87] See Vol.1, Ch.6, #64.
[88] TE xɪat^{III} from Bhaskararao (1994:336;347).
[89] See Shorto (2006:222).
[90] See Vol.1, Ch.6, #72.

kr

krɐŋ⁻ — *(Austroasiatic)*.[91] MI ʈɐŋ^{I} ~ ʈɐn^{III} *exert, dry (v)*; ZA ʈɐŋ^{I} ~ ʈɐn^{III} *exert (v)*; TH/TE/SI kɐŋ^{I} ~ kɐn^{III} *distend (v)*; ZO kɐŋ^{I} ~ kɐn^{III} *steadfast (v)*. MI ʈɐŋ^{IIA} ~ ʈɐn^{III} *distend (breasts) (v)*; ZA ʈɐŋ^{IIA} ~ ʈɐn^{III} *dry (v)*. *cf.* **kr^{h}ɐŋ¹**, **ĸraŋ¹**

krɐp — (ST *krəp).[92] MI/ZA ʈɐp ~ ʈɐʔ, TH/ZO kɐp ~ ka^{III}, TE kɐp ~ kɐʔ, SI kɐp ~ ka^{III} *weep (v)*.

(k)raŋ¹ — MI raŋ^{I} ~ ran^{III} *piebald (v)*; ZA raŋ^{I} ~ ran^{III} *white (v_i)*, rɐn^{IIB} *whiten (v_t)*;[93] TH/ZO/TE/SI kaŋ^{I} ~ kan^{III} *white (v)*.

ĸraŋ¹ — (ST *raŋ).[94] MI/ZA ʈaŋ^{I}, TH/ZO/TE aŋ^{I}, SI kaŋ^{I} *bosom (n)*. MI ɛŋ^{I} *chest (n)*. *cf.* **krɐŋ⁻**

kraw⁻ — MI ʈaw^{III}, TH/ZO/TE/SI kaw^{III} *evil spirit (n)*.

krɛt — MI ʈɛt ~ ʈɛʔ *tear (v_i)*; ZA ʈɛt ~ ʈɛʔ *tatter (v_i)*. ⇨ **kr^{h}ɛt**

krek — MI/ZA ʈek^{IIB}, ZO keʔ^{II}, TE kek^{II}, *lightning (n)*; TH keʔ^{II}, SI kɛak^{II} *lightning concretion (n)*.

kren⁻ — MI ʈen^{IIA} ~ ʈen^{III}, TH/ZO/TE/SI ken^{I} ~ ken^{III} *steep (v)*.

(k)rɪal¹ — MI/ZA ʈɪal^{I} ~ ʈɪal^{III}, TH geɪl^{I} ~ geɪl^{III} *stripe (v)*; ZO gɪel^{I} ~ gɪel^{III}, TE gɪal^{I} ~ gɪal^{III}, SI ŋiɐl^{I} ~ ŋiɐl^{III} *stripe (v_i)*; ZO gɪel^{III}, TE gɪal^{III} ~ gɪalʔ, SI ŋiɐl^{III} *stripe (v_t)*.

kri¹ — MI ʈi^{I} ~ ʈɪt *scared (v_i)*, ʈɪʔ *scared of (v_t)*; ZA ʈɪʔ *scared (v_i)*; TH/SI ki^{III}, ZO ki^{III}–, TE kɪʔ *disgusted (v)*. ⇨ **kr^{h}i¹**

krin² — ZO/TE/SI kin^{II} ~ kin^{III} *move (v_i)*. ⇨ **kr^{h}in²**

krɪl² — MI ʈil^{III} ~ ʈɪlʔ, ZA ʈɪl^{III} *drop (v_i)*. ⇨ **kr^{h}ɪl²**

krɪŋ¹ — TH kiŋ^{I} ~ kin^{III} *sooty (v)*; ZO kiŋ^{I}, TE –kɪŋ^{I}, SI –kiŋ^{I} *soot (n)*.[95]

krom¹ — TH/ZO kom^{I} ~ kom^{III} *borrow, lend (v)*; TE/SI kom^{I} ~ kom^{III} *borrow (v)*, kom^{III} ~ kɔp *lend (v)*.[96]

krʊm² — MI ʈʊm^{IIA} ~ ʈʊm^{III}, TH/ZO/TE kʊm^{II} ~ kʊm^{III} *descend, decrease (v)*, ZA ʈʊm^{IIA} ~ ʈʊm^{III} *decrease (v_i)*. ⇨ **kr^{h}ʊm^{II}**

krvn¹ — MI/ZA ʈon^{I} ~ ʈon^{III}, TH kan^{I} ~ kan^{III} *bind (v)*; ZO/TE kan^{I} ~ kan^{III} *weave basket/net (v)*.

[91] See Vol.1, Ch.6, #47.
[92] See Vol.1, Ch.6, #182.
[93] ZA ran^{IIB} from Osburne (1975:112).
[94] See Vol.1, Ch.6, #35.
[95] VanBik (2009:307) has Lai *ʈ-*.
[96] See Lorrain (1940:434) for possible MI *ʈ-*.

kr^{h}

kr^{h}ɐŋ^{1} — MI/ZA ʈ^{h}ɐŋ^{I} ~ ʈ^{h}ɐn^{III}, TH/ZO/TE xɐŋ^{I} ~ xɐn^{III}, SI k^{h}ɐŋ^{I} ~ k^{h}ɐn^{III} *increase (v)*. *cf.* **krɐŋ$^{-}$**

kr^{h}ɐŋ$^{-}$ — MI ʈ^{h}ɐŋ^{IIB}, ZA ʈ^{h}ɐŋ^{III} ~ ʈ^{h}ɐŋ^{IIB} TH/ZO xɐŋ^{III} ~ xɐʔ, SI k^{h}ɐŋ^{III} ~ k^{h}ɐn̲^{III} *wake (v)*.

kr^{h}al^{1} — MI/ZA ʈ^{h}al^{I}, TH/ZO/TE xal^{I}, SI k^{h}al^{I} *summer (n)*.

kr^{h}al^{-} — MI ʈ^{h}al^{III}, TH/ZO/TE xal^{III} *crotch (n)*.

kr^{h}ɛn^{1} — MI ʈ^{h}ɛn^{I} ~ ʈ^{h}ɛn^{III} *separate (v)*. ZA ʈ^{h}ɛn^{I} ~ ʈ^{h}ɛn^{III}, TH/ZO xɛn^{I} ~ xɛn^{III}, TE xɛn^{I} ~ xɛn^{III}, SI k^{h}ɛn^{I} ~ k^{h}ɛn^{III} *separate (v$_{t}$)*; ZA ʈ^{h}ɛn^{III} ~ ʈ^{h}ɛn^{IIB}, TH/ZO xɛn^{III} ~ xɛt, TE xɛn^{III}, SI k^{h}ɛn^{III} ~ k^{h}ɛt *separate (v$_{b}$)*. *cf.* **kr^{h}ɛt**

kr^{h}ɛt — MI ʈ^{h}ɛt ~ ʈ^{h}ɛʔ *tear (v$_{t}$)*; ZA ʈ^{h}ɛt ~ ʈ^{h}ɛʔ *tatter (v$_{t}$)*. ⇨ **krɛt**. *cf.* **kr^{h}ɛn^{1}**

kr^{h}i^{1} — ZA ʈ^{h}ɪʔ *scare (v$_{t}$)*. ⇨ **kri^{1}**

kr^{h}in^{2} — MI ʈ^{h}in^{IIB}, TH xin^{II} ~ xin^{III} *move (v)*; ZO/TE xin^{II} ~ xin^{III}, SI k^{h}in^{II} ~ k^{h}in^{III} *move (v$_{t}$)*. ⇨ **krin^{2}**

kr^{h}ɪl^{2} — MI ʈ^{h}il^{II} ~ ʈ^{h}il^{III} *uncongealed (v)*; ZA ʈ^{h}ɪl^{III} *drop (v$_{t}$)*. ⇨ **krɪl^{2}**

ʞ^{h}(r)o̥aL^{-} — MI k^{h}oj^{I} ~ k^{h}oj^{III}, ZA k^{h}oj^{I}, TE xoj^{I} ~ xoj^{III}, SI k^{h}ɔaj^{I} ~ k^{h}ɔaj^{III} *breed (v)*. TH xɔj^{III}, ZO/TE xɔj^{I} ~ xɔj^{III}, k^{h}ɔj^{I} ~ k^{h}ɔj^{III}, TH xoʊl^{I} ~ xoʊl^{III}, ZO xʊol^{I} ~ xʊol^{III}, TE xʊal^{I} ~ xʊal^{III}, SI k^{h}uɐl^{I} ~ k^{h}uɐl^{III} *tend (v)*. ZO hʊej^{II} ~ hʊej^{III}, TE hʊaj^{II} ~ hʊaj^{III}, SI huɛj^{II} ~ huɛj^{III} *nurse (v)*. MI/ZA ^{h}rʊaj^{I} ~ ^{h}rʊaj^{III}, TH hoʊj^{II} ~ hoʊj^{III} *escort (v)*.

kr^{h}ʊam^{-} — MI/ZA ʈ^{h}ʊam^{III}, TH xoʊm^{III}, ZO xʊom^{III}, TE xʊam^{III}, SI k^{h}uɐm^{III} *column (n)*.

kr^{h}ʊaC — MI/ZA ʈ^{h}ʊaʔ, TH xoʊ^{III}, ZO xʊo^{III}, TE xʊaʔ, SI k^{h}uɐ^{III} *swill (v)*.

kr^{h}ʊm^{2} — ZA ʈ^{h}ʊm^{IIA} ~ ʈ^{h}ʊm^{III} *decrease (v$_{t}$)*. ⇨ **krʊm^{2}**

kr^{h}u^{1} — (ST *k^{h}rəw).[97] MI/ZA ʈ^{h}u^{I}–, TH/ZO/TE –xu^{I}, SI –k^{h}u^{I} *dove (n)*.

kr$^{(h)}$u^{1} — MI ʈ^{h}u^{I} ~ ʈ^{h}ʊt, TE tu^{I} ~ tʊt *sit (v)*.

kr^{h}uj^{1} — MI ʈ^{h}ʊj^{I} ~ ʈ^{h}ʊj^{III}, ZA ʈ^{h}i^{I} ~ ʈ^{h}i̲t^{IIB}, TH xuj^{I} ~ xuj^{III} / xʊj^{III}, ZO/TE xuj^{I} ~ xuj^{III}, SI k^{h}ʊj^{I} ~ k^{h}ʊj^{III} *sew (v)*.

[97] See Vol.1, Ch.6, #49.

l

lɐm² — (ST *lam^{ʔ}). [98] MI/ZA lɐm^{IIA}, TH/ZO/TE/SI lɐm^{II} *road (n)*.

lɐm² — MI lɐm^{IIA} ~ lɐm^{III} *retrieve, articulate (v)*; TH/SI lɐm^{II} ~ lɐm^{III} *seek out (v)*; ZO lɐm^{II} ~ lɐm^{III} *earn, build (house) (v)*; TE lɐm^{IIA} ~ lɐm^{III} *earn* ($v_{i/t}$), lɐm^{III} ~ lɐp *earn* (v_b).

lɐŋ⁻ — MI lɐŋ^{III} ~ lɐn^{IIB}, ZA lɐŋ^{III} ~ lɐŋ^{IIB}, TH/ZO lɐŋ^{III} ~ lɐʔ, TE lɐŋ^{III} ~ lɐt, SI lɐŋ^{III} ~ lɐk / lɐt *appear (v)*.

l$\overset{\varepsilon}{\text{ɐ}}$p — MI/SI –lɛp, TH –lɐp *twinkle (v)*; ZO –lɛp *dart (v)*; TE –lɛp *flash (v)*.

la¹ — MI/ZA/TH la^{I} *female animal (n)*; ZO/TE/SI la^{I} *female animal suffix (n)*. MI/ZA la^{I} ~ l$\underline{\text{a}}$t^{IIB} *nubile (v)*.

la² — MI/ZA la^{IIB}, TH/ZO la^{II} *spleen (n)*; TE/SI la^{II} *diaphragm (n)*.

la² — MI la^{III} ~ lak^{IIB}, ZA la^{IIB} ~ lak^{IIB}, TH/ZO la^{II} ~ laʔ^{II}, TE/SI la^{II} ~ lak^{II} *take (v)*.

laj¹ — (ST *laj).[99] MI/ZA/TH/ZO/TE/SI laj^{I} *middle, navel (n)*.

laj⁻ — ZA/ZO/TE/SI laj^{III} *writing (n)*.

laj⁻ — MI laj^{III} ~ lɐjʔ *harrow (v)*; ZA laj^{III} ~ lɐjʔ *dig (v)*; TH/ZO/SI laj^{III} ~ lɐj^{III}, TE laj^{III} ~ lɐjʔ *harrow, dig (v)*.

ᴘ-lak — *(Austroasiatic)*.[100] MI bak^{IIA}, KH –lak^{IIA}, TH/ZO baʔ^{II}, TE/SI bak^{II} *bat (n)*.[101] *cf.* **$^{(h)}$lvᴍ⁻**

lam¹ — MI/ZA/TH/ZO lam^{I} ~ lam^{III}, SI lam^{I} ~ lam^{III} / lɐp *dance (v)*; ZO lam^{I} ~ lɐp *float (v)*; TE lam^{I} ~ lam^{III} *dance, float (v)*; MI lɐm^{IIB} *spin a top (v)*; TH/ZO/TE/SI lam^{III} ~ lɐp *lift (v)*.

lɛj¹ — *(areal)*.[102] MI/ZA/TH/ZO/TE/SI lɛj^{I} *tongue (n)*.

lɛj¹ — MI/ZA lɛj^{I} ~ lɛj^{III} *slant (v)*.

lɛj¹ — MI/SI lɛj^{I}, ZA/TH/ZO/TE lɛj^{I}– *debt (n)*. *cf.* **lɛj²**.

lɛj² — *(areal)*.[103] MI lɛj^{IIA} ~ lɛj^{III}, ZO/TE/SI lɛj^{II} ~ lɛj^{III} *buy (v)*; ZA lɛj^{IIA} ~ lɛj^{III} *buy* ($v_{i/t}$), lɛjʔ *buy* (v_b). *cf.* **lɛj¹**

lɛj² — *(Austroasiatic)*.[104] MI/ZA lɛj^{IIA}, TH/ZO/TE/SI lɛj^{II} *ground (n)*.

lɛk — MI/TE lɛk ~ lɛʔ, SI lɛ$\underline{\text{p}}$ ~ le^{III} *brandish (v)*; ZA lɛk ~ lɛʔ *play (v)*; TH/ZO lɛʔ ~ le^{III} *toss (v)*.

lɛm¹ — TH/ZO/TE/SI lɛm^{I} ~ lɛm^{III} *peaceful* (v_i); TH lɛm^{III}, ZO lɛm^{III}– ~ lɛp, TE/SI lɛm^{III} ~ lɛp *pacify* (v_t).

lɛm⁻ — MI lɛm^{IIB} *swallow (v)*; ZA lɛm^{IIB} *swallow saliva (v)*.

leŋ² — *(Austroasiatic)*.[105] MI/ZA leŋ^{IIA}, TH/ZO/TE leŋ^{II}, SI lɛaŋ^{II} *cart (n)*. *cf.* **lᴏŋ⁻**

lɛt — MI/ZA lɛt ~ lɛʔ, MI lɛ$\underline{\text{p}}$ ~ lɛʔ, TE – lɛt ~ lɛʔ, TH lɛt ~ le^{III}, ZO/SI –lɛt ~ le^{III} *invert (v)*. MI let^{IIB} (~ lɛʔ) *alter (v)*;

[98] See Vol.1, Ch.6, #133.
[99] See Vol.1, Ch.6, #110.
[100] See Vol.1, Ch.6, #9.
[101] KH pɐlak^{IIA} from Luce (1962:tableʙ).
[102] See Vol.1, Ch.6, #170.
[103] See Vol.1, Ch.6, #59.
[104] See Vol.1, Ch.6, #89.
[105] See Vol.1, Ch.6, #33.

TH/ZO/TE let^{II} ~ let^{III}, SI let^{II} ~ let^{III} / le^{III} *overflow (v)*.

lɪak — *(areal)*.[106] MI/ZA lɪak^{IIB} ~ lɪaʔ, TH leɪʔ^{II} ~ leɪ^{III} ZO lɪeʔ^{II} ~ lɪe^{III}, TE lɪak^{II} ~ lɪak^{III} / lɪaʔ, SI liɐk^{II} ~ liɐk^{III} / liɐ^{III} *lick (v)*. ZA lɪaʔ *lick (n)*.

lɪa*n*$^{-}$ — MI lɪan^{III} ~ lɛn^{IIB}, TH leɪn^{III} ~ leɪt, ZO lɪen^{III} ~ lɪet, TE lɪan^{III} ~ lɪat, SI liɐn^{III} ~ lɛt *big (v)*; ZA lɪan^{III} ~ lɛn^{IIB} *rich (v)*.

lɪaŋ¹ — MI/ZA/TE lɪaŋ^{I}, TH leɪŋ^{I}, ZO lɪeŋ^{I}, SI liɐŋ^{I} *shoulder (n)*.

Lɪat — (ST *rjat).[107] MI/ZA rɪat^{IIB}, TH geɪt^{II}, ZO gɪet^{II}, TE gɪat^{II}, SI liɐt^{II} *eight (v)*.

Lɪs — (ST *–njəs).[108] MI/ZA –rɪʔ, TH/ZO –gi^{III}, TE –gɪʔ, SI –li$^{(II)}$ *seven (v)*

li¹ — (ST *ljə).[109] MI li^{I} ~ li^{III}, ZA li^{I} ~ li^{IIB}, TH li^{I} ~ li^{III}, ZO/TE/SI li^{I} *four (v)*.

li¹ — MI li^{I} *pool (n)*, li^{I} ~ lɪt *pool (v)*; ZA/SI –li^{I} *lake (n)*; TH/ZO li^{I}, TE –li^{I} *stream pool (n)*.

li² — (ST *ljəʔ).[110] MI li^{IIB} *hairspring (n)*; ZA li^{IIB} *bow (n)*; TH li^{II}, ZO/TE/SI –li^{II} *slingshot (n)*.

Liŋ² — ZA –riŋ^{IIA} ~ riŋ^{III}, TH/ZO giŋ^{II} ~ giŋ^{III}, *scare (v_i)*; TE/SI liŋ^{II} ~ liŋ^{III} *frozen with fear/excitement (v)*. MI rik^{IIB}, TH giʔ^{II}, ZO giʔ^{II} (~ git^{II}) *threaten (v_t)*.

lɔw² — MI/ZA lɔw^{IIA}, TH/ZO/TE/SI lɔw^{II} *field (n)*. *cf.* **k^{h}lɔw²**, **^{h}lɔw¹**

loj¹ — *(Tai-Kadai)*.[111] MI/TH/ZO/TE loj^{I}, SI lɔaj^{I} *buffalo (n)*.

lom¹ — MI lom^{I} ~ lom^{III} *mutually assist (v)*; TH lom^{I} ~ lom^{III} / lɔp, ZO/TE/SI lom^{I} ~ lom^{III} *suitable (v)*. TH/ZO/TE/SI lom^{I} *friend (n)*.

lom² — MI lom^{II} ~ lom^{III} *rejoice (v_i)*. MI lɔm^{IIB}, ZA lom^{III} ~ lom^{IIB}, TH/ZO/TE/SI lom^{III} ~ lɔp *rejoice (v_t)*.

lɔŋ$^{-}$ — *(Austroasiatic)*.[112] MI/TH lɔŋ^{III}, ZA loŋ^{III} *boat (n)*; SI loŋ^{III} *raft (n)*. *cf.* **leŋ²**

l$^{o}_{ʊ}$ak — MI lok^{IIB} ~ lɔʔ, ZA lʊak^{IIB}, TH loʊʔ^{II} ~ loʊ^{III}, ZO lʊoʔ^{II} ~ lʊo^{III}, TE lʊak^{II} ~ lʊak^{III} / lʊaʔ, SI luɐk^{II} ~ luɐk^{III} / luɐ^{III} *scoop up (v)*. TE lok^{II} ~ lok^{III} *repossess (v)*. MI/ZA lʊaʔ *occupy (v)*; TH loʊ^{III}, ZO lʊo^{III}, TE lʊaʔ, SI luɐ^{III} *inherit (v)*.

lʊaŋ¹ — MI/TE lʊaŋ^{I} ~ lʊan^{III}, TH loʊŋ^{I} ~ loʊn^{III}, ZO lʊoŋ^{I} ~ lʊon^{III}, SI luɐŋ^{I} ~ luɐn^{III} *flow (v)*. ZA lʊaŋ^{I} ~ lʊan^{III} *flow (v_i)*, lɔn^{IIB} *carry in flow (v_t)*. MI lʊan^{III}, TH loʊn^{III}, TE lʊan^{III} ~ lʊat *plate (v)*.

Lʊaŋ$^{-}$ — MI rʊaŋ^{IIA}, ZA rʊak^{IIB}, TH loʊŋ^{I}, ZO lʊoŋ^{I}, TE lʊaŋ^{I}, SI luɐŋ^{I} *corpse (n)*. ZA rʊaŋ^{IIA}, ZO dʊoŋ^{II}, TE dʊaŋ^{II}, SI duɐŋ^{II} *body (n)*. *cf.* **rʊak**

lʊas — MI lʊa^{III} ~ lʊak^{IIB}, ZA lʊak^{IIB}, TH loʊ^{III} ~ loʊʔ^{II}, ZO lʊo^{III} ~ lʊoʔ^{II}, TE lʊa^{III} ~ lʊak$^{II/III}$, SI luɐ^{III} ~ luɐk^{II} *vomit*

[106] See Vol.1, Ch.6, #170.
[107] See Vol.1, Ch.6, #54.
[108] See Vol.1, Ch.6, #138.
[109] See Vol.1, Ch.6, #80.
[110] See Vol.1, Ch.6, #145.
[111] See Vol.1, Ch.6, #30.
[112] See Vol.1, Ch.6, #22.

(v).[113] MI/ZA lʊak^{IIB}, TH loʊʔ^{II}, ZO lʊoʔ^{II}, SI luɐk^{II} *vomit (n)*.

Lʊk — (ST *rwək).[114] MI/ZA rʊk, TH gup^{III}, ZO gʊʔ, TE gʊk, SI lʊk *six (v)*.

lʊm⁻ — MI lʊm^{III} ~ lʊm^{IIB}, ZA lʊm^{III} (~ lʊm^{IIB}) *lie (v_i)*. TH/ZO/TE/SI lʊm^{III} ~ lʊp *lie (v)*. ⇨ **^{h}lʊm⁻**

lʊŋ¹ — MI/ZA/TH/ZO/TE/SI lʊŋ^{I} *heart (n)*.

lʊŋ² — (ST *lwəŋ^{ʔ}).[115] MI/ZA lʊŋ^{IIA}, TH/ZO/TE/SI lʊŋ^{II}– *stone (n)*.[116]

lʊŋ² — (ST *lwəŋ^{ʔ}).[117] MI/ZA lʊŋ^{IIA}, TH lʊŋ^{II} *maggot (n)*; ZO/TE/SI lʊŋ^{II} *insect (n)*. MI lʊŋ^{IIA} ~ lʊn^{III} *maggoty (v)*.

lʊs — MI lʊʔ *eat from pot (v)*; ZA lʊʔ *bring in (v)*; TH/ZO/SI lu^{III}, TE lʊʔ *rob (v)*.

lu¹ — *(Austronesian)*.[118] MI/ZA/TH/ZO/TE/SI lu^{I} *head (n)*.

lu² — MI lu^{III} ~ luk^{IIB}, ZA lu^{IIB} ~ luk^{IIB}, TH/ZO lu^{II} ~ luʔ^{II}, TE lu^{II} ~ luk^{II} *copulate (v)*.

luj⁻ — MI/SI lʊj^{III}, TH/ZO/TE luj^{III} *stream (n)*.

lut — MI lut^{IIB} ~ lʊʔ, ZA lut^{IIB} (~ lʊʔ), TH/ZO/TE lut^{II} ~ lut^{III}, SI lut^{II} ~ lut^{III} / lu^{III} *enter (v)*.

LVl⁻ — ZA ril^{III} ~ rɪlʔ *roll along (v_i)*. ⇨ **^{h}LVl⁻**. *cf.* **wVL⁻**

[113] TE lʊak^{III} from Bhaskararao (1994:336;349).
[114] See Vol.1, Ch.6, #143.
[115] See Vol.1, Ch.6, #159.
[116] TE lʊŋ^{II}– from Vul Za Thang & J. Gin Za Twang (1975:74).
[117] See Vol.1, Ch.6, #109.
[118] See Vol.1, Ch.6, #92.

ʰl

ʰlɐm¹ — TH/ZO/TE lɐm^{I} *membrane (n)*. MI/ZA ʰlɐm^{III}, TH/ZO/TE/SI lɐm^{III} *placenta (n)*.

ʰla² — MI/ZA ʰla^{IIA}, TH/ZO/TE/SI la^{II} *song (n)*.

ʰla⁻ — MI ʰla^{I} ~ ʰlɐt, ZA ʰla^{IIA} ~ ʰlat^{IIB}, TH/ZO/TE/SI la^{II} ~ lat^{II} *far (v)*.

(ʰ)laŋ² — MI ʰlaŋ^{IIA}, ZA laŋ^{IIA} *bier, machan (n)*; TH/ZO/TE/SI laŋ^{II} *bier (n)*; TH/ZO/TE/SI laŋ^{II} *machan (n)*.

(ʰ)lʌm¹ — (ST *(ʰ)ləm).[119] MI ʰlɐm^{I}, ZA lɐm^{I}, TH/ZO/TE/SI lam^{I} *fathom (n)*; MI ʰlɐm^{I} ~ ʰlɐm^{III} *fathom (v)*.

ʰlɛj² — *(Austroasiatic)*.[120] MI/ZA –ʰlɛj^{IIA}, TH/ZO/TE/SI –lɛj^{II} *squirrel (n)*.

(ʰ)lɛj⁻ — *(Austronesian)*.[121] MI lɛj^{III}, ZA ʰlɛj^{III}–, TH/ZO/TE/SI lɛj^{III} *bridge (n)*.

ʰLɛw¹ — MI ʰrɛw^{I}, TH/ZO ʰlɛw^{I} *leech (n)*.

ʰlɪam¹ — MI ʰlɪam^{I} ~ ʰlɪam^{III}, TH leɪm^{I} ~ leɪm^{III}, ZO lɪem^{I} ~ lɪem^{III}, TE lɪam^{I} ~ lɪam^{III}, SI liɐm^{I} ~ liɐm^{III} *wound (v)*.

ʰlɪaw¹ — MI/ZA ʰlɪaw^{I} ~ ʰlɪaw^{III}, TH leɪw^{I} ~ leɪw^{III}, ZO lɪew^{I} ~ lɪew^{III}, TE lɪaw^{I} ~ lɪaw^{III}, SI liɐw^{I} ~ liɐw^{III} *lick (flame) (v)*.

(ʰ)Lɪk — *(Sinitic)*.[122] MI –ʰrɪt, ZA –rɪt, TH/ZO –gɪʔ, TE –gɪk, SI –lɪk *pheasant (n)*.

ʰlɪm¹ — MI/ZA ʰlɪm^{I} ~ ʰlɪm^{III} *joyful (v)*; TH/TE/SI lɪm^{I} ~ lɪm^{III} *delicious (v)*.

ʰli¹ — (ST *ʰljə).[123] MI/ZA ʰli^{I}, TH/ZO/TE/SI li^{I} *flea (n)*.

(ʰ)li⁻ — MI li^{III} ~ lik^{IIB}, ZA ʰlik^{IIA} ~ ʰlik^{III}, TH/ZO/TE/SI li^{II} ~ lit^{II} *retract to reveal (v)*. MI li^{IIB} / lik^{IIA}, TE lɪk, SI li^{II} *glans penis (n)*. ZO/TE/SI li^{III}, TE li^{III} ~ lɪk *slough (v)*;[124] TH lɪʔ, TE/SI lik^{III} *wax (v)*.

ʰLit — MI ʰlit^{IIB}, ZA ʰnit^{IIB}, TH/ZO ʰlit^{II}, TE/SI lit^{II} *leech (n)*.

ʰlɪŋ¹ — MI ʰliŋ^{I}, ZA ʰlɪŋ^{I}, TH/ZO/TE/SI lɪŋ^{I} *thorn (n)*.

ʰlɔs — MI ʰlɔʔ, TH/SI lo^{III}, TE lɔʔ *wage (n)*. ZA ʰlɔʔ, ZO lo^{III} *earn (v)*.

ʰlɔw¹ — MI ʰlɔw^{I}, TH/ZO/TE/SI lɔw^{I} *weed (n)*. *cf.* **kʰlɔw²**, **lɔw²**

ʰlon¹ — MI lon^{I} ~ lon^{III} *launch (v)*; ZA ʰlɔn^{IIB} *throw (v)*; TH/TE/SI lon^{I} ~ lɔt *throw (v_i/v_t)*; TE/SI lɔt *throw (v_b)*.

ʰLom¹ — MI/ZA ʰlom^{I} ~ ʰlom^{III}, TH/ZO/TE hom^{I} ~ hom^{III} / hɔp, SI hom^{I} ~ hom^{III} *distribute (v)*.

ʰlʊk — *(Austronesian)*.[125] MI/ZA ʰlʊk, TH lup, ZO lʊʔ, TE/SI lʊk *colugo (n)*.

ʰlʊm⁻ — MI –ʰlʊm^{III} ~ ʰlʊm^{IIB}, ZA ʰlʊm^{III} ~ ʰlʊm^{IIB} *lay (v_t)*. ⇨ **lʊm⁻**

(ʰ)lʊm¹ — (ST *(ʰ)lwəm).[126] MI lʊm^{I} ~ lʊm^{III} / lʊm^{IIB}, ZA ʰlʊm^{I} ~ ʰlʊm^{III} *warm*

[119] See Vol.1, Ch.6, #67.
[120] See Shafer (1952:154) and the data in Shorto (2006:569).
[121] See Vol.1, Ch.6, #28.
[122] See Vol.1, Ch.6, #129.
[123] See Vol.1, Ch.6, #73.
[124] TE FORM-II lɪk from Bhaskararao (1994:349).
[125] See Vol.1, Ch.6, #111.

(v_i); MI lʊm^{IIB}, ZA ^{h}lʊm^{IIB} *warm (v_t)*; TH/ZO/TE/SI lʊm^{I} ~ lʊm^{III} *warm (v)*.

^{h}luj¹ — MI ^{h}lʊj^{I} ~ ^{h}lʊj^{III}, TH luj^{I} ~ luj^{III} / lʊj^{III}, ZO/TE luj^{I} ~ luj^{III}, SI lʊj^{I} ~ lʊj^{III} *old (v)*.

^{h}luj¹ — MI ^{h}lʊj^{I}, KH ^{h}li^{I}, ZO/TE –luj^{I}, SI –lʊj^{I} *cock (n)*.[127]

^{h}LVl⁻ — MI/ZA ^{h}rʊal^{I} ~ ^{h}rʊal^{III}, TH hoʊl^{II} ~ hoʊl^{III}, ZO hʊol^{II} ~ hʊol^{III}, TE hʊal^{II} ~ hʊal^{III}, SI huɐl^{II} ~ huɐl^{III} *twine (v)*. MI/TE zɪal^{I} ~ zɪal^{III}, TH ʒeɪl^{I} ~ ʒeɪl^{III}, ZO zɪel^{I} ~ zɪel^{III}, TE zɪal^{I} zɪal^{III} /SI ziɐl^{I} ~ ziɐl^{III} *roll (v)*; ZA zʊal^{I} ~ zʊal^{III} *roll (v_t)*; ZA zɔlʔ *roll (v_b)*. MI zɪal^{III}, TH ʒeɪl^{III}, ZO zɪel^{III}, SI ziɐl^{III} *roll (n)*. ZA ^{h}ril^{III} ~ ^{h}rɪlʔ *roll along (v_t)*. ⇨ **LVl⁻**. *cf.* **WVL⁻**

^{h}lVm² — (ST *^{h}lwəmʔ).[128] MI ^{h}lum^{IIA} ~ ^{h}lum^{III} / ^{h}lum^{IIB}, SI lim^{II} ~ lim^{III} *coil (v)*. ZA ^{h}lum^{IIA} ~ ^{h}lum^{III} *coil ($v_{i/t}$)*, ^{h}lum^{IIB} *coil (v_b)*. TH/ZO/TE lum^{II} ~ lum^{III}, SI lum^{II} *sphericalise (v_i)*. MI ^{h}lom^{IIA} ~ ^{h}lom^{III} *knead into lump (v)*; TH/ZO/TE/SI lɔm^{II} ~ lɔm^{III} *sphericalise (v_t)*. MI ^{h}lum^{IIA} *ball (n)*, TH lom^{II}, ZO/TE lim^{II} *string ball (n)*.

^{h}lVm⁻ — MI ^{h}lim^{I} ~ ^{h}lim^{III}, TH/TE lem^{I} ~ lem^{III}, ZO lem$^{I/II}$ ~ lem^{III}, SI lɛam$^{I/II}$ ~ lɛam^{III} *strip (v)*; TE lem^{II} ~ lem^{III} *flip (v)*.

$^{(h)}$lVM⁻ — MI/ZA lɛm^{III}, TH/ZO/TE/SI lim^{II} *image (n)*; TH/ZO/TE/SI lɛm^{III} ~ lɛp *rehearse (v)*. MI ^{h}lɪm^{III}, ZA t̲^{h}lam^{II}, TH lim^{III}, ZO ^{h}lim^{III}, TE lim^{III}, SI lɪm^{III} *shadow (n)*; ZO ^{h}lim^{III} ~ ^{h}lɪp *shadow (v)*. ZO lɪep^{II} ~ lɪep^{III}, TE lɪap^{II} ~ lɪap^{III}, SI liɐp^{II} ~ liɐp^{III} *shade (v)*. MI/ZA lɪam^{IIA} ~ lɪam^{III} *overflow (v)*; TH leɪm^{I} ~ leɪm^{III} *pass away (v)*; ZO lɪem^{III} ~ lɪep, TE lɪam^{I} ~ lɪam^{III}, SI liɐm^{II} ~ liɐm^{III} *disappear over horizon (v)*.

$^{(h)}$lVM⁻ — *(Austroasiatic)*.[129] MI –^{h}lɛp, ZA/TH –lɛp, ZO –lam^{I} TE –lek̲^{III}, SI –lɛap^{III} *butterfly (n)*. MI –^{h}lip^{II}, ZA –^{h}lim^{I}, TH –lɪp, ZO –lʊm^{I}, TE –lum^{I} *flying ant (n)*. *cf.* **P-lak**, **(k)l$^{(h)}$Vp**

[126] See Vol.1, Ch.6, #177.
[127] MI and KH from Luce (1962:tableB).
[128] See Vol.1, Ch.6, #136.
[129] See Vol.1, Ch.6, #72.

m

mɐl² — MI mɐl^{IIA} ~ mɐl^{III} *blurry (eyesight) (v)*; ZA mɐl^{III} *dim (v)*.

mɛ̰n¹ — MI mɐn^{I} ~ mɐn^{IIB}, ZA mɐn^{I} *catch (v)*; ZA mɛn^{I} ~ mɛn^{III} *stick (v)*; TH/ZO/TE/SI mɐn^{I} ~ mɐt *catch, stick (v_i)*, mɐt *stick (v_t)*. TE mɐt *prisoner (n)*.

mɐŋ² — (ST *məŋ^{ʔ}). [130] MI/ZA mɐŋ^{IIA}, TH/ZO/TE/SI mɐŋ^{II} *dream (n)*; MI mɐŋ^{IIA} ~ mɐn^{IIB}, ZA mɐn^{IIB}, TH/ZO/TE/SI mɐn^{III} ~ mɐt *dream (v)*. *cf.* **mɛŋ¹**

ma² — MI ma^{III} ~ mak^{IIB}, ZA mak^{IIB}, TE ma^{II} ~ mak^{IIB} *leave wife (v)*; TH/ZO ma^{II} ~ maʔ^{II} *disapprove (v)*.

maj¹ — MI/ZA/TH/ZO/TE/SI maj^{I} *pumpkin (n)*.

mak — (ST *mak). [131] MI mak^{IIB}, ZO maʔ^{II}, TE/SI mak^{II} *brother-in-law, son-in-law (n)*; ZA mak^{IIB} *son-in-law (n)*.

mɛj¹ — MI –mɛj$^{(I)}$ *haze (n)*; TH/ZO/TE/SI mɛj^{I} *cloud (n)*.

mɛj² — (ST *məj^{ʔ}). [132] MI/ZA mɛj^{IIA}, TH/ZO/TE/SI mɛj^{II} *fire (n)*.

mɛj² — (ST *məj^{ʔ}). [133] MI/ZA mɛj^{IIA}, TH/ZO/TE/SI mɛj^{II} *tail (n)*.

mɛŋ¹ — MI mɛŋ^{I} *open eyes (v)*, mɛn^{IIB} *suffer insomnia (v)*; ZA mɛŋ^{I} ~ mɛn^{III} *open eyes (v), suffer insomnia (v)*. TE mɛŋ^{I} ~ mɛn^{III} *suffer night seizure (v)*. TE mɛŋ^{I}, SI mɛŋ^{I} ~ mɛn^{III} *nap (v)*. *cf.* **mɐŋ²**

met — MI/ZA met^{IIB} ~ mɛʔ, TH/ZO/TE met^{II} ~ met^{III}, SI met^{II} ~ met^{III} / me^{III} *shave (v)*.

mɪt — *(Austroasiatic)*. [134] MI/ZA/TH/ZO/TE/SI mɪt *eye (n)*.

mɪt — (ST *mjət). [135] MI/ZA/TE, mɪt ~ mɪʔ, TH/ZO/SI mɪt ~ mi^{III} *extinguish (v)*.

mi² — (ST *mjə^{ʔ}). [136] MI/ZA mi^{IIB}, TH/ZO/TE/SI mi^{II} *person (n)*.

məŋ² — MI məŋ^{IIB} *river mouth, posterior (n)*; ZO/SI məŋ^{II} *river mouth, edge, top (n)*; TH məŋ^{II} *edge (n)*; TE məŋ^{II} *end, top, extremity (n)*. SI məŋ^{II} ~ mən^{III} *die off (v)*.

məs — MI/ZA məʔ *misdeed (n)*. TH/ZO/SI mo^{III}, TE məʔ *err (v)*.

məw¹ — MI/TH məw^{I} *daughter/sister-in-law (n)*; ZA/TE/SI məw^{I} *daughter-in-law (n)*; ZO məw^{I} *sister-in-law (n)*.

mol˗ — MI mol^{IIA} ~ mol^{III}, ZA məl^{IIB}, TH mol^{I} (~ məl^{III}), ZO/TE mol^{I} ~ mol^{III} *stupid (v)*. SI mol^{I} ~ mol^{III} *muddle (v)*. TH məl^{III} , TE/SI mol^{II} ~ mol^{III} *blunt (v)*, ZO mol^{II} ~ mol^{III} *dull (colour) (v)*. MI məl^{IIB}, LA məlʔ *forget (v)*.

moj¹ — *(Sinitic)*. [137] MI/ZA moj^{I} ~ moj^{III} *beautiful (v)*. ZO/TE/SI məj^{I} ~ məj^{III} *young (v)*. *cf.* **həj˗**

[130] See Vol.1, Ch.6, #50.
[131] See Vol.1, Ch.6, #154.
[132] See Vol.1, Ch.6, #69.
[133] See Vol.1, Ch.6, #165.
[134] See Vol.1, Ch.6, #62.
[135] See Vol.1, Ch.6, #61.
[136] See Vol.1, Ch.6, #128.
[137] See Vol.1, Ch.6, #13.

mʊal¹ — MI mʊal^{I} *hill (n)*; ZA/TE mʊal^{I}, TH moʊl^{I}, ZO mʊol^{I}, SI muɐl^{I} *mountain (n)*.

mʊat — MI mʊat^{IIB} ~ mʊaʔ *brittle (v)*. ZA mʊat^{IIB}, TH moʊt^{II} ~ moʊt^{III}, ZO mʊot^{II} ~ mʊot^{III}, TE mʊat^{II} ~ mʊat^{III}, SI muɐt^{II} ~ muɐt^{III} *rot (v)*.

mu¹ — MI/ZA/TH/ZO/TE/SI mu^{I} *vulture (n)*.

mu² — MI/ZA/TH/ZO/SI mu^{II} *kernel (n)*. TE mu^{II} *seed pit (n)*

mut — MI mut^{IIB} ~ mʊʔ, ZA mut^{IIB}, *smoulder (v)*; TH/ZO mut^{II} ~ mut^{III} *blow (v)*; TE/SI mut^{II} ~ mut^{III} *smoulder, blow (v)*.

mvm⁻ — *(Austroasiatic)*.[138] MI mɔm^{II} ~ mɔm^{III}, TH/ZO mɔm^{I} ~ mɔm^{III} *sprout (v)*; TE mɔm^{I} ~ mɔm^{III}, SI mɔm^{II} (~ mɔm^{III}) *very young (v)*. MI/ZA mum^{IIA} ~ mum^{III} *closed (flower) (v)*. MI mim^{I} *nut (n)*; SI mɔm^{II} / mʊm^{II} *bud (n)*. ⇨ **$^{(h)}$mʊ̥am¹**

mv*n*⁻ — MI/TH/ZO/TE/SI mon^{III}, TH/ZO/TE men^{III} *clitoris (n)*

mvŋ² — *(areal)*.[139] MI mɐŋ^{IIA} ~ mɐn^{III}, ZA –mɐŋ^{IIA}, TH mɐŋ^{II}, ZO/TE/SI –mɐŋ^{II} *black (pot) (v)*. MI mok^{IIB} *sallow (v)*; MI muk^{IIB} *dull (colour), sit obediently (v)*; ZO moʔ^{II}, TE mok^{II}, SI mɔk *fog (n)*.

[138] See Vol.1, Ch.6, #29.
[139] See Vol.1, Ch.6, #20.

ʰm

ʰmɐj² — MI ʰmɐjʔ *overlook (v)*. TH/ZO/TE/SI mɐj^{II} ~ mɐj^{III} *fumble (v)*. ZO mɐj^{III}, TE mɐjʔ *smear (v)*.

(h)mɐn² — MI ʰmɐn^{IIB}, ZA mɐn^{IIB} *footloose (v)*; TH/ZO/TE/SI mɐn^{II} ~ mɐn^{III} *footloose, finish (v)*.

ʰmɐŋ¹ — MI ʰmɐŋ^{I} ~ ʰmɐn^{III} / ʰmɐn^{IIB}, ZA ʰmɐŋ^{I} ~ ʰmɐn^{III}, TH/ZO/TE/SI mɐŋ^{I} ~ mɐn^{III} *utilise (v)*.

ʰma¹ — MI/ZA ʰma^{I}, TH/ZO/TE/SI ma^{I} *wound (n)*. ZA ʰma^{I} ~ ʰma^{I}-s *wound (v)*.

(h)mɛs — MI/ZA ʰmɛʔ, TH/ZO/SI me^{III}, TE mɛʔ *curry (n), eat curry (v)*; LA mɛʔ *curry (n)*.

ʰmEC — MI/ZA ʰmɛt ~ ʰmɛʔ, TH –meʔ^{I} ~ mɛʔ, ZO/SI mɛt ~ me^{III}, ZO meʔ^{I} ~ me^{III}, TE mek^{I} ~ mek^{III} *massage (v)*.

ʰmɪn¹ — (ST *ʰmjən).[140] MI/ZA/TH/ZO/TE/SI ʰmɪn^{I} ~ ʰmɪn^{III} *ripe (v)*; MI ʰmɪn^{IIB} *subdue (v)*; ZA ʰmɪn^{IIB} *prepare (v)*.

ʰmɪŋ¹ — (ST *ʰmjəŋ).[141] MI ʰmɪŋ^{I}, ZA ʰmɪn^{I}, TH/ZO/TE/SI mɪn^{I} *name (n)*.

(h)mʊ̥am¹ — *(Austroasiatic)*.[142] MI ʰmʊam^{I} ~ ʰmʊam^{III}, ʰmom^{I} ~ ʰmom^{III}, TH moʊm^{I} ~ moʊm^{III}, ZO mʊom^{I} ~ mʊom^{III}, TE mʊam^{I} ~ mʊam^{III}, SI muɐm^{I} ~ muɐm^{III} *hold in mouth (v)*. MI ʰmɔm^{IIB} *put in mouth (v)*. ZA mɔm^{IIB} *devour (v)*. TH/SI mɔp, ZO mʊom^{III} ~ mɔp, TE mʊam^{III} ~ mɔp *feed regurgitatively (v)*. ⇨ **mvm⁻**

ʰmʊj² — (ST *ʰmwəjʔ).[143] MI/ZA ʰmʊj^{IIA}, TH/ZO/TE/SI mʊj^{II} *spindle (n)*.

ʰmʊl² — (ST *ʰmwəlʔ).[144] MI/ZA ʰmʊl^{IIA}, TH/ZO/TE/SI mʊl^{II} *body hair (n)*.

ʰmʊn⁻ — MI/ZA ʰmʊn^{III}, TH/ZO/TE/SI mʊn^{III} *place (n)*.

ʰmu⁻ — MI/ZA ʰmu^{III} ~ ʰmʊʔ, TH/ZO/SI mu^{III}, TE mu^{III} ~ mʊʔ *see (v)*.

(h)mu¹ — MI mu^{I} ~ mʊt *lie, sleep (v_i)*, mʊt *put to sleep (v_t)*;[145] ZA ʰmu^{I} ~ ʰmut^{IIB} *sleepy (v)*; TH mu^{I} ~ mʊt *sleep (v)*; ZO/TE/SI mu^{I} ~ mʊt *fall asleep (v)*.

ʰmvL⁻ — *(Austroasiatic)*.[146] MI ʰmur^{III} *point, tip, teat (n)*; ZA ʰmur^{III}, TH mʊʔ, ZO mʊa^{III}, TE/SI muk^{III} *lips, beak (n)*. MI ʰmuj^{III} *muzzle (n)*. MI/ZA ʰmel^{I}, ZA ʰmuj^{III}, TH/ZO/TE/SI mel^{I} *visage (n)*. MI/ZA ʰmaj^{IIA}, TH/ZO/TE/SI maj^{II} *face, front (n)*.

[140] See Vol.1, Ch.6, #132.
[141] See Vol.1, Ch.6, #117.
[142] See the data in Shorto (2006:376-7).
[143] See Vol.1, Ch.6, #156.
[144] See Vol.1, Ch.6, #90.
[145] MI FORM-I mʊt from Chhangte (1996:87).
[146] See Vol.1, Ch.6, #63.

n

nɐm¹ — (ST *nam).[147] MI/ZA/TH/ZO/TE/SI nɐm^{I} ~ nɐm^{III} *smell (v$_i$)*. ⇨ **^{h}nvm¹**

nɐŋ¹ — MI nɐŋ^{I} ~ nɐn^{III} *catch in time (v)*. TH/ZO/TE/SI nɐŋ^{I} ~ nɐn^{III} *prop up (v)*.

nɐŋ² — *(areal)*.[148] MI/ZA nɐŋ^{IIA}, TH/ZO/TE/SI nɐŋ^{II} *you (n)*.

na¹ — (ST *na).[149] MI/TH/ZO/TE/SI na^{I} ~ nɐt *hurt, ill (v)*. ZA na^{I} ~ nɐt *hurt, ill (v$_i$)*, nɐt *hurt (v$_t$)*.

naw¹ — MI/ZA/TH/ZO/TE naw^{I} *child (n)*, SI naw^{I} *infant (n)*. ZO –naw^{III} *undercooked (v)*.

nɛj⁻ — MI/ZA/TE nɛj^{III} ~ nɛjʔ, TH/ZO/SI nɛj^{III} *have (v)*.

nɛŋ² — ZO nɛn^{III} nɛt, TE/SI nɛŋ^{II} nɛn^{III} *press (v)*. *cf.* **nɐŋ¹**

ni¹ — (ST *njə).[150] MI/ZA/TH/ZO/TE/SI ni^{I} *sun (n)*.

ni¹ — MI/ZA/TH/ZO/TE/SI ni^{I} *paternal aunt (n)*.

nɔw² — (ST *nwəʔ).[151] MI/ZA nɔw^{IIA} ~ nɔw^{III}, TH/ZO nɔw^{II} ~ nɔw^{III} *young (v)*; TE nɔw^{II} ~ nɔw^{III} *young, small (v)*; SI nɔw^{II} ~ nɔw^{III} *small (v)*.[152]

not — MI not^{IIB} ~ nɔʔ, TH/ZO/TE not^{II} ~ not^{III}, SI not^{II} ~ not^{III} / no^{III} *rub (v)*. *cf.* **$^{(h)}$nvl¹**, **nvk**

nʊŋ² — MI nʊŋ^{IIA} ~ nʊn^{III}, TH/SI nʊŋ^{II} ~ nʊn^{III}, ZO/TE nʊŋ^{II}– ~ nʊn^{III} *alive (v)*; ZA nʊŋ^{IIA} ~ nʊn^{III} *alive (v$_i$)*, nʊn^{IIB} *survive (v$_t$)*.[153]

nu¹ — MI/SI nu^{I} ~ nʊt *murky (v)*; TH/ZO nu^{III}, TE nʊʔ *smear (v)*.

nu² — MI/ZA nu^{IIB}, TH/ZO/TE/SI nu^{II} *mother (n)*. MI/ZA/TH/ZO/TE/SI nu^{III} *female (n)*.

nvk — *(onomatopoeic)*. MI/TE/SI nok^{I} ~ nok^{III}, MI nek^{I} ~ nek^{III}, MI nok^{IIB} ~ nɔʔ, TH neʔ^{I} ~ nɛʔ, ZO noʔ^{I} ~ noʔ^{III} *jostle (v)*; TH noʔ^{I} ~ nɔʔ *wade (v)*; TH nɛʔ, TE nek^{III} ~ neʔ, SI nɛak^{III} *approach (v)*. *cf.* **$^{(h)}$nvl¹**, **not**

nvl⁻ — MI/ZA nal^{IIA} ~ nal^{III}, TH/ZO/TE/SI nal^{II} ~ nal^{III} *smooth, slippery (v)*; MI nɛl^{I} ~ nɛl^{III} *pliant (v)*; ZA/TE/SI nɛl^{I} ~ nɛl^{III} *damp (v)*; ZO nɛl^{I} ~ nɛl^{III} *greasy (v)*. MI nel^{I} ~ nel^{III} *soft (texture), intimate (v)*; ZA nel^{I} ~ nel^{III} *intimate (v)*; TH/ZO nel^{I} ~ nel^{III}, TE nel^{II} ~ nel^{III}, SI nɛal^{II} ~ nɛal^{III} *soft (texture) (v)*. ZA nel^{IIA}, TH nel^{III}, TH/TE –nel^{II}, ZO nel^{II}, SI –nɛal^{II} *sand (n)*. *cf.* **$^{(h)}$nvl¹**

nvm² — MI nɐm^{IIA} ~ nɐm^{III}, ZO/TE/SI nɐm^{II} ~ nɐm^{III} *push (v)*; ZA nɐm^{IIA} ~ nɐm^{III} *compress (v)*; TH nɐm^{II} ~ nɐm^{III} *barge (v)*; TH/ZO nɔm^{II} ~ nɔm^{III} *cram (v)*; MI nɛm^{IIB} *press (v)*.

nvm⁻ — *(areal)*.[154] MI/ZA/TH/ZO nem^{I} ~ nem^{III} *soft (v)*; TE/SI nem^{I} ~ nem^{III}

[147] See Vol.1, Ch.6, #147.
[148] See Vol.1, Ch.6, #185.
[149] See Vol.1, Ch.6, #97.
[150] See Vol.1, Ch.6, #163.
[151] See Vol.1, Ch.6, #152.
[152] TE gloss of *small* from Vul Za Thang & J. Gin Za Twang (1975:87).
[153] ZA nʊn^{IIB} from Osburne (1975:112).
[154] See Vol.1, Ch.6, #153.

flexible (v). TH nɔʊm^{II} ~ nɔʊm^{III} / nɔp, ZO nʊɔm^{II} ~ nʊɔm^{III} / nɔp, TE nʊam^{II} ~ nʊam^{III}, SI nuɐm^{II} ~ nuɐm^{III} / nɔp *happy (v)*. MI/ZA nʊam^{III} ~ nɔm^{IIB}, TH nɔʊm^{III} ~ nɔp, ZO nʊɔm^{III} ~ nɔp, TE nʊam^{III} ~ nɔp, SI nuɐm^{III} ~ nɔp *comfortable (v)*. ⇨ **^{h}nVM^{-}**. *cf.* **^{h}nɪam^{2}**

ʰn

ʰnɐm² — MI ʰnɐm^{IIA}, TH/ZO/TE/SI nɐm^{II} *clan (n)*.

ʰnɐp — (ST ʰnɐp). [155] MI/ZA ʰnɐp, TH/ZO/TE/SI nɐp *snot (n)*. *cf.* **ʰnvm¹**

ʰnɐs — MI/ZA ʰnɐʔ, TH/ZO naᴵᴵᴵ, TE nɐʔ , SI –naᴵᴵᴵ *leaf (n)*.

ʰna¹ — (ST *ʰnə).[156] ZA ʰnaᴵ *ear (n)*; TH naᴵ *inner ear (n)*.

ʰnaj¹ — MI/ZA ʰnajᴵ, TH/ZO/TE/SI najᴵ *pus, sap (n)*. MI ʰnajᴵ ~ ʰnajᴵᴵᴵ *tap (v)*. *cf.* **ʰnoj²**

(h)naj² — (ST *(h)najʔ). [157] MI ʰnajᴵᴵᵃ ~ ʰnajᴵᴵᴵ, ZA najᴵᴵᵃ ~ ʰnajᴵᴵᴵ, TH najᴵᴵ ~ najᴵᴵᴵ / nɐjᴵᴵᴵ, ZO/TE/SI najᴵᴵ ~ najᴵᴵᴵ *near (vi)*. MI/ZA ʰnɐjʔ , TH najᴵᴵᴵ ~ nɐjᴵᴵᴵ, ZO (najᴵᴵᴵ ~) nɐjᴵᴵᴵ, TE (najᴵᴵᴵ ~) nɐjʔ, SI nɐjᴵᴵᴵ *near, approach (vt)*.

ʰnaŋ² — (ST *ʰnaŋʔ). [158] MI ʰnaŋᴵᴵᴬ ~ ʰnanᴵᴵᴵ, ZO naŋᴵᴵ ~ nanᴵᴵᴵ *viscous (v)*; ZA ʰnaŋᴵᴵᴬ ~ ʰnanᴵᴵᴵ, TH naŋᴵᴵ ~ nanᴵᴵᴵ *sticky (v)*; SI naŋᴵᴵ ~ nanᴵᴵᴵ / naŋ̲ᴵᴵᴵ *trickle (v)*.

ʰnar¹ — (ST *ʰnar).[159] MI ʰnarᴵ ~ ʰnarᴵᴵᴵ, SI nakᴵ ~ nakᴵᴵᴵ *snore (v)*; TH nɐʔ *smell (vt)*; ZO naᴵ ~ naᴵᴵᴵ, TE nakᴵ ~ nakᴵᴵᴵ *breathe (v)*. MI ʰnarᴵ/ᴵᴵᴵ, ZA ʰnarᴵᴵᴵ, TH naʔᴵ, ZO naʔ̲ᴵ, TE/SI nakᴵᴵᴵ *nose (n)*.[160]

ʰnɛs — MI h̲ɛʔ *lower lip (n)*; TH/ZO/SI neᴵᴵᴵ, TE nɛʔ *lip (n)*.

ʰne² — MI ʰneᴵᴵᴵ ~ ʰnekᴵᴵᴮ *suckle (v)*, TH/ZO neᴵᴵ ~ neʔᴵᴵ, TE neᴵᴵ ~ nekᴵᴵ, SI neᴵᴵ ~ nɛakᴵᴵ *eat (v)*.

ʰnɪal² — MI ʰnɪalᴵᴵᴬ ~ ʰnɪalᴵᴵᴵ, SI niɐlᴵᴵ ~ niɐlᴵᴵᴵ *contradict (v)*; TH neɪlᴵᴵ ~ neɪlᴵᴵᴵ *deny (v)*; ZO nɪelᴵᴵ ~ nɪelᴵᴵᴵ, TE nɪalᴵᴵ ~ nɪalᴵᴵᴵ *contradict, deny (v)*.

(h)nɪam² — *(areal)*. [161] MI ʰnɪamᴵᴵᴬ ~ ʰnɪamᴵᴵᴵ, ZA nɪamᴵᴵᴬ ~ nɪamᴵᴵᴵ, TH neɪmᴵᴵ ~ neɪmᴵᴵᴵ, ZO nɪemᴵᴵ ~ nɪemᴵᴵᴵ, TE nɪamᴵᴵ ~ nɪamᴵᴵᴵ, SI niɐmᴵᴵ ~ niɐmᴵᴵᴵ *low (v)*. *cf.* **ʰnvm⁻**

ʰnɪs — (ST *(h)njəs). [162] MI/ZA ʰnɪʔ, TH/ZO/TE niᴵᴵᴵ, SI nɪʔ *two (v)*.

(h)ni² — MI ʰniᴵᴵᴮ, ZA –niᴵᴵᴮ, TH niᴵᴵ, TE/SI –niᴵᴵ *gums (n)*.

ʰnim¹ — MI ʰnimᴵ ~ ʰnimᴵᴵᴵ, TH nimᴵ ~ nimᴵᴵᴵ *overcast, immerse (v)*; ZA ʰnimᴵ ~ ʰnimᴵᴵᴵ *immerse (v)*; ZO/TE/SI nimᴵ ~ nimᴵᴵᴵ *overcast (v)*.

ʰnit — *(onomatopoeic)*. MI/ZA ʰnitᴵ ~ ʰnitᴵ, TH/ZO/TE nitᴵᴵ ~ nitᴵᴵᴵ, SI nitᴵᴵ ~ nitᴵᴵᴵ / niᴵᴵᴵ *blow nose (v)*.

ʰnɔm¹ — MI ʰnɔmᴵ ~ ʰnɔmᴵᴵᴵ, TH/ZO/TE nɔmᴵ ~ nɔmᴵᴵᴵ *damp (v)*.

ʰnoj² — ZA ʰnɔjᴵᴵᴮ, TH/ZO/TE nojᴵᴵ, SI nɔajᴵᴵ *breast, milk (n)*. *cf.* **ʰnaj¹**

ʰnʊ̃ŋ¹ — (ST *ʰnwəŋ). [163] MI ʰnʊŋᴵ, TH/TE/SI nʊŋᴵ *back (n)*. MI ʰnɔŋᴵ ~

[155] See Vol.1, Ch.6, #150.
[156] See Vol.1, Ch.6, #53.
[157] See Vol.1, Ch.6, #118.
[158] See Vol.1, Ch.6, #176.
[159] See Vol.1, Ch.6, #122.
[160] Weidert, in Benedict (1988a:263), distinguishes MI ʰnarᴵ *nose (n)* and ʰnarᴵᴵᴵ *elephant trunk (n)*.
[161] See Vol.1, Ch.6, #153.
[162] See Vol.1, Ch.6, #173.
[163] See Vol.1, Ch.6, #4.

ʰnɔn^{III} *rejected (v$_t$)*, MI ʰnɔn^{IIB}, ZA ʰnɔŋ^{I} ~ ʰnɔn^{III} *reject (v$_t$)*.

ʰnu⁻ — *(areal)*.[164] MI ʰnu^{III} *breast (n)*.[165]

(h)nuj¹ — MI nʊj^{I} ~ nʊj^{III} / nʊjʔ *laugh (v$_i$)*, nʊjʔ *laught at (v$_t$)*; ZA ʰni^{I} ~ ʰnɪʔ, TH nuj^{I} ~ nuj^{III} / nʊj^{III}, ZO nuj^{I} ~ nuj^{III}, TE nuj^{I} ~ nʊjʔ, SI nʊj^{I} ~ nʊj^{III} *laugh (v)*.

(h)nVL¹ — MI nul^{I} ~ nul^{III} *brush past, rub against (v)*; ZA ʰnul^{I} ~ ʰnul^{III}, TE nul^{I} ~ nul^{I} *wipe (v)*. MI nol^{I} ~ nol^{III} *graze (v)*, ZA nol^{I} ~ nol^{III} *relocate (v)*. TH/ZO/TE/SI nol^{I} ~ nol^{III} *brush (v)*. MI/ZA/TE nʊaj^{I} ~ nʊaj^{III}, TH noʊj^{I} ~ noʊj^{III}, ZO nʊej^{I} ~ nʊej^{III}, SI nuɛj^{I} ~ nuɛj^{III} *rub between hands (v)*. ZA ʰnoj^{I} ~ ʰnoj^{III}, TH/ZO/TE noj^{II} ~ noj^{III} *murky (v)*; MI ʰnɔjʔ, SI nɔaj^{III} ~ nɔj^{III} *smear (v)*. *cf.* **nVl⁻**, **nVk**, **not**

ʰnVm¹ — MI/ZA ʰnɐm^{III} ~ ʰnɐm^{IIB} *sniff affectionately (v)*; MI ʰnim^{III} ~ ʰnɪm^{IIB}, ZA ʰnim^{III} (~ ʰnɪm^{IIB}), ZO/TE/SI nɐm^{III} ~ nɐp^{III} *smell (v$_t$)*. ⇨ **nɐm¹**. *cf.* **ʰnɐp**

ʰnVM⁻ — *(areal)*.[166] MI/ZA ʰnem^{III} ~ ʰnɛm^{IIB}, ZO/TE nem^{III} ~ nɛp, SI nɛam^{III} ~ nɛp *comfort (v$_t$)*. MI/ZA ʰnɪp, TH/ZO nɪp *malleable (v)*; TE/SI nɪp *soft (v)*. ⇨ **nVM⁻**. *cf.* **(h)nɪam²**

(h)nVŋ⁻ — MI ʰnɐŋ^{III} (~ ʰnɐn^{IIB}), ZA ʰnɐŋ^{III}, TH/ZO naŋ^{I} ~ nan^{III}, SI nɐŋ^{III} ~ nɐk *sluggish (v)*; TH nɐŋ^{III} ~ nɐʔ, TE nɐŋ^{III} ~ nɐt *exhausted (v)*; ZO nɐŋ^{III} ~ nɐʔ *on deathbed (v)*; SI nɐŋ^{III} ~ nɐt *ill (v)*. TE nɛŋ^{I} ~ nɛn^{III} *disdain (v)*. MI/ZA nɪŋ^{IIA} ~ nɪn^{III}, TH nɪŋ^{II}, ZO/TE/SI nɪŋ^{II} ~ nɪn^{III} *tired of (v)*.[167]

[164] See Vol.1, Ch.6, #27.
[165] MI from Löffler (1985:284) and Luce (1985:II.86).
[166] See Vol.1, Ch.6, #153.
[167] TE nɛŋ^{I} ~ nɛn^{III} from VanBik (2009:209).

ŋ

ŋɐl¹ — MI/ZA/TH/ZO/TE/SI ŋɐlᴵ *shin (n)*.

ŋɐm¹ — MI/ZA ŋɐmᴵ ~ ŋɐmᴵᴵᴵ *tame (v)*; TH/ZO/TE/SI ŋɐmᴵᴵᴵ ~ ŋɐp *lean on (v)*.

ŋɐs — MI/ZA/TE ŋɐʔ, TH/ZO/SI ŋaᴵᴵᴵ *receive (v)*.

ŋa¹ — (ST *ŋaʔ).[168] MI/TH ŋaᴵ ~ ŋaᴵᴵᴵ, ZA ŋaᴵ ~ ŋatᴵᴵᴮ, ZO/TE/SI ŋaᴵ *five (v)*.

ŋa¹ — TH/ZO/TE/SI ŋaᴵ ~ ŋɐt *face (v)*.

ŋaj¹ — MI ŋajᴵ ~ ŋajᴵᴵᴵ / ŋɐjʔ *love (v)*; MI ŋajᴵ ~ ŋɐjʔ *listen (v)*; ZA/SI ŋajᴵ ~ ŋajᴵᴵᴵ *love, pine (v)*; TH/ZO ŋajᴵ ~ ŋɐjᴵᴵᴵ, TE ŋajᴵ ~ ŋɐjʔ *love, listen (v)*; ZA/TE ŋɐjʔ, TH/ZO ŋɐjᴵᴵᴵ *palatable, pleasing (v)*.

ŋaw¹ — MI/ZA/TH/ZO/TE/SI ŋawᴵ *monkey (n)*.

ŋam⁻ —[169] MI ŋɐmᴵ/ᴵᴵᴮ / hʊamᴵ, ZA ŋɐmᴵᴵᴮ *dare (v)*;[170] TH/ZO/TE/SI ŋɐmᴵ ~ ŋɐmᴵᴵᴵ *dare* (v_t); TH/ZO/TE ŋapᴵᴵ ~ ŋapᴵᴵᴵ, SI napᴵᴵ ~ napᴵᴵᴵ / naᴵᴵᴵ *dare* (v_i).

ŋɔŋ¹ — MI/TH/TE/SI ŋɔŋᴵ ~ ŋɔnᴵᴵᴵ *deaf (v)*; ZA ŋɔŋᴵᴵᴬ *deaf and stupid (v)*.

ŋɔw¹ — MI/ZA/TH/ZO/TE/SI ŋɔwᴵ ~ ŋɔwᴵ *pale (v)*.

ŋʊ(a)j⁻ — MI ŋʊjᴵᴵᴬ ~ ŋʊjᴵᴵᴵ, MI ŋʊajᴵᴵᴮ *miserable (v)*; TH ŋɯjᴵᴵ / noʊjᴵᴵ *sad, sleepy (v)*; ZO ŋʊjᴵᴵ–, TE ŋʊjᴵᴵ ~ ŋʊjᴵᴵᴵ, TE ŋʊajᴵ ~ ŋʊajᴵᴵᴵ *tired out (v)*; SI ŋʊjᴵᴵᴵ *nauseated (v)*. MI ŋojᴵ ~ ŋojᴵᴵᴵ / ŋɔjʔ *quiet (v)*. MI vʊajᴵ ~ vʊajᴵᴵᴵ, MI ʊajᴵ, ZA vʊajᴵ ~ vʊajᴵᴵᴵ, ZA ʔʊajᴵ ~ ʔʊajᴵᴵᴵ, TH voʊjᴵ ~ voʊjᴵᴵᴵ, ZO ʊejᴵ ~ ʊejᴵᴵᴵ, TE vʊajᴵ ~ vʊajᴵᴵᴵ, TE gʊajᴵ ~ gʊajᴵᴵᴵ, SI huɛjᴵ ~ huɛjᴵᴵᴵ *wither (v)*.[171] *cf.* **kvl⁻**

ŋum¹ — MI ŋumᴵᴵᴵ, TH/ZO ŋumᴵ *spine (n)*.

ŋun¹ — *(external)*.[172] MI/ZA ŋunᴵ, ZO/TE/SI ŋunᴵᴵᴵ *silver (n)*.

ŋvŋ¹ — MI ŋeŋᴵ ~ ŋenᴵᴵᴵ *dawdle (v)*; TH ŋoŋᴵ– *slow (v)*. MI/ZA ŋenᴵᴵᴵ ~ ŋɛnᴵᴵᴮ, ZO/TE/SI ŋenᴵᴵᴵ ~ ŋɛt *request (v)*.[173]

[168] See Vol.1, Ch.6, #71.
[169] See Vol.1, Ch.6, #42.
[170] MI hʊamᴵ from Weidert (1975:61). See Vol.1, Ch.6, #42.
[171] MI ʊajᴵ from VanBik (2009:157).
[172] See Vol.1, Ch.6, #142.
[173] Compare the senses of *harass* for the semantics.

ʰŋ

ʰŋɐl¹ — MI/ZA ʰŋɐl^{I} ~ ʰŋɐl^{III}, TE ŋɐl^{I}– *rude (v)*; TE ŋɐl^{III} *scowl (v)*; TH ŋɐl^{I} ~ ŋɐl^{III}, SI ŋɐl^{I} ~ ŋɐl^{III} *unabashed (v)*; ZO ŋɐl^{I} ~ ŋɐl^{III} *barren (v)*.

(h)ŋɐl¹ — MI ʰŋɐl^{III}, ZA ŋɐl^{III}, TH/ZO/TE/SI ŋɐl^{III} *wild boar (n)*.

(h)ŋa² — (ST *$^{(h)}$ŋa^{ʔ}).[174] MI ʰŋa^{IIB}, ZA ŋa^{IIB}, TH/ZO/TE ŋa^{II}, SI ŋɐ– *fish (n)*.

ʰŋak — MI/ZA ʰŋak^{IIB} ~ ʰŋɐʔ, TH/ZO ŋaʔ^{II} ~ ŋa^{III}, TE ŋak^{II} ~ ŋak^{III}, SI ŋak^{II} ~ ŋak^{III} ŋa^{III} *wait (v)*.

ʰŋɔw̄ — MI ʰŋɔw^{III}, ZA h̲ɔw^{III}, TE ŋɔw^{III}– *tusk (n)*.

ʰŋok — *(onomatopoeic)*. MI ʰŋok^{I} ~ ʰŋok^{III}, ZA ʰŋok^{IIA} ~ ʰŋok^{III} *snore (v)*.

ʰŋoŋ¹ — *(Austroasiatic)*.[175] MI/ZA ʰŋoŋ^{I}, TH/ZO/TE/SI ŋoŋ^{I} *neck (n)*. c*f.* **$^{(h)}$rvŋ̄**

ʰŋoŋ² — MI ʰŋɔk *elbow (v)*, ʰŋɔŋ^{IIB} *elbow, recoil (v)*; ZA ʰŋɔŋ^{IIB} *butt (v)*; TE ŋok^{II} ~ ŋok^{III}, SI ŋok^{II} ~ ŋok^{III} / ŋo^{III} *shake (v)*.

(h)ŋvr̄ — MI ŋʊr^{III}, ZA ʰŋɪr^{III}, TH ŋɪʔ, ZO ŋiʔ^{III}, TE ŋik^{III} *growl (v)*.

[174] See Vol.1, Ch.6, #70.
[175] See Benedict (1994:5).

p

p$^{\text{ɛ}}_{\text{ɐ}}$j^{-} — MI/ZA pɐj^{II} ~ pɐj^{III} *stagger (v)*; ZO pɛj^{II} ~ pɛj^{III}, TE/SI pɐj^{I} ~ pɐj^{III} *go (v)*. TH/ZO/TE/SI pɛj^{I} ~ pɛj^{III} *revolve (v)*. TH/ZO pɛj^{I} *wheel (n)*.

pɐl¹ — MI/TH/ZO pɐl^{I} *palisade (n)*.

pa² — MI/ZA pa^{IIA}, TH/ZO/TE pa^{II}, SI –pa^{II} *mushroom (n)*.

pa² — (ST *pa^{ʔ}). [176] MI/ZA pa^{IIB}, TH/ZO/TE/SI pa^{II} *father (n)*. MI/ZA pa^{III}, TH/ZO/TE/SI pa^{III} *male (n)*.

paj¹ — MI paj^{I}, TH/ZO/TE/SI paj^{I} *sheath (n)*. *cf.* **paj²**

paj² — MI/ZA paj^{IIA} ~ paj^{III}, ZO/TE/SI paj^{II} ~ paj^{III} *carry on self (v)*. *cf.* **paj¹**

paj^{-} — (ST *paj). [177] MI pɐjʔ, TH/ZO paj^{III} ~ pɐj^{III}, TE paj^{III} ~ pɐjʔ *discard (v)*; ZA pɐjʔ *discard on fire (v)*; SI paj^{III} ~ pɐj^{III} *misplace (v)*.

pa(L)² —[178] ZA pa^{IIA} ~ pat^{IIB}, TH/ZO/TE/SI pa^{II} ~ pat^{II} *thin (v)*. MI pɐn^{I} ~ pɐn^{III} *thin (v)*; TH/SA pɐn^{II} / pɛn^{II}, TE pɐn^{I} ~ pɐn^{III}, SI pɛn^{I} ~ pɛn^{III} *very thin (v)*.

paw¹ — MI paw^{I}– *speech, word (n)*, TH/TE/SI paw^{I} ~ paw^{III} *speak (v)*.

p$^{\text{ɛ}}_{\text{ʌ}}$L^{-} — MI/ZA par^{I}, TH pɐʔ, ZO pa^{I}, TE/SI pak^{I} *flower (n)*. MI/ZA par^{I} ~ par^{III} *flower (v)*; TH paʔ^{I} ~ pɐʔ *flower (v)*; ZO pa^{I} ~ pa^{III}, TE/SI pak^{I} ~ pak^{III} *flower (v)*; MI parʔ *unfurl (flower) (v$_i$)*. TH pal^{III} *fully bloom (v)*; ZO pal^{I} ~ pal^{III} *in prime of life (v)*, TE pal^{I} ~ pal^{III}, SI pɐl^{III} *blossom, bloom (v)*; ZO pɐl^{III} *over bloom (v)*; TE pɐlʔ *flower (v)*. MI per^{III} ~ pɛrʔ, ZA per^{III}, SI pɛak^{III} *flatten (v$_t$)*. TH pɐʔ^{II} ~ pɛʔ, TE pek^{II} ~ pek^{III}, *flat (v$_i$)*. ZO pɐʔ^{III} *plank (n)*. SI – pak^{II} *foot (n)*. ⇨ **p$^{\text{hɛ}}_{\text{ʌ}}$L^{-}**. *cf.* **Par¹**, **p$^{\text{hɛ}}_{\text{ɐ}}$ŋ$^{-}$**

Par¹ — *(Austroasiatic)*.[179] MI var^{I} ~ var^{III} *illuminate, white (v)*; ZA var^{I} ~ var^{III} *white (v)*; TH vaʔ^{I} ~ vɐʔ, ZO va$\underline{\text{ʔ}}^{I}$ ~ va$\underline{\text{ʔ}}^{III}$, TE/SI vak^{I} ~ vak^{III} *illuminate (v)*. TH paʔ^{I} ~ pɐʔ *white spotted (v)*; ZO pa^{I} ~ pa^{III}, TE/SI pak^{I} ~ pak^{III} *white (v)*. *cf.* **p$^{\text{ɛ}}_{\text{ʌ}}$L^{-}**, **HVL^{-}**

pɛr¹ — MI pɛr^{I} ~ pɛr^{III} *catapult (v)*, TH pɐʔ^{I} ~ pɛʔ, ZO pɐʔ^{I} ~ pɐʔ^{III}, TE pek^{II} ~ pek^{III}, SI pɛak^{I} ~ pɛak^{III} *back kick (v)*. TE pek^{I} ~ pek^{III} *wag, bob (v)*.

pɛt — MI/TE pɛt ~ pɛʔ, TH/ZO/SI pɛt ~ pe^{III} *bite (v)*; ZA pɛt ~ pɛʔ *hop (v)*.

p$^{\text{e}}_{\text{ɪa}}$² — (ST *pja^{ʔ}). [180] MI pe^{III} ~ pek^{IIB}, ZA pe^{IIB} ~ pek^{IIB}, TH peɪ^{II} ~ peɪʔ^{II}, ZO pɪe^{II} ~ pɪeʔ^{II}, TE pɪa^{II} ~ pɪak^{II}, SI piɐ^{II} ~ piɐk^{II} *give (v)*.

pi¹ — (ST *pjə). [181] MI/ZA/TH/ZO/TE/SI pi^{I} *grandmother (n)*. *cf.* **pi²**

pi² — MI p$\underline{\text{ʊ}}$j^{IIA} ~ pʊj^{III}, ZA pi^{IIA} ~ pit^{IIB}, TH/TE/SI pi^{II} ~ pit^{II}, ZO –pi^{II} *big (female animal) (v)*. *cf.* **pi¹**

pɔp — MI pɔp ~ pɔʔ, ZA/TH pɔp *perforate (v)*. MI/ZA/TH pɔp *perforation (n)*.

[176] See Vol.1, Ch.6, #66.
[177] See Vol.1, Ch.6, #46.
[178] See Vol.1, Ch.6, #166.
[179] See Vol.1, Ch.6, #75.
[180] See Vol.1, Ch.6, #84.
[181] See Vol.1, Ch.6, #87.

ᴘɔt — MI pɔt ~ pɔʔ, ZA/TE bɔt ~ bɔʔ, TH/ZO bɔt ~ bo^{III}, SI bɔt ~ bo^{III} *pluck (v)*. TH/ZO/SI pɔt ~ po^{III} *comb (v)*.

pol¹ — MI/ZA/ZO/TE/SI pol^{I} *group (n)*. MI/ZA/TH/ZO/SI pol^{I} ~ pol^{III}, TE pol^{III} *associate (v)*. MI/ZA pɔlʔ, TH pɔl^{III} *mix (v$_t$)*; SI pɔl^{III} *dilute (v$_t$)*.

pol² — MI pol^{IIA} ~ pol^{III} *blue, bloomy, dusty (v)*; ZA pol^{IIA} *off-colour (v)*; TH/ZO/TE/SI pol^{II} ~ pol^{III} *piebald (v)*.

pɔɒ̄ — MI/ZA pɔk ~ pɔʔ *stand (v$_i$)*. ⇨ **p^{h}ɔɒ̄**. *cf.* **pvɒ̄**

pʊan² — MI/ZA pʊan^{IIA}, TH poʊn^{II}, ZO pʊon^{II}, TE pʊan^{II}, SI puɐn^{II} *garment (n)*.

ᴘʊaŋ¹ — MI bʊaŋ^{I} ~ bʊan^{III}, TH boʊŋ^{I} ~ boʊn^{III}, ZO pʊoŋ^{I} ~ pʊon^{III}, TE pʊaŋ^{I} ~ pʊan^{III}, SI puɐŋ^{I} ~ puɐn^{III} *grey (v)*.

pu¹ — (ST *pəw).[182] MI/ZA/TH/ZO/TE/SI pu^{I} *grandfather (n)*.

p̊ůt — MI put^{IIB} ~ pʊʔ, ZA put^{IIB}, TH put^{II} ~ put^{III} *trickle out (v)*; TH/ZO/TE pot^{II} ~ pot^{III} *leave (v)*; SI pot^{II} ~ pot^{III} / po^{III} *pop (burning firewood) (v)*. *cf.* **p^{h}it**

ᴘ̊ůk — *(Austroasiatic)*.[183] MI/ZA buk^{IIB}, TH/ZO buʔ^{II}, TE/SI buk^{II} *hut (n)*; MI bok^{IIB} *shack (n)*. MI/ZA puk^{IIB} *concave (v)*. MI puk^{IIB} *cave (n)*.

pvL̄ — MI/ZA pɪl^{I} ~ pɪl^{III} *sink (v$_i$)*; MI/TE pɪlʔ *peel off (v)*; MI pɪl^{IIB}, ZA pɪlʔ *peel (n)*. MI/ZA/TE pul^{III} ~ pʊlʔ, TH pul^{III}, SI pul^{III} ~ pʊl^{III} *die out (v)*; TH pul^{III} ~ pʊl^{III}, TE pʊlʔ, SI pʊl^{III} *drop off (v)*; ZO pul^{III} ~ pʊl^{III} *die out, drop off (v)*. ZO pʊa^{II} ~ pʊa^{III}, TE puk^{II} ~ puk^{III}, SI puk^{II} ~ puk^{III} / pu^{III} *fall (v$_i$)*. MI pɪal^{IIA} ~ pɪal^{III} *slip, deviate (v)*; ZA pɪal^{III}, TH peɪl^{II}, ZO pɪel^{II} ~ pɪel^{III}, TE pɪal^{II} ~ pɪal^{III}, SI piɐl^{II} ~ piɐl^{III} *deviate (v)*; ZA pɪal^{IIA} *stopover (v)*. MI pel^{III} ~ pɛlʔ *pass (v)*; ZO pel^{III} ~ pɛl^{III}, TE pel^{III} ~ pɛlʔ, SI pɛal^{III} ~ pɛl^{III} *avoid (v)*. MI/ZA pɛlʔ, TH pɪl^{II} ~ pɪl^{III}, ZO pɛl^{II} ~ pɛl^{III}, SI pɛal^{II} ~pɛal^{III} *detach (v$_i$)*. ⇨ **p^{h}vL̄**

pvɒ̄ — MI/ZA/TE pɪaŋ^{I} ~ pɪan^{III}, TH peɪŋ^{I} ~ peɪn^{III}, ZO pɪeŋ^{I} ~ pɪen^{III}, SI piɐŋ^{I} ~ piɐn^{III} *come into being (v)*. MI/ZA poŋ^{IIA} ~ pon^{III} *bulge (v)*. TE/SI poŋ^{III} *bulge (navel) (v)*. MI/ZA/TH/ZO/TE/SI pʊŋ^{I} ~ pʊn^{III} *multiply (v)*; ZA pɛŋ^{I} ~ pɛn^{III} *pile up (v)*. MI pʊaŋ^{I} ~ pʊan^{III} *divulge (v$_i$)*. MI pʊak^{IIB} ~ pʊaʔ, TH poʔ^{I} ~ pɔʔ, ZO poʔ^{I} ~ poʔ^{III}, TE pʊak^{II} ~ pʊak^{III} / pʊaʔ, SI puɐk^{II} ~ puɐk^{III} / puɐ^{III} *burst (v)*; ZA pʊak^{IIB} *burst (v$_i$)*, pʊaʔ *burst (v$_t$)*. ⇨ **p^{h}vɒ̄**. *c.f.* **pɔɒ̄**.

pvM̄ — [184] MI/ZA/TH/ZO/TE/SI pɔm^{I} ~ pɔm^{III} *hug (v)*. TH pom^{II} ~ pom^{III}, ZO pom^{II} ~ pom^{III} *swell from impact (v)*; TE pom^{II} ~ pom^{III}, SI pom^{II} ~ pom^{III} *bloat (v)*; ZO pom^{III} ~ pɔp *exaggerate (v)*; TE pom^{III} ~ pɔp *participate (v)*; SI pom^{III} ~ pɔp *exaggerate, participate (v)*. MI/TE/SI pʊam^{I} ~ pʊam^{III} *unripe but swollen (v)*; ZA *swell in water (v)*; TH/ZO pʊam^{I} ~ pʊam^{III} *unripe (v)*. MI/ZA pʊm^{I} *counter for spherical objects (n)*; MI pum^{IIA}; TH/SI pʊm^{II} *forge pot (n)*. MI pʊm^{IIB} *plump (fruit) (v)*; ZA pum^{IIA}, TH/ZO/TE/SI pʊm^{II} ~ pʊm^{III} *spherical (v)*. MI/ZA pʊm^{III} *belly (n)*; TH/ZO/SI pʊm^{III} *body (n)*; TE pʊm^{III} *upper body (n)*. MI/TH/TE pem^{I} ~ pem^{III}, SI pɛam^{I} ~ pɛam^{III} *migrate (v)*; TE pem^{III} ~ pɛp, SI pɛam^{III} ~ pɛp

[182] See Vol.1, Ch.6, #86.
[183] See Vol.1, Ch.6, #16.
[184] See Vol.1, Ch.6, #164.

extend house (v). TH pem^{III} *extension (n)*. TH/ZO/TE bem^{II} ~ bem^{III}, SI bɛam^{II} ~ bɛam^{III} *circular (v)*. MI bem^{III} *small seed basket (n)*; TH/ZO/TE bem^{III}, SI bɛam^{III} *large cylindrical rice basket (n)*. MI/ZO bom^{I} *coop (n)*; ZA/TE/SI bom^{I}, ZO bom^{II} *back basket (n)*; TE bom^{II} *small shoulder basket (n)*; SI bɔm^{II} *small waist basket (n)*. TE bɔm^{II}, SI bɔm^{II} *bunch (n)*. MI bom^{III} ~ bɔm^{IIB}, ZA bom^{I}, TH/ZO/TE/SI bom^{III} ~ bɔp *swarm (v)*; ZA bɔm^{IIB} *hold to bosom (v)*. MI bɔp *upper leg (n)*; ZA bɔp *occiput (n)*.

PVr^{1} — MI por^{I} (~ pɔrʔ) *arrogant (v_i)*; MI pɔrʔ *form proud flesh (v)*; ZA pɔrʔ *praise (v_t), arrogant (v_i)*; TH/ZO pɔʔ, SI pɔk *praise (v_t)*. ZA por^{III} ~ pɔrʔ *widen/thick (rope/river) (v)*. MI/ZA pʊar^{I} ~ pʊar^{III}, TH poʊʔ^{I} ~ poʊʔ^{III}, ZO pʊoʔ^{I} ~ pʊoʔ^{III}, TE pʊak^{I} ~ pʊak^{III}, SI puɐk^{I} ~ puɐk^{III} *bloat (v)*. MI/ZA bor^{I} ~ bor^{III} *swarm (v_i)*; TH boʔ^{I} ~ bɔʔ, TE/SI bok^{I} ~ bok^{III} *bulge (v)*; MI bɔrʔ, ZA bur^{II} ~ bur^{III}, TE bok^{III} *swarm (v_t)*.

pʰ

pʰɐl^{-} — TH pʰɐl^{III}, ZO/TE/SI pʰɐl^{III}– *winter (n)*.

pʰɐn² — MI pʰɐn^{IIA} ~ pʰɐn^{III}, ZO/TE pʰɐn^{II} ~ pʰɐn^{III} *weave net (v)*.

pʰɐs — *(areal)*.[185] MI/ZA/TE pʰɐʔ, TH/ZO/SI pʰa^{III} *splay (v)*.

pʰ$^{E}_{A}$L^{-} — MI/ZA pʰɐrʔ *unfurl (v_t)*, MI pʰɛrʔ *spread, scatter (v_i)*; ZA pʰɛrʔ, TE pʰɛk ~ pʰɛʔ, SI pʰɛk ~ pʰe^{III} *lay out meat to dry (v)*. MI/ZA pʰɪar^{I} ~ pʰɪar^{III}, TH pʰeʔ^{I} ~ pʰɛʔ, ZO pʰeʔ^{I} ~ pʰeʔ^{III}, TE pʰek^{I} ~ pʰek^{III}, SI pʰɛak^{I} ~ pʰɛak^{I} *braid (v)*. MI/ZA pʰɛr^{I}, TH pʰeʔ^{I}, TE pʰek^{I} *mat (n)*. ⇨ **p$^{E}_{A}$L^{-}**

pʰɐm¹ — MI fɐm^{I} ~ fɐm^{I}, TH/ZO/TE/SI pʰɐm^{I} ~ pʰɐm^{III} *die (v)*.

p$^{(h)}$$^{ɛ}_{ɐ}$ŋ$^{-}$ — *(Austroasiatic)*.[186] MI bɐŋ^{IIA}, TH/ZO bɐŋ^{II}, ZO/SI pɐŋ^{I} *wall (n)*; TE bɐŋ^{II} *door (n)*; SI bɐŋ^{II} *main entrance (n)*. MI/TH pɐŋ^{III} *side of body (n)*; ZO/TE pɐŋ^{III} *side (n)*; SI pɐŋ^{III} *side of body/head (n)*. MI/ZA paŋ^{I} *pelvis (n)*; TH paŋ^{I}, ZO –paŋ^{I} *forehead (n)*; TE paŋ^{I} *pelvis, forehead (n)*. MI baŋ^{I} ~ ban^{III} *stop, hang up*, ZA baŋ^{I} ~ ban^{III} *stop*; TH/ZO/TE baŋ^{I} ~ ban^{III} *hang up, stopover, catch on*; SI baŋ^{I} ~ ban^{III} *stopover*. TH/SI pɐŋ^{I} ~ pɐn^{III} *waylay (v)*; ZO pɐŋ^{I} ~ pɐn^{III}, TE pɐŋ$^{I/II}$ ~ pɐn^{III} *waylay, stop (v)*; SI paŋ^{II} ~ pɐn^{III} *stop (v)*. MI baŋ^{IIA} ~ ban^{III}, TE baŋ^{II} *remain (v)*; SI –baŋ$^{(II)}$ *exempt (v)*. MI/ZA pʰɐk *palm (n)*; ZO pʰɐʔ, SI pʰɐk *mat (n)*. MI/ZA/TH/ZO/TE pʰeŋ^{I} ~ pʰen^{III}, SI pʰɛaŋ^{I} *flat (v)*; TH/ZO pʰaŋ^{I} *palm, sole (n)*; SI pʰaŋ^{I} *slice (n)*; SI pʰɛak^{II} *flat (v_i), slice (n)*. *cf.* **p$^{A}_{E}$L^{-}**

pʰɛj¹ — MI/ZA/ZO/SI pʰɛj^{I} ~ pʰɛj^{III}, TH/TE pʰɛj^{I} *level (road) (v)*.

pʰɛj^{-} — (ST *pʰəj).[187] MI pʰɛj^{III} *lower leg, foot (n)*, ZA pʰɛj^{III}– *calf (n)*, TH/ZO/TE/SI pʰɛj^{III} *upper leg (n)*.

pʰɛn² — MI pʰɛn^{IIA} ~ pʰɛn^{III}, ZO pʰen^{II} ~ pʰen^{III}, TE/SI pʰɛn^{II} ~ pʰɛn^{III} *divaricate (v)*; ZA pʰɛn^{IIA} ~ pʰɛn^{III} *divaricate (v_t)*, pʰɛn^{IIB} *divaricate (v_b)*.

p$^{(h)}$eC — MI pɛʔ, ZO pʰeʔ^{I} ~ pʰeʔ^{III}, TE pʰɛʔ, SI pʰe^{III} *bore (v)*. TH pʰe^{II} *ox's nose piercing (n)*.

pʰ$^{e}_{ɪa}$$^{-}$ — MI pʰe^{IIA} ~ pʰet^{IIB} *flash (v_i)*, pʰet^{IIB} *flash (v_t)*, TH pʰe^{I} ~ pʰɛt *twinkle (v)*, pʰɛt *blink (v)*; ZO pʰe^{I} ~ pʰɛt, TE pʰɪa^{II} ~ pʰɪat^{II}, TE pʰe^{II} *twinkle, blink (v)*; SI pʰe^{I} ~ pʰɛt *flash, blink (v)*.

pʰɪat — MI/ZA pʰɪat^{IIB} ~ pʰɪaʔ, SI pʰiɐt^{II} ~ pʰiɐt^{III} / pʰiɐ^{III} *sweep (v)*; ZA pʰɪaʔ *wash face (v)*; TH pʰeɪt^{II} ~ pʰeɪt^{II}, ZO pʰɪet^{II} ~ pʰɪet^{II}, TE pʰɪat^{II} ~ pʰɪat^{III} *sweep, wash face (v)*. MI/ZA/TE pʰɪaʔ, ZO –pʰɪe^{III}, SI –pʰiɐ^{III} *broom (n)*.

pʰit — MI pʰit^{IIB} *snort (v)*, pʰiʔ *wash face (v)*. TH/ZO pʰit^{II} ~ pʰit^{III}, SI pʰit^{II} ~ pʰit^{III} / pʰi^{III} *spew ($v_{i/t}$)*; TE pʰit^{II} ~ pʰit^{III} *blow air between lips in disgust (v)*; TH/ZO/TE/SI pʰi^{III} *spew (v_b)*. *cf.* **p$^{u}_{o}$t**

pʰo² — ZA pʰo^{IIB}, TH/ZO/TE/SI pʰo^{II} *shell (n)*.

[185] See Vol.1, Ch.6, #126.

[186] See Vol.1, Ch.6, #141.

[187] See Vol.1, Ch.6, #78.

$p^hɔŋ^-$ — MI $p^hɔk$ ~ $p^hɔʔ$, ZA $p^hɔk$ (~ $p^hɔʔ$) *stand (v_t)*; MI $p^hɔŋ^{III}$ ~ $p^hɔn^{IIB}$ *open up, uncover (v)*; TH $p^hɔŋ^{III}$ ~ $p^hɔʔ$, ZO $p^hɔŋ^{III}$ ~ $p^hɔʔ$ / $p^hɔt$, TE $p^hɔŋ^{III}$ ~ $p^hɔt$, SI $p^hɔŋ^{III}$ ~ $p^hɔk$ / $p^hɔt$ *wake, stand (v_t)*. MI p^hok^{I} ~ p^hok^{III}, TE $p^hoŋ^{I}$ ~ p^hon^{III}, SI $p^hoŋ^{I}$ ~ p^hon^{III} *startle (v)*; ZO $p^hoŋ^{I}$ ~ p^hon^{III} *inform about death (v)*. TH/ZO $p^hoʔ^{II}$ ~ p^ho^{III}, TE p^hok^{II} ~ p^hok^{II} /SI p^hok^{II} ~ p^hok^{III} / p^ho^{III} *recall (v)*. ⇨ **$pɔŋ^-$**. *c.f.* **$p^hvŋ^-$**

$p^hʊ(L)^-$ — *(Austroasiatic)*.[188] MI pu^{I} ~ $pʊt$ *carry on shoulder/head (v)*; ZA/TH pu^{I} ~ $pʊt$ *carry on shoulder (v)*; SI pu^{I} ~ $pʊt$ *carry on head (v)*. MI $pʊa^{III}$ ~ $pʊak^{IIB}$, ZA po^{IIB} ~ pok^{IIB} *carry baby on back (v)*; TH $poʊ^{II}$ ~ $poʊʔ^{II}$, ZO $pʊo^{II}$ ~ $pʊoʔ^{II}$, TE $pʊa^{II}$ ~ $pʊak^{II}$, SI $puɐ^{II}$ ~ $puɐk^{II}$ *carry on back (v)*. MI $p^hʊr^{I}$ ~ $p^hʊrʔ$ *carry on back (v)*; ZA $p^hʊr^{I}$ ~ $p^hʊrʔ$ *carry on shoulder/head/back (v)*.

p^hum^1 — MI/ZA/TH/ZO/TE/SI p^hum^{I} ~ p^hum^{III} *bury (v)*.

p^hur^1 — TH $p^huʔ^{I}$, ZO $p^hʊa^{I}$, TE p^huk^{I} *paunch (n)*. *cf.* **p^hvL^-**

p^hvL^- — MI $p^hɪl^{I}$ ~ $p^hɪl^{III}$ *assassinate (v)*. ZA $p^hɪl^{I}$ ~ $p^hɪl^{III}$ *do secretely (v)*. TH $p^hɪl^{I}$ ~ $p^hɪl^{III}$ *assassinate, rid (v)*, SI $p^hɪl^{I}$ ~ $p^hɪl^{III}$ *dispel (v)*. ZO/TE p^hil^{II} ~ p^hil^{III} *snout (v)*; TE p^hul^{II} ~ p^hul^{III}, SI $p^hʊl^{II}$ ~ $p^hʊl^{III}$ *butt (v)*. MI/ZA p^hul^{I} ~ p^hul^{III} *bubble, froth (v)*; p^hul^{I} ~ p^hul^{III} *gush out (v)*. MI $p^hʊlʔ$ / $p^hʊl^{IIB}$, ZA $p^hʊlʔ$ *sprinkle (v)*; TH/ZO p^hul^{III}, TE p^hul^{III} ~ $p^hʊlʔ$, SI p^hul^{III} ~ $p^hʊl^{III}$ *boil over (v)*. TH $p^huʔ^{II}$ ~ p^hu^{III}, ZO $p^hʊa^{II}$ ~ $p^hʊa^{III}$, TE p^huk^{II} ~ p^huk^{III}, SI p^huk^{II} ~ p^huk^{III} / p^hu^{III} *fell (v_t)*. MI $p^hɛl^{I}$ ~ $p^hɛl^{III}$ *split (v)*; ZA $p^hɛl^{I}$ ~ $p^hɛl^{III}$ *share/split (food) (v)*; SI $p^hɐl^{I}$ ~ $p^hɐl^{III}$ *split into big chunks (v)*. MI/TH/TE/SI $p^hɛl^{I}$, ZA $p^hɛl^{III}$, ZO $p^hɐl^{I}$ *piece (n)*. MI $p^hɐl^{I}$ ~ $p^hɐl^{III}$ *share out, permit (v)*; ZA $p^hɐl^{I}$ ~ $p^hɐl^{III}$ *pay, consign (v)*; TH/ZO/TE $p^hɐl^{I}$ ~ $p^hɐl^{III}$ *permit (v)*. MI/ZA $p^hɛlʔ$ TH/ZO/SI $p^hɛl^{II}$ ~ $pɛl^{III}$ *detach (v_t)*. TH/ZO/SI $p^hɛl^{III}$, TE $p^hɛlʔ$ *extinguish (v_t)*. ⇨ **pvL^-**. *cf.* **p^hur^1**

$p^hvŋ^-$ — TH $p^hoʊŋ^{I}$ ~ $p^hoʊn^{III}$, ZO $p^hʊoŋ^{I}$ ~ $p^hʊon^{III}$, TE $p^hʊaŋ^{I}$ ~ $p^hʊan^{III}$, SI $p^huɐŋ^{I}$ ~ $p^huɐn^{III}$ *divulge (v_t)*. MI $p^hʊan^{III}$, TH $p^hoʊn^{III}$, ZO $p^hʊon^{III}$, TE $p^hʊan^{III}$, SI $p^huɐn^{III}$ *froth, foam (n)*. MI $p^hʊan^{III}$ ~ $p^hɔn^{IIB}$, TH $p^hoʊn^{III}$ (~ $p^hoʊ̲t$), ZO $p^hʊon^{III}$ ~ $p^hʊ̲o̲t$, TE $p^hʊan^{III}$ ~ $p^hʊat$, SI $p^huɐn^{III}$ ~ $p^hɔt$ *froth (v)*, ZA $p^hʊan^{III}$ *float (v)*. MI/ZA $p^hʊaʔ$, TH $p^hoʊ^{III}$, ZO $p^hʊo^{III}$, TE $p^hʊak^{II}$ ~ $p^hʊak^{III}$ / $p^hʊaʔ$, SI $p^huɐk^{II}$ ~ $p^huɐk^{III}$ / $p^huɐ^{III}$ *compose (v)*. ⇨ **$pvŋ^-$**. *c.f.* **$p^hɔŋ^-$**

[188] See Vol.1, Ch.6, #32.

r

rɐm¹ — (ST *rəm).[189] MI/ZA rɐm^{I}, TH/ZO/TE gɐm^{I}, SI ŋɐm^{I} *forest, territory (n)*.

rɐm² — MI rɐm^{IIA} ~ rɐm^{III}, TH/ZO/TE gɐm^{II} ~ gɐm^{III}, SI ŋɐm^{II} ~ ŋɐm^{III} *brittle (v)*. ZA rɐm^{IIB} *decrepit (v)*.

rɐn¹ — MI rɐn^{I}, SI ŋɐn^{I} *domesticated animal (n)*; ZA rɐn^{III}, TH/ZO/TE gɐn^{I} *animal (n)*.

rɐŋ¹ — ZA rɐŋ^{I}, TH/ZO/TE gɐŋ^{I}, SI ŋɐŋ^{I} *paternal aunt's husband (n)*.

rɐp — MI/ZA rɐp, TH/ZO gɐp, SI ŋɐp *mantel (n)*.

rɐs — *(Austronesian)*.[190] MI/ZA rɐʔ, TH/ZO ga^{III}, TE gɐʔ, SI ŋa^{III} *fruit (n/v)*.

raj¹ — MI/ZA raj^{I} ~ raj^{III}, TH gaj^{I} ~ gaj^{III} / gɐj^{III}, ZO/TE gaj^{I} ~ gaj^{III}, SI ŋaj^{I} ~ ŋaj^{III} *pregnant (v_i)*. MI/ZA rɐjʔ, TH/ZO gaj^{III} ~ gɐj^{III}, TE gaj^{III} ~ gɐjʔ, SI ŋaj^{IIII} ~ ŋɐj^{III} *impregnate (v_t)*.

rɛ̱k — MI rek^{IIB} ~ rɛʔ, ZA rek^{IIA} ~ rek^{III}, TH/ZO gaʔ^{II} ~ ga^{III} *tight (v)*. TE gak^{II} ~ gak^{III}, SI ŋak^{II} ~ ŋak^{III} *tighten (v_t)*. SI ŋat̲^{II} ~ ŋat^{III} / ŋa^{III} *tight (v_i)*. MI rek^{IIA} ~ rek^{III} *slender in one place (v)*.

ral¹ — MI/ZA/TH/ZO/TE/SI ral^{I} *enemy (n)*. MI/ZA/TH/ZO/TE/SI ral^{III} *opposite side (n)*. *cf.* **rol¹**, **rvl¯**

raŋ¹ — (ST *raŋ).[191] ZA raŋ^{I} *bones (n)*.

raŋ² — *(areal)*.[192] ZA raŋ^{IIA} *horse (n)*.

raw¹ — (ST *raw).[193] MI raw^{I} ~ raw^{III}, TH/ZO/TE gaw^{I} ~ gaw^{III}, SI ŋaw^{I} ~ ŋaw^{III} *darken (leaf/fruit) (v)*. ZA raw^{I} ~ raw^{III} *dry (leaf/laundry) (v)*.

raw² — MI/ZA raw^{IIA}, TH/ZO/TE gaw^{II}, SI ŋaw^{II} *spirit (n)*.

rʌŋ² — MI/ZA rɐŋ^{IIA} ~ rɐn^{III}, TH/ZO/TE gɐŋ^{II} ~ gɐn^{III}, SI ŋaŋ^{II} ~ ŋan^{III} *fast (v)*.

rel¹ — MI rel^{I} ~ rel^{III}, TH/ZO/TE gel^{I} ~ gel^{III}, SI ŋɛal^{I} ~ ŋɛal^{III} *plan (v)*; ZA rel^{I} ~ rel^{III} *discuss (v)*.

rɪak — (ST *rjak).[194] MI/ZA rɪak^{IIB} ~ rɪaʔ, TH gɛɪʔ^{II} ~ gɛɪ^{III}, ZO gɪɐʔ^{II} ~ gɪɐʔ^{II}, TE gɪak^{II} ~ gɪak^{III} / gɪaʔ, SI ŋiɐk^{II} ~ ŋiɐk^{III} / ŋiɐ^{III} *stay over night (v)*.

rɪal¹ — MI rɪal^{I}, ZA rɪal^{III}, TH geɪl^{I}, ZO gɪel^{I}, TE gɪal^{I}, SI ŋiɐl^{I} *hail (n)*.

rɪk — (ST *rjək).[195] MI/ZA rɪt ~ rɪʔ, TH/ZO gɪʔ, TE gɪk ~ gɪʔ, SI ŋɪt ~ ŋi^{III} *heavy (v)*.

rɪl² — TH/ZO/TE gɪl^{II}, SI ŋɪl^{II} *birdcoop (n)*. *cf.* **rɪl¹**

rɪŋ¹ — MI/ZA rɪŋ^{I} ~ rɪn^{III} *loud (v)*; TH/ZO/TE gɪŋ^{I} ~ gɪn^{III}, SI ŋɪŋ^{I} ~ ŋɪn^{III} *emit sound (v)*.

rɪp — TH/ZO/TE gɪp, SI ŋɪp *lac (n)*.

ri² — MI/ZA ri^{IIA}, TH/ZO/TE gi^{II}, SI ŋi^{II} *boundary (n)*.

[189] See Vol.1, Ch.6, #77.
[190] See Vol.1, Ch.6, #82.
[191] See Vol.1, Ch.6, #25.
[192] See Vol.1, Ch.6, #95.
[193] See Vol.1, Ch.6, #184.
[194] See Vol.1, Ch.6, #43.
[195] See Vol.1, Ch.6, #93.

riN¹ — MI/ZA rin^{I} ~ rin^{III}, TH/ZO/TE git^{I} ~ git^{III}, SI ŋit^{I} ~ ŋit^{III} *delineate (v)*. MI/ZA rin^{III} *line (n)*; rit^{I} ~ rit^{III} *hoe (v)*.

rɪl¹ — MI ril^{I}, ZA rɪl^{I}, TH gɪl^{I} *intestines (n)*; ZO/TE gɪl^{I}, SI ŋɪl^{I} *belly (n)*. *cf.* **rɪl²**

P-rɔw¹ — MI/ZA ʈɔw^{I} ~ ʈɔw^{III}, TH/ZO/TE/SI pɔw^{I} ~ pɔw^{III} *sprout (v)*.

rol¹ — TH/TE gol^{III}, SI ŋol^{III} *fence (n)*; ZO gol^{III} *lane (n)*. ZO/TE gol^{I} ~ gol^{III} *withhold (v)*. *cf.* **ral¹**, **rvl⁻**

rot — *(onomatopoeic)*. MI/ZA rot^{I} ~ rot^{III}, TH/ZO got^{I} ~ got^{III} *grind (v)*; TE got^{II} ~ got^{III}, SI ŋot^{II} ~ ŋot^{III} *torture (v)*.

rOM⁻ — MI/ZA rɔp *deteriorate (v)*; TH gom^{I} ~ gop, TE gom^{I} ~ gom^{III} *shrivel (v)*; TH gop^{II} ~ gop^{III} *dry (v)*; ZO gop^{II} ~ gop^{III} *shrink (v)*; SI ŋom^{I} ~ ŋom^{III} *gaunt (v)*.

rO(w)¹ — MI/ZA rɔw^{I} ~ rɔw^{III}, TH go^{I} ~ gɔt, ZO go^{I} ~ go^{III}, TE go^{I} ~ gɔt / g<u>o</u>t^{II}, SI ŋo^{I} ~ ŋɔt *dry (v)*. TH gɔw^{III} ~ go^{III} *roast (v)*.

rʊa¹ — (ST *r-wa^{ʔ}). [196] MI/ZA rʊa^{I}, TH goʊ^{I}, ZO gʊo^{I}, TE gʊa^{I}, SI ŋuɐ^{I} *bamboo (n)*.

rʊak — MI rʊak^{IIB} ~ rʊaʔ, TH goʊʔ^{II} ~ goʊ^{III}, ZO gʊoʔ^{II} *empty (v)*. TH goʊʔ^{II}, ZO gʊoʔ^{II}, TE gʊak^{II}, SI ŋuɐk^{II} *individual (n)*. *cf.* **ʟʊaŋ⁻**

rʊam² — TH goʊm^{II}, ZO gʊom^{II}, TE gʊam^{II} *canyon, ravine (n)*.

rʊl⁻ — TH/ZO gʊl^{III}, TE –gʊlʔ, SI ŋʊl^{III} *desire (v)*.

rʊs — (ST *rwəs). [197] MI/ZA rʊʔ *bone (n), firm (v)*. TH/ZO gu^{III}, TE gʊʔ *bone (n)*; SI ŋu^{III} *stubborn (v)*.

ru² — MI ru^{III}, TH/ZO/TE gu^{II}, SI ŋu^{II} *poison (n)*; ZA ru^{III} *intoxicant (n)*.

ru² — ru^{III} ~ ruk^{IIB}, ZA ru^{IIB} ~ ruk^{IIB}, TH/ZO gu^{II} ~ guʔ^{II}, TE gu^{II} ~ guk^{II}, SI ŋu^{II} ~ ŋuk^{II} *steal (v)*.

rul¹ — (ST *rwəl^{ʔ}). [198] MI/ZA rul^{I}, TH/ZO/TE gul^{I}, SI ŋul^{I} *snake (n)*.

run¹ — MI run^{I}, TH/ZO/TE gun^{I}, SI ŋun^{I} *river (n)*; ZA run^{I} *Manipur river*.

rvl⁻ — MI rɛlʔ, ZO/TE gɛl^{II} ~ gɛl^{III} , SI ŋɛl^{II} ~ ŋɛl^{III} *sneak off (v)*; ZA rɛlʔ *hide (v)*. MI/ZA rɔl^{IIB} *evade (v)*. ⇨ $^{(h)}$**rvl⁻**. *cf.* **ral¹**, **rol¹**

rvm⁻ — MI/ZA rɛm^{I} ~ rɛm^{III} *harmonise (v_i)*, rɛm^{IIB} *harmonise (v_t)*; TH gom^{II} ~ gɔp, ZO/TE gom^{II} ~ gom^{III}, SI ŋom^{II} ~ ŋom^{III} *combine (v)*.

[196] See Vol.1, Ch.6, #5.

[197] See Vol.1, Ch.6, #24.

[198] See Vol.1, Ch.6, #149.

ʰr

ʰrɛ̰m² — (ST *ʰram?).[199] MI –ʰrɐmIIA, ZA –ʰrɛmIIA, TH/ZO/TE –hɐmII, SI –hɐm(II) *otter (n)*.

ʰrʌm⁻ — MI ʰrɐmIIA ~ ʰrɐmIII, ZA ʰramI, ZO/SI hɐmII ~ hɐmIII *weedy, rough (v)*; TH/TE hɐmII ~ hɐmIII *rough (v)*. MI ʰramI ~ ʰramIII *dry (hair) (v)*; TH/ZO/TE/SI hɐmI ~ hɐmIII *haggard (v)*. ZA ʰrɐmIIA *tree root, base (n)*. MI/ZA ʰrɐmIII, TH/ZO/TE/SI hɐmIII *weed (n)*.

ʰra¹ — MI –ʰraI, ZA ʰraI, TH haI, ZO/TE/SI haI– *yam (n)*.

ʰra¹ — ZA ʰraI *ten (n)*.

ʰ(r)aj⁻ — ZA hajIII, TH/ZO/TE/SI hajIII *cup (n)*.[200]

ʰ(r)am² — MI ʰramIIA ~ ʰramIII, TH/ZO/TE/SI hɐmII ~ hɐmIII *howl (v)*; ZA ʰramIIA ~ ʰramIII *complain (v)*. MI hamIII ~ hɐmIIB, ZA –hɐmIIA, ZO/TE/SI hamIII ~ hɐp *yawn (v)*.

ʰraŋ¹ — MI/ZA ʰraŋI ~ ʰranIII *audacious (v)*; TH/ZO/TE/SI haŋI ~ hanIII *brave (v)*.

ᴘ-ʰras — MI/ZA ʈʰaIII ~ ʈʰɐt̲, TH/ZO/TE/SI pʰaIII ~ pʰɐt̲ *good (v)*.

ʰrat — MI/ZA ʰratIIB *resolute (v)*; TH/ZO/TE hatII ~ hatIII, SI hatII ~ hatIII / haIII *strong (v)*.

ʰrɛj⁻ — MI/ZA ʰrɛjIII, TH/ZO/TE/SI hɛjIII *axe (n)*.

ʰrɛs — MI/ZA ʰrɛʔ *averse (v)*; TE hɛʔ *angry (v)*; SI heIII *sad, angry (v)*.

ʰreŋ¹ — MI/ZA ʰreŋI ~ ʰrenIII, TH/ZO heṉI ~ henIII *tether (v)*; TE/SI heṉI ~ henIII *bind (v)*.

ʰrɛ̰² — MI ʰrɪaIIA ~ ʰrɪatIIB, TH (heII ~) hetII, SI heII ~ hɛakII *sense (v)*.

ʰrɪak — (ST *ʰrjak).[201] MI/ZA ʰrɪakIIB *grease (n)*.

ʰrɪam¹ — (ST *ʰrjam).[202] MI/ZA ʰrɪamI ~ ʰrɪamIII, TH heɪmI ~ heɪmI *sharp (v)*; ZO hɪemI ~ hɪemI, TE hɪamI ~ hɪamI, SI hiɐmI ~ hiɐmI *sharp (vi)*; ZO hɪemIII ~ hɪep, TE hɪamIII ~ hɪap, SI hiɐmIII ~ hiɐp *sharpen (vt)*.

ʰ(r)ɪat — MI hɪatIIB ~ hɪaʔ *scratch itch, clean out hole (v)*; ZA ʰrɪatIIB ~ ʰrɪaʔ *scrape, scratch*; TH heɪtII ~ heɪtIII *scrape*; ZO hɪetII ~ hɪetIII *scrape, comb*; TE hɪatII ~ hɪatIII *scratch, comb*; SI hiɐtII ~ hiɐtIII / hiɐIII *prune (v)*.

ʰrɪk — (ST *ʰrjək).[203] MI/ZA ʰrɪk, TH/ZO hɪt, TE/SI hɪk *louse (n)*.

ʰrɪl¹ — MI ʰrɪlI ~ ʰrɪlIII, TH/ZO/TE/SI hɪlI ~ hɪlIII *inform (vt)*; ZA ʰrɪlI ~ ʰrɪlIII *choose (vt)*. MI ʰrɪlʔ, TH/ZO/SI hɪlIII, TE hɪlʔ *teach (v)*; ZA ʰrɪlʔ *choose (vb)*.[204]

ᴘ-ʰrɪm¹ — MI ʈʰɪmI, ZO/TE pʰɪmI *needle (n)*.

[199] See Vol.1, Ch.6, #124.
[200] VanBik (2006:269) shows evidence for *ʰr-* in Lai.
[201] See Vol.1, Ch.6, #88.
[202] See Vol.1, Ch.6, #139.
[203] See Vol.1, Ch.6, #108.
[204] Compare the association between *lecture* and *select* for the semantics.

^{h}rɪŋ¹ — (ST *^{h}rjəŋ).[205] MI ^{h}rɪŋ^{I} ~ ^{h}rɪn^{III} / ^{h}rɪn^{IIB} *beget, green, fresh, raw (v)*;[206] ZA ^{h}rɪŋ^{I} ~ ^{h}rɪn^{III} *green, fresh, raw (v)*, *beget* (v_t), ^{h}rɪn^{IIB} *beget* (v_b); TH/ZO/TE/SI hɪŋ^{I} ~ hɪn^{III} *beget, green, alive (v)*.

^{h}rəl⁻ — MI ^{h}rəl^{I} ~ ^{h}rəl^{III}, TH/ZO/TE gəl^{II} ~ gəl^{III} *big (v)*.

^{h}(r)ol¹ — MI hol^{I} ~ hol^{III} *brandish (v)*. TH/ZO/SI/TE hol^{I} ~ hol^{III} *drive (v)*. MI həlʔ, TH/ZO/SI həl^{III}, TE həlʔ *prod (v)*.[207]

^{h}(r)ʊaŋ¹ — *(Austroasiatic)*.[208] MI hʊaŋ^{I}, ZA ^{h}rʊaŋ^{I} *enclosure, fence (n)*; TH hoʊŋ^{I}, ZO hʊoŋ^{I},TE hʊaŋ^{I}, SI huɐŋ^{I} *enclosure (n)*. MI hʊan^{III}, TE hʊan^{III}, TH hoʊn^{III}, ZO hʊon^{III}, SI huɐn^{III} *acreage (n)*.

$^{(h)}$rʊj² — (ST *$^{(h)}$rwəj^{ʔ}). [209] MI ^{h}rʊj^{IIA}, TH/TE gʊj^{II}, ZO guj^{II}, SI ŋʊj^{II} *rope, creeper (n)*; ZA ^{h}ri^{IIA} *rope (n)*. ZO huj^{III}, TE –hʊj^{III}, SI –hʊj$^{(III)}$ *vein (n)*.

^{h}ru¹ — MI –^{h}ru^{I}, TH –hu^{I} *nit (n)*.

^{h}ru⁻ — ZA ^{h}ru^{III} ~ ^{h}ru̲t̲^{IIB}, TH/ZO hu^{III} ~ hʊʔ, TE/SI hu^{III} ~ hʊk *block (v)*. ZA ^{h}ru^{III}, TE hu^{III} *stopper (n)*. TE hu^{II} ~ hut^{IIB}, SI hu^{II} ~ hut^{IIB} *protect (v)*; TH huʔ^{II} *rescue (v)*. TH/ZO hu^{III}, TE hʊʔ, SI hu̲^{I} ~ hu^{III} *help (v)*.

$^{(h)}$rvl⁻ — MI rɪal^{III}, ZA ^{h}rɪal^{II}, TH heɪl^{I} ~ heɪl^{III}, ZO hɪel^{I} ~ hɪel^{III}, TE hɪal^{I} ~ hɪal^{III}, SI hiɐl^{I} ~ hiɐl^{III} *desist temporarily (v)*. ZA ^{h}rɛlʔ *leave behind accidentally (v)*. ⇨ **rvl⁻**

$^{(h)}$rvŋ¹ — MI ruŋ^{I} ~ run^{III} *help (v)*; [210] TH/ZO/TE/SI hʊŋ^{I} ~ hʊn^{III} *prevent (v)*; ZA run^{III} ~ rʊn^{IIB}, ZO/TE/SI hʊn^{III} ~ hʊt, ZO/TE hɔn^{III} ~ hɔt *rescue (v)*.

$^{(h)}$rvɒ⁻ — *(areal)*.[211] MI rɔŋ^{I}, ZO/TE gɔŋ^{I} *bottle neck (n)*. MI rɪŋ^{IIB} *nape (n)*. MI ^{h}rɔk, ZA ^{h}rɔŋ^{III}–, TH/ZO/TE gɔŋ^{III} *throat (n)*. TH/ZO/TE/SI loŋ^{I} *tube (n)*. TH/ZO/TE goŋ^{I} ~ gon^{III} *scrawny (v)*. *cf.* **^{h}ŋoŋ¹**

^{h}(r)vp — *(Austroasiatic, onomatopoeic)*.[212] ZA hop^{I} ~ hop^{I} *eat with spoon (v)*; ZA ^{h}rop^{II} ~ ^{h}rop^{III} *eat from ladle (v)*; TH/ZO/TE hop^{II} ~ hop^{III}, SI hop^{II} ~ hop^{III} / ho^{III} *drink soup (v)*. MI/TH/ZO/TE/SI hɐp *gobble (v)*. ZA hɐp ~ hɐʔ *scoop out (v)*. MI/ZA hip^{I} ~ hip^{III} *gasp (v)*. MI hup^{I} ~ hup^{III} *drink from hands (v)*; TH hup^{I} ~ hup^{III} *sip (v)*, ZO hup^{I} ~ hup^{III} *suck up (v)*; TE/SI hup^{I} ~ hup^{III} *suck/lap up (v)*.

[205] See Vol.1, Ch.6, #1.
[206] MI ^{h}rɪn^{IIB} from Chhangte (1993:88) who associates it with *beget* as opposed to ^{h}rɪn^{III} with *green*.
[207] VanBik (2009:262) has Lai *^{h}r-*.
[208] See Vol.1, Ch.6, #57.
[209] See Vol.1, Ch.6, #41.
[210] MI ruŋ^{I} ~ run^{III} from VanBik (2006:244).
[211] See Vol.1, Ch.6, #119.
[212] See Vol.1, Ch.6, #85.

S

sɐk — MI/TE/SI sɐk, ZA h̲ɐk ~ hɐʔ, ZO sɐʔ *hard (v)*.

sɐl² — MI/ZA sɐl^{IIA}, TH/ZO/TE/SI sɐl^{II} *captive (n)*.

sɐm² — *(Austronesian)*.[213] MI/ZA sɐm^{IIA}, TH/ZO/TE/SI sɐm^{II} *head hair (n)*.

sɛ̱n¹ — MI/TH sɛn^{I} ~ sɛn^{III}, TH/ZO/TE/SI sɐn^{I} ~ sɐn^{III} *red (v)*; ZA sɛn^{I} ~ sɛn^{III} *red (v$_i$)*, sɛn^{IIB} *redden (v$_t$)*.

sa¹ — (ST *tsʰa).[214] MI/ZA/TH/ZO/TE/SI sa^{I} ~ sɐt *hot (v)*.

sa² — (ST *sjaʔ).[215] MI/ZA sa^{IIB}, TH/ZO/TE/SI sa^{II} *meat (n)*.

saj¹ — MI/ZA/TH/ZO/TE/SI saj^{I} *elephant (n)*.

saj¹ — MI/ZA/ ZO/TE/SI saj^{I} ~ saj^{III}, TH saj^{I} ~ saj^{III} / sɐj^{III} *fire slingshot (v)*.

saŋ¹ — MI/ZA/TH/ZO/TE/SI saŋ^{I} ~ san^{III} *high (v)*.[216]

sas — MI/TE/SI sa^{III} ~ sɐk, ZA sɐk ~ sɐʔ, TH/ZO sa^{III} ~ sɐʔ *sing (v)*.

saw² — MI saw^{IIA} ~ saw^{III}, TH/ZO/TE/SI saw^{II} ~ saw^{III} *long (v)*; ZA saw^{IIA} ~ saw^{III} *long (v$_i$)*, sɐwʔ *lengthen (v$_t$)*.[217]

sɛm⁻ — MI sɛm^{I} ~ sɛm^{III} *apportion (v)*; ZA sɛm^{III} *fillet (n)*; TH/ZO/TE/SI sɐm^{II} ~ sɐm^{III} *dissect (v)*.

sɛn¹ — MI/TH/ZO sen^{I} ~ sen^{III} *very young (v)*; ZA sen^{III}–, TE sen^{I} ~ sen^{III}, SI sɐn^{I} ~ sɐn^{III} *young (v)*.

sɪak — MI/ZA sɪak^{IIB}, TH seɪt̲^{II}, ZO sɪet̲^{II}, TE sɪak^{II}, SI siɐk^{II} *cockspur (n)*.

sɪal¹ — MI/TE sɪal^{I}, ZA –sɪal$^{(I)}$, TH seɪl^{I}, ZO sɪel^{I}, SI siɐl^{I} *mithun (n)*.

sɪal² — MI/ZA sɪal^{IIA} ~ sɪal^{III}, TH seɪl^{II} ~ seɪl^{III}, ZO sɪel^{II} ~ sɪel^{III}, TE sɪal^{II} ~ sɪal^{III}, SI siɐl^{II} ~ siɐl^{III} *clear a road (v)*.

sɪam¹ — MI sɪam^{I} ~ sɪam^{III} *compose, create (v)*; ZA sɪam^{I} ~ sɪam^{III} *hew, create (v)*; TH seɪm^{I} ~ seɪm^{III} *compose (v)*; ZO sɪem^{I} ~ sɪem^{III} *hew, create, decorate (v)*; TE sɪam^{I} ~ sɪam^{III}, SI siɐm^{I} ~ siɐm^{III} *hew, bless (v)*.

sɪk — MI/ZA/TE sɪk ~ sɪʔ, TH/ZO sɪʔ ~ si^{III}, SI sɪk ~ si^{III} *pinch (v)*. MI/ZA/TE/SI sɪk, TH sɪʔ *cold (v)*.

sɪl² — (ST *tsʰjəlʔ).[218] MI/TH/ZO/TE/SI sɪl^{II} ~ sɪl^{III} *wash (v)*.

sɪL² — MI sɪn^{II} ~ sɪn^{IIB}, MI/TE sɪlʔ, TH/ZO/SI sɪl^{III} *put on above waist (v)*;[219] ZA sɪlʔ *refill (v)*.

sɪs — MI sɪʔ, TH/ZO/SI si^{III}, LA/TE sɪʔ– *salt water spring (n)*.

sɔw¹ — (ST *tsʰwə).[220] MI/TH/ZO/TE/SI sɔw^{I} ~ sɔw^{III} *boil (v)*; ZA sɔw^{I} ~ sɔw^{III} *boil (v$_i$)*, sɔwʔ *boil (v$_t$)*.

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[213] See Vol.1, Ch.6, #91.
[214] See Vol.1, Ch.6, #96.
[215] See Vol.1, Ch.6, #74.
[216] Shafer (1952:140) suggests an Austroasiatic link.
[217] ZA sɐwʔ from Osburne (1975:113).
[218] See Vol.1, Ch.6, #178.
[219] MI sɪn^{II} ~ sɪn^{IIB} from Chhangte (1993:86;99).

sɔw¹ — ZA/TH/ZO/TE/SI sɔw^{I} *panji (n)*. MI/ZA sɔʔ *prod (v)*; TH/ZO/SI so^{III}, TE sɔʔ *season (v)*.

soj² — MI/TE soj^{III} ~ sɔjʔ, TH soj^{II} ~ soj^{III}, ZO soj^{II} ~ soj^{III} / sɔj^{III}, SI sɔaj^{III} *askew (v)*.

soŋ¹ — MI/ZA soŋ^{I} ~ son^{III} *shrivel (v)*.

sop — MI sop^{IIB}, ZA sop^{IIB} ~ sɔʔ, TH/ZO/TE/SI sop^{II} ~ sop^{III} *launder (v)*.

sʊ̊ak — MI sok^{IIB} ~ sɔʔ *take a pinch (v)*; ZA sok^{IIB} *pick up sticky object (v)*; TH soʔ^{II} ~ so^{III}, TE sok^{II} ~ sɔʔ, SI sok^{II} ~ sok^{III} / so^{III} *take out (v)*; ZO soʔ^{II} ~ so^{III} *take out, take a pinch (v)*. MI/ZA sʊak^{IIB} ~ sʊaʔ, TE sʊak^{II} ~ sʊak^{III} / sʊaʔ, SI suɐk^{II} ~ suɐk^{III}/ suɐ^{III} *ladle (v)*.

sʊal⁻ — MI sʊal^{I} ~ sʊal^{III} *rape (v)*. ZA/TE sʊal^{I} ~ sʊal^{III}, SI suɐl^{I} ~ suɐl^{III} *fight (v)*. MI/ZA sʊal^{IIB} ~ sʊal^{III}, ZO sʊol^{II} ~ sʊol^{III} *wicked (v)*.

sʊam¹ — MI sʊam^{I} ~ sʊam^{III}, TH soʊm^{I} ~ soʊm^{III}, TH soʊm^{I} ~ soʊm^{III}, ZO sʊom^{I} ~ sʊom^{III}, TE sʊam^{I} ~ sʊam^{III}, SI suɐm^{I} ~ suɐm^{III} *assassinate (v)*. ZA sʊam^{I} ~ sʊam^{III} *disdain (v)*.

sʊ̊an¹ — MI son^{I}, ZA –son^{I} *bastard (n)*; TH son^{III}, ZO –son^{III} *new generation (n)*; TH soʊn^{III} *great grandchild (n)*; ZO sʊon^{III}, SI suɐn^{III} *descendants (n)*; TE son^{I} *grandchild (n)*.

sʊ̊an² — MI sʊan^{IIA} ~ sʊan^{III}, TH soʊn^{II} ~ soʊn^{III}, ZO sʊon^{II} ~ sʊon^{III}, TE sʊan^{II} ~ sʊan^{III}, SI suɐn^{II} ~ suɐn^{III} *usurp (v)*. MI sɔn^{IIB} *shift (v)*. ZA sʊan^{III} ~ sɔn^{IIB} *contaminate (v)*; TH soʊn^{III}, ZO sʊon^{III}, TE sʊan^{III} ~ sʊat, SI suɐn^{III} ~ sɔt *entrust (v)*. TH/ZO/TE/SI son^{II} ~ son^{III} *push (v)*.

sʊ̊ån⁻ — *(Austroasiatic)*.[221] ZA –sʊan^{III}, TH –son^{II}, ZO –sʊon^{II}, TE –sʊan^{II}, SI –suɐn^{II} *onion, garlic (n)*.[222]

sʊaŋ² — MI sʊaŋ^{IIA}, TH soʊŋ^{II}, ZO sʊoŋ^{II}, TE sʊaŋ^{II}, SI suɐŋ^{II} *stone (n)*.

sʊm² — *(Tai-Kadai)*.[223] MI/ZA sʊm^{IIA}, TH/ZO/TE/SI sʊm^{II} *mortar (n)*.

su⁻ — MI su^{I} ~ sʊt *collide (v)*. MI/TE/SI su^{III} ~ sʊk, ZA su^{I} ~ sʊt, TH/ZO su^{III} ~ sʊʔ *pound (v)*.

su² — *(Austroasiatic)*.[224] MI su^{III} ~ suk^{IIB}, SI su^{II} ~ suk^{II} *launder (v)*.

sʊ̊r¹ — MI sur^{I} ~ sur^{III} *rain (v)*; ZA sur^{I} ~ sur^{III} *rain (v_i)*, sʊrʔ *rain on (v_t)*. MI/ZA sor^{I} ~ sor^{III}, TE/SI suk^{I} ~ suk^{III} *wring (v)*.

sut — MI sut^{IIB} ~ sʊʔ, ZA sut^{IIB} (~ sʊʔ), TH/ZO/TE sut^{II} ~ sut^{III}, SI sut^{II} ~ sut^{III} / su^{III} *untie (v)*.

sVj² — MI sɔj^{IIA} ~ sɔj^{III}, TH sɛj^{II} ~ sɛj^{III}, TI sɔj^{II} ~ sɔj^{II} *say (v)*; ZA sɔj^{IIA} ~ sɔj^{III} *criticise (v)*.

sVM⁻ — MI/ZA som^{I} ~ som^{III} *invite (v)*; TH/SI som^{I} ~ som^{III} *bind together (v)*; ZO som^{I} ~ som^{III} *complain (v)*; TE som^{I} ~ som^{III} *contemplate (v)*;[225] TH/ZO/TE/SI sim^{I} ~ sim^{III} *gather to eat*

[220] See Vol.1, Ch.6, #23.

[221] See Vol.1, Ch.6, #123.

[222] TE sʊan^{II} from Luce (1962:tableB).

[223] See Vol.1, Ch.6, #113.

[224] See Vol.1, Ch.6, #179.

[225] TE som^{I} ~ som^{III} from Bhaskararao (1996:88); see VanBik (2009:182) for the semantics.

(v). TH/TE/SI som^{II}, ZO som^{II} ~ som^{III} *gather to sleep (v)*. MI sum^{I} ~ sum^{III}, ZA sup^{III} *withhold (v)*. MI sum^{III}, TH sɪm^{III} ~ sɪp, TE sɔm^{II} ~ sɔm^{III}, SI sum^{I} ~ sum^{III} *clench (v)*. MI/ZA sum^{III} *fist-measure (n)*. MI/ZA/TH/ZO/TE/SI som^{III} *ten (n)*.

svŋ² — MI saŋ^{IIA} *thousand (n)*, siŋ^{IIA} *ten thousand (n)*; TH/TE/SI saŋ^{II} *hundred thousand (n)*.

t

tɐk — MI/ZA tɐk *real (v)*; TH/ZO tɐʔ, TE/SI tɐk *real (v), right (n)*.

tɐk — MI/ZA tɐk, ZO tɐʔ *flesh (n)*; TH tɐʔ– *flesh, muscle (n)*; TE –tɐk, SI tɐk *muscle (n)*.

tɐk — (ST *təq).[226] MI/ZA tɐʔ, TH ta^{III}, SI tɐk ~ ta^{III} *weave (v)*.

t^{ɛ}ɐ̃l^{1} — MI –tɐl^{I}, TH tɛl^{I} *muscle (n)*.

tɐm^{2} — MI/ZA tɐm^{IIA} ~ tɐm^{III}, TH/ZO/TE/SI tɐm^{II} ~ tɐm^{III} *many (v)*.

tɐn^{2} — MI/ZA tɐn^{IIA} ~ tɐn^{III}, TH/ZO/TE/SI tɐn^{II} ~ tɐn^{III} *saw, cut (v)*.

tɐŋ^{1} — ZA tɐŋ^{I} *winter (n)*; TE tɐŋ^{I} *dry/hot weather (n)*.

tɐp — MI/ZA/TH/ZO/TE/SI tɐp *hearth (n)*.

t^{ɛ}ɐ̃r^{1} — MI/ZA tɐr^{I} ~ tɐr^{III}, TH tɐʔ^{I} ~ tɛʔ, ZO tɐʔ^{I} ~ tɐʔ^{III}, TE tɐk^{I} ~ tɐk^{III}, SI tɛak^{I} ~ tɛak^{III} *elderly (v)*. TH taʔ^{I} ~ tɐʔ *hard (v)*; ZO ta^{I} ~ ta^{III}, TE tak^{I} ~ tak^{III} *firm (v)*.

taj^{2} — MI/ZA taj^{IIA} *waist (n)*; TH/ZO/TE/SI taj^{II} *underbelly (n)*.

tar^{1} — MI/ZA tar^{I} ~ tar^{III}, TH taʔ^{I} ~ tɐʔ, ZO ta^{I} ~ ta^{III}, SI tak^{I} ~ tak^{III} *display on pole (v)*. MI/ZA tɐrʔ *bait (v)*. *cf.* **tsɐs**

tat — MI tat^{IIB} ~ tɐʔ, ZA tat^{IIB}, TH/ZO/TE tat^{II} ~ tat^{III}, SI tat^{II} ~ tat^{III} / ta^{III} *sharpen (v)*.

taw^{2} — MI/ZA taw^{III} ~ tɐwʔ *moan (v)*. TH/ZO/TE/SI taw^{II} ~ taw^{III} *sulk (v)*.

te^{2} — MI/ZA te^{IIA} ~ tet^{IIB}, TH te^{I} ~ tɛt *small (v)*; SI te^{II} ~ tet^{II} *granular (v)*.

tɛl̄ — MI/ZA tɛl^{IIA} ~ tɛl^{III} *include (v$_i$)*, tɛlʔ *include (v$_t$)*; MI tel^{I} ~ tel^{III} *bunch (v)*. MI tel^{I}, ZA tel^{III} *bunch (n)*; MI/ZA tɛl^{IIA}, TH tɛl^{II} *bundle (n)*; ZO tɛl^{I} *fillet (n)*.

tɪam^{1} — MI tɪam^{III}, ZA –tɪam^{III}, TH teɪm^{I} ~ teɪm^{III} / teɪp, ZO ʧɪem^{I} ~ ʧɪem^{III}, TE ʧɪam^{I} ~ ʧɪam^{III}, SI ʧiɐm^{I} ~ ʧiɐm^{III} *promise (v)*. ZO ʧɪem^{III}– ~ ʧɪep *mentally note (v)*.

t^{ɛ}ɪɐ̃M^{1} — MI tɛm^{I} ~ tɛm^{III}, MI tɛp, ZA tɛp ~ tɛʔ, TH/SI tɛp ~ te^{III}, ZO ʧɪem^{III} ~ ʧɪep, TE ʧɪam^{III} ~ ʧɪap *taste (v)*; TH teɪm^{III} ~ teɪp *try (v)*.

tɪaŋ^{2} — MI tɪaŋ^{IIA}, ZO ʧɪeŋ^{II}, TE ʧɪaŋ^{II}, SI ʧiɐŋ^{II} *stick (n)*; TH teɪŋ^{II} *javelin (n)*.

tɪar^{1} — ZA tɪar^{I} *relocate (v$_i$)*. ⇨ **t^{h}ɪar^{1}**

tɪl^{2} — MI/ZA tɪl^{IIA}, TH tɪl^{II}, ZO/TE/SI ʧɪl^{II} *testicle (n)*.

tɪn^{2} — (ST *sjən^{ʔ}).[227] MI/ZA tɪn^{IIA}, TH tɪn^{II}, ZO/TE/SI ʧɪn^{II} *nail, claw (n)*.

ti^{2} — MI ti^{IIB}–, TH ti^{II}–, ZO/SI ʧi^{II}– *nervous (v)*.

tis — MI ti^{III} ~ tɪʔ, ZA/TH ti^{III}, ZO/SI ʧi^{III}, TE ʧi^{III} ~ ʧɪʔ *say (v)*.

tɔw^{1} — MI –tɔw^{I} ~ tɔw^{III}, TH/ZO/SI tɔw^{I} ~ tɔw^{III} *sit (v)*; ZA tɔw^{I} ~ tɔw^{III} *sit (v$_i$)*, tɔwʔ *sit (v$_t$)*.

[226] See Vol.1, Ch.6, #181.

[227] See Vol.1, Ch.6, #116.

tɔk — MI tɔk ~ tɔʔ, TH tɔʔ– *touch with hand (v)*; ZA tɔk ~ tɔʔ *knock down fruit with stick, point (v)*.

toj² — MI/ZA toj^{IIA} *short (v)*.

tʊaj¹ — MI/TE tʊaj^{I} ~ tʊaj^{III}, TH toʊj^{I} ~ toʊj^{III}, ZO tʊej^{I} ~ tʊej^{I}, SI tuɛj^{I} *young (v)*.

tʊal¹ — MI/ZA/TE tʊal^{I}, TH toʊl^{I}, ZO tʊol^{I}, SI tuɐl^{I} *locality (n)*.

tʊk — MI/TE tʊk, TH/ZO tʊʔ *hair bob (n)*; ZA tʊk *crown of head (n)*; SI tʊk *indent at back head (n)*.

tʊm² — MI/ZA tʊm^{IIA} ~ tʊm^{III}, TH/ZO/TE/SI tʊm^{II} ~ tʊm^{III} *drum (v)*.

tʊm⁻ — MI tʊm^{I} ~ tʊm^{III} *intend, wish (v)*; ZA tʊm^{II} ~ tʊm^{III}, tʊm^{III} ~ tʊp *intend (v)*; TH/ /TE/SI tʊm^{III} ~ tʊp *wish (v)*.

tʊŋ¹ — MI/ZA/TH/ZO/TE/SI tʊŋ^{I} *warp (n)*; tʊŋ^{I} ~ tʊn^{III} *erect (v)*. *cf.* **Tʊ̈ŋ¹**

Tʊ̈ŋ¹ — (ST *dwəŋ).[228] MI/TH/ZO/TE/SI dʊŋ^{I} *length (n)*. MI/TH/ZO/TE/SI tɔŋ^{III}, ZA dɔŋ^{III} *cubit (n)*. *cf.* **tʊŋ¹**

tʊr¹ — MI tʊr^{IIB}, ZA tʊr^{I} ~ tʊr^{III} *pulsate (v)*.

tʊs — MI/ZA/TE tʊʔ, TH/ZO/SI tu^{III} *plant seed (v)*.

tu¹ — ZA/TH/ZO tu^{I}, SI –tu^{I} *jungle (n)*; TE tu^{I}– *tall grass area (n)*.

tu² — MI/ZA tu^{IIB}, TH/ZO/TE/SI tu^{II} *grandchild (n)*.

tu² — ZA tu^{IIA}, TH/ZO/TE/SI tu^{II} *now (n)*.

[228] See Vol.1, Ch.6, #105.

tuj¹ — MI/TH/SI tʊj^{I}, ZA ti^{I}, ZO/TE tuj^{I} *egg (n)*. MI/TH/SI tʊj^{I}~ tʊj^{III}, ZA ti^{I} ~ tit^{IIB}, ZO/TE tuj^{I} ~ tuj^{III} *lay egg (v)*.

tuj¹ — MI tʊj^{I}~ tʊj^{III}, TH tuj^{I} ~ tuj^{III} / tʊj^{III}, ZO tuj^{I} ~ tuj^{III}, TE –tuj^{I} ~ tuj^{III}, SI –tʊj^{I}~ tʊj^{III} *delicious (v)*.

tuj² — (ST *twəj$^{?}$).[229] MI tʊj^{IIA}, TH/SI tʊj^{II}, ZA ti^{IIA}, ZO/TE tuj^{II} *water (n)*. MI tʊj^{IIA} ~ tʊj^{III}, ZA ti^{IIA}, TH/SI tʊj^{II}~ tʊj^{III}, ZO/TE tuj^{II} ~ tuj^{III} *melt (v)*.

tul¹ — MI/TH/ZO/TE tul^{I}, ZA –tul^{I} *skewer (n)*.

tul⁻ — ZO/TE/SI tul^{III} *thousand (n)*.

tur⁻ — MI tur^{III}, TH tʊʔ, ZO tʊa^{III}, TE/SI tuk^{III} *pungent (v)*.

tus — MI tu^{III}– *hammer (n)*; ZA/TH/ZO/TE tu^{III}, SI tu^{III}– *small hoe (n)*. MI/ZA tɔk *carve (v)*; TH/ZO tu^{III} ~ tʊʔ, TE tu^{III} ~ tɔk *chop (v)*.

tvl⁻ — MI/ZA tal^{IIA} ~ tal^{III} *wriggle (v)*. MI tɛl^{IIB}, ZO/TE/SI tal^{II} ~ tal^{III} *slither (v)*. TH/ZO/TE tɔl^{II} ~ tɔl^{III} *slide out (v)*. MI tɔlʔ / tɔl^{IIB}, ZA/TE tɔlʔ, ZO/SI tɔl^{III} *slide (v$_i$)*. ⇨ **t^{h}vl⁻**. *cf.* **ʦel⁻**

Tvl⁻ — *(Austroasiatic)*.[230] ZA dil^{II}, TH tal^{I}, ZO tul^{I}, TE/SI –tul^{I} *heel (n)*.

tvm⁻ — MI/ZA tʊam^{IIA} ~ tʊam^{III}, TH toʊm^{II} ~ toʊm^{III}, ZO tʊom^{II} ~ tʊom^{III}, TE tʊam^{II} ~ tʊam^{III}, SI tuɐm^{II} ~ tuɐm^{III} *wrap (v)*. MI tɔm^{I} ~ tɔm^{III} *crouch, huddle up, tie hair bob (v)*; ZA tɔm^{I} ~ tɔm^{III} *bind up (v)*. MI/ZA tɔm^{III} *hair bob (n)*. MI/ZA tʊm^{III}, TH/ZO/TE/SI

[229] See Vol.1, Ch.6, #180.
[230] See Shorto (2006:455).

tʊm^{I} ~ tʊm^{III} *clench (v)*. MI/ZA tʊm^{III}, *fist, block (n)*; TH/ZO/SI tʊm^{I} *fist, hair bob (n)*; TE tʊm^{III} *fist, block, hair bob (n)*.

ᴛvŋ̄ — MI/ZA tʊak^{IIB} *pair (n)*. MI tok^{IIB} ~ tɔʔ, TH toʊʔ^{II} ~ toʊ^{III}, ZO tʊoʔ^{II} ~ tʊo^{III}, TE tʊak^{II} ~ tʊak^{III} / tʊaʔ, SI tuɐk^{II} ~ tuɐk^{III} / tuɐ^{III} *meet (v)*. MI/ZA tɔŋ^{I} ~ tɔn^{III} *meet (v)*. TH tɔŋ^{I} *speak (v)*. MI toŋ^{III} ~ tɔn^{IIB}, ZA toŋ^{III} *fight (v)*; TE/SI toŋ^{II} ~ ton^{III} *provoke (v)*. MI dɔŋ^{I} ~ dɔn^{III}, ZA dɔŋ^{IIA} ~ dɔn^{III} *catch, intercept (v)*; TH/ZO dɔŋ^{I} ~ dɔn^{III} *solicit, intercept (v)*; TE dɔŋ^{I} ~ dɔn^{III} *solict donation, host party (v)*; SI dɔŋ^{I} ~ dɔn^{III} *solicit donation, catch, intercept (v)*. TH/ZO/TE doŋ^{I} ~ don^{III} *reply (v)*, SI doŋ^{I} *reply in verse (v)*. MI dɐŋ^{IIA} ~ dɐn^{III}, TH/ZO/TE/SI dɔŋ^{II} ~ dɔn^{III} *hinder (v)*. TH dɔŋ^{III} ~ dɔʔ, ZO dɔŋ^{III} ~ dɔʔ / dɔt, TE dɔŋ^{III} ~ dɔt, SI dɔŋ^{III} ~ dɔk / dɔt *ask (v)*. TH/TE/SI do<u>n</u>^{II} ~ don^{III} *unburden, meet (v)*. MI <u>ʦ</u>^{h}on^{III} ~ ʦ^{h}ɔn^{IIB}, ZA <u>s</u>on^{III} ~ sɔn^{IIB} *reply (v)*.

tʰ

tʰɐk — (ST *sək).[231] MI/ZA/TE tʰɐk ~ tʰɐʔ, TH/ZO tʰɐʔ, SI tʰɐk *itch, spicy (v)*.

tʰɐl¹ — MI/ZA tʰɐlᴵ, ZO/TE/SI tʰɐlᴵᴵᴵ *oak (n)*.

tʰɐl² — MI/ZA tʰɐlᴵᴵᴬ *arrow (n)*; ZO/TE/SI tʰɐlᴵᴵ *bow (n)*.

tʰɐm² — MI/ZA tʰɐmᴵᴵᴬ ~ tʰɐmᴵᴵᴵ *handle (v)*; TH/ZO/TE/SI tʰɐmᴵᴵ ~ tʰɐmᴵᴵᴵ *touch with hand (v)*.

tʰɐŋ¹ — MI/ZA/TH/ZO/TE/SI tʰɐŋᴵ ~ tʰɐnᴵᴵᴵ *famous (v)*; ZA tʰɐnᴵᴵᴮ *broadcast (v)*.

tʰɛŋ⁻ — MI tʰaŋᴵᴵᴬ, ZA tʰeŋᴵᴵᴬ ~ tʰenᴵᴵᴵ TH/ZO/TE/SI tʰaŋᴵ ~ tʰanᴵᴵᴵ *reek (v)*; tʰaŋᴵ ~ tʰanᴵᴵᴵ *flavoursome (v)*.

tʰɐr¹ — (ST *sar).[232] MI/ZA tʰɐrᴵ ~ tʰɐrᴵᴵᴵ, TH tʰaʔᴵ ~ tʰɐʔ, ZO tʰaᴵ ~ tʰaᴵᴵᴵ, TE tʰɐkᴵ, SI tʰɐkᴵ ~ tʰɐkᴵᴵᴵ *new (v)*.

tʰɐt — (ST *sat).[233] MI/ZA/TE tʰɐt ~ tʰɐʔ, TH/ZO/SI tʰɐt ~ tʰaᴵᴵᴵ *kill (v)*.

tʰa² — MI/ZA tʰaᴵᴵᴮ, TH/ZO/TE/SI tʰaᴵᴵ *sinew (n)*.

tʰal¹ — MI tʰalᴵ ~ tʰalᴵᴵᴵ *bale (v)*; ZO/SI tʰalᴵ ~ tʰalᴵᴵᴵ *funnel (v)*.

tʰaw¹ — (ST *saw).[234] MI/ZA/TH/ZO/TE/SI tʰawᴵ ~ tʰawᴵᴵᴵ *fat (v)*, tʰawᴵᴵᴵ *fat (n)*.

tʰʌŋ² — MI/ZA tʰɐŋᴵᴵᴬ, TH/ZO/TE/SI tʰaŋᴵᴵ *trap (n)*.

tʰʌr⁻ — MI tʰarᴵ, ZA tʰɐrᴵᴵᴬ, TE/SI tʰɐkᴵ *serow (n)*.

tʰɛj² — (ST *səjʔ).[235] MI/ZA tʰɛjᴵᴵᴬ, TH tʰɛjᴵᴵ *fruit, fig (n)*; ZO/TE/SI tʰɛjᴵᴵ *fig (n)*.

tʰɛj⁻ — (ST *səjʔ).[236] MI tʰɛjᴵᴵᴵ ~ tʰɛjʔ, SI tʰɛjᴵᴵᴵ *capable (v)*; ZA tʰɛjᴵᴵᴵ ~ tʰɛjʔ, TH/ZO tʰɛjᴵᴵᴵ *know (v)*; TE tʰɛjᴵᴵᴵ ~ tʰɛjʔ *know, capable (v)*.

tʰɪam² — MI tʰɪamᴵᴵᴬ ~ tʰɪamᴵᴵᴵ, TH tʰeɪmᴵᴵ ~ tʰeɪmᴵᴵᴵ / tʰeɪp, ZO sɪemᴵᴵ ~ sɪemᴵᴵᴵ, TE sɪamᴵᴵ ~ sɪamᴵᴵᴵ, SI ʧʰiɐmᴵᴵ ~ ʧʰiɐmᴵᴵᴵ. *proficient (v)*; ZA tʰɪamᴵᴵᴬ ~ tʰɪamᴵᴵᴵ *understand (v)*.

tʰɪaŋ¹ — MI/ZA tʰɪaŋᴵ ~ tʰɪanᴵᴵᴵ, TH tʰeɪŋᴵ ~ tʰeɪnᴵᴵᴵ, ZO sɪeŋᴵ ~ sɪenᴵᴵᴵ, TE sɪaŋᴵ ~ sɪanᴵᴵᴵ, SI ʧʰiɐŋᴵ ~ ʧʰiɐnᴵᴵᴵ *clean (v)*.

tʰɪar¹ — MI/ZA tʰɪarᴵ ~ tʰɪarᴵᴵᴵ *relocate (v$_t$)*; TH tʰeɪʔᴵ ~ tʰeɪʔᴵᴵᴵ, ZO sɪaᴵ ~ sɪaᴵᴵᴵ, TE sɪakᴵ ~ sɪakᴵᴵᴵ, SI ʧʰiɐkᴵ ~ ʧʰiɐkᴵᴵᴵ *wipe (v)*. ⇨ **tɪar¹**

tʰɪn⁻ — (ST *sjən$^{?}$).[237] MI/ZA/TH tʰɪnᴵᴵᴵ, ZO/TE sɪnᴵᴵᴵ, SI ʧʰɪnᴵᴵᴵ *liver (n)*.

tʰɪŋ¹ — MI/ZA/TH tʰɪŋᴵ ~ tʰɪnᴵᴵᴵ, ZO t̲ʰɪŋᴵ ~ t̲ʰɪnᴵᴵᴵ, TE sɪŋᴵ ~ sɪnᴵᴵᴵ, SI ʧʰɪŋᴵ ~ ʧʰɪnᴵᴵᴵ *shake (v)*

tʰɪŋ² — (ST *sjəŋ$^{?}$).[238] MI/ZA tʰɪŋᴵᴵᴬ, TH tʰɪŋᴵᴵ, ZO/TE sɪŋᴵᴵ, SI ʧʰɪŋᴵᴵ *tree, wood (n)*.

tʰɪs — MI tʰɪʔ *oil hair (v)*. ZA tʰɪʔ, TH tʰiᴵᴵᴵ, ZO siᴵᴵᴵ, TE sɪʔ, SI ʧʰiᴵᴵᴵ *comb (n)*.

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[231] See Vol.1, Ch.6, #100.
[232] See Vol.1, Ch.6, #120.
[233] See Vol.1, Ch.6, #101.
[234] See Vol.1, Ch.6, #65.
[235] See Vol.1, Ch.6, #81.
[236] See Vol.1, Ch.6, #102.
[237] See Vol.1, Ch.6, #107.
[238] See Vol.1, Ch.6, #172.

tʰi¹ — (ST *sjə).[239] MI/ZA tʰiᴵ ~ tʰɪʔ, TH tʰiᴵ ~ tʰiᴵᴵᴵ, ZO siᴵ ~ siᴵᴵᴵ, TE siᴵ ~ sɪʔ, SI ʧʰiᴵ ~ ʧʰiᴵᴵᴵ *die (v)*.

tʰi² — *(Sinitic)*.[240] MI/ZA tʰiᴵᴵᴬ, TH tʰiᴵᴵ, ZO/TE siᴵᴵ, SI ʧʰiᴵᴵ *blood (n)*. MI/ZA tʰiᴵᴵᴬ ~ tʰitᴵᴵᴮ *bleed (v)*.

tʰik — MI/ZA tʰikᴵᴵ *jealous (v)*.

tʰiŋ¹ — *(areal)*.[241] MI/ZA/TH tʰiŋᴵ, ZO/TE siŋᴵ, SI ʧʰiŋᴵ *ginger (n)*.

tʰip — MI/ZA tʰipᴵᴵᴮ, TH tʰipᴵᴵ ~ tʰipᴵᴵᴵ, ZO/TE sipᴵᴵ ~ sipᴵᴵᴵ, SI ʧʰipᴵᴵ ~ ʧʰipᴵᴵᴵ *sting (v)*.

tʰir² — MI/ZA tʰirᴵᴵᴬ, TH tʰiʔᴵᴵ, ZO sɪaᴵᴵ, TE sikᴵᴵ, SI ʧʰikᴵᴵ *iron (n)*.

tʰɔw² — MI tʰɔwᴵᴵᴬ ~ tʰɔʔ, TH/ZO/SI tʰɔwᴵᴵ ~ tʰoᴵᴵᴵ, TE tʰɔwᴵᴵ ~ tʰɔʔ *arise (v)*. ZA tʰɔwᴵᴵᴬ ~ tʰɔʔ *arise* (v_i), tʰɔʔ *rouse* (v_t).

tʰɔw⁻ — MI/ZA/TH/ZO/TE/SI tʰɔwᴵᴵᴵ *fly (n)*.

tʰo² — MI tʰoᴵᴵᴵ ~ tʰokᴵᴵᴮ ZA tʰoɯ ~ tʰotᴵᴵᴮ *breathe (v)*. MI tʰoᴵᴵᴮ *breath (n)*.

tʰom² — MI/ZA tʰomᴵᴵᴬ, ZO/SI tʰomᴵᴵ, TE tʰomᴵᴵ– *sound (n)*.

tʰoj⁻ — MI/ZA tʰojᴵᴵᴮ, TH/ZO/SI tʰɔjᴵᴵᴵ, TE tʰɔjʔ *appease nats (v)*.

tʰʊam² — MI tʰʊamᴵᴵᴵ ~ tɔmᴵᴵᴮ, ZA tʰʊamᴵᴵᴵ *dress in finest (v)*. ⇨ **tʌm⁻**

tʰʊap — MI/ZA tʰʊaʔ, TH tʰoʊpᴵᴵ, ZO/TE tʰʊopᴵᴵ ~ tʰʊopᴵᴵᴵ, SI tʰuɐpᴵᴵ ~ tʰuɐpᴵᴵᴵ *layer (v)*. SI tʰuɐpᴵᴵ *layer (n)*. ZO tʰʊoᴵᴵᴵ *pair (v)*; TE tʰʊaʔ, SI tʰuɐᴵᴵᴵ *repeat (v)*.

tʰʊk — MI/TE/SI tʰʊk, TH/ZO tʰʊʔ *stove (n)*.

tʰʊm¹ — (ST *swəm).[242] MI/TH tʰʊmᴵ ~ tʰʊmᴵᴵᴵ, ZA tʰʊmᴵ ~ tʰʊmᴵᴵᴮ, ZO/TE/SI tʰʊmᴵ *three (v)*.

tʰʊn¹ — MI/ZA/ZO tʰʊnᴵ ~ tʰʊnᴵᴵᴵ *insert lengthwise (v)*; TH tʰʊnᴵ ~ tʰʊnᴵᴵᴵ *pour into (v)*; TE/SI tʰʊnᴵ ~ tʰʊnᴵᴵᴵ *insert lengthwise, pour into (v)*.

tʰʊp — MI/ZA tʰʊp ~ tʰʊʔ *hide (v)*.

tʰʊr¹ — MI tʰʊrᴵ ~ tʰʊrᴵᴵᴵ, TH tʰuʔᴵ ~ tʰʊʔ, ZO tʰʊaᴵ ~ tʰʊaᴵᴵᴵ, TE/SI tʰukᴵ ~ tʰukᴵᴵᴵ *ladle (v)*; ZA tʰʊrᴵ ~ tʰʊrᴵᴵᴵ *ladle* (v_t), tʰʊrʔ *ladle* (v_b).

tʰu² — MI/ZA –tʰuᴵᴵᴮ, TH/ZO/TE –tʰu⁽ᴵᴵᴵ⁾, SI –tʰuᴵᴵ *trivet (n)*.

tʰu² — (ST *səwˀ).[243] ZA tʰuᴵᴵᴮ ~ tʰutᴵᴵᴮ *rot (v)*.

tʰu² — MI/ZA tʰuᴵᴵᴬ, TH/ZO/TE/SI tʰuᴵᴵ *news (n)*.

tʰuk — MI/ZA tʰukᴵᴵᴮ ~ tʰuk̲ᴵᴵᴵ, TH tʰuʔᴵᴵ tʰʊʔ, ZO tʰuʔᴵᴵ ~ tʰuʔᴵᴵᴵ, TE tʰukᴵᴵ ~ tʰukᴵᴵᴵ, SI tʰukᴵᴵ ~ tʰukᴵᴵᴵ / tʰuᴵᴵᴵ *deep (v)*.

tʰum² — MI/ZA tʰumᴵᴵᴬ ~ tʰumᴵᴵᴵ *deep (voice) (v)*. *cf.* **ʞʰɪm¹**

tʰum² — TH/ZO tʰumᴵᴵ ~ tʰumᴵᴵᴵ *request (v)*. TE/SI tʰumᴵᴵ ~ tʰumᴵᴵᴵ *apologise (v)*.

tʰur² — *(Austroasiatic)*.[244] MI/ZA tʰurᴵᴵᴬ ~ tʰurᴵᴵᴵ, TH tʰuʔᴵᴵ ~ tʰʊʔ, ZO tʰʊaᴵᴵ ~ tʰʊaᴵᴵᴵ, TE/SI tʰukᴵᴵ ~ tʰukᴵᴵᴵ *sour (v)*.

[239] See Vol.1, Ch.6, #44.
[240] See Vol.1, Ch.6, #21.
[241] See Vol.1, Ch.6, #83.
[242] See Vol.1, Ch.6, #167.
[243] See Vol.1, Ch.6, #135.
[244] See Vol.1, Ch.6, #155.

t^hvl^- — MI $t^hɔlʔ$ / $t^hɔl^{IIB}$ *slide under/between (v)*, ZA/TE $t^hɔlʔ$, TH/ZO/SI $t^hɔl^{III}$ *slide (v_t)*. MI t^hol^I ~ t^hol^{III}, ZA t^hol^{II} ~ t^hol^{III} *loose (v)*. TH/ZO/TE/SI t^hol^I ~ t^hol^{III} *fittable (v)*. ⇨ **tvl⁻**

t^hvp — MI t^hep^{IIB}, ZA t^hep^I ~ t^hep^{III}, TH $t^hep^{I/II}$ ~ t^hep^{II}, ZO/TE t^hep^{II} ~ t^hep^{III} SI $t^hɛap^{II}$ ~ $t^hɛap^{III}$ / t^he^{III} *deflate (v)*. MI t^hop^{II} ~ t^hop^{III} *spongy (v)*; TH $t^hop^{I/II}$ ~ t^hop^{III} *shrivel (v)*.

ʦ

ʦɐk — MI/ZA ʦɐk ~ ʦɐʔ, TH ʧɐʔ ~ ʧa^{III}, TE/SI ʦk *sturdy (v)*.

ʦɛ̯̆l¹ — MI ʦɐl^{I}, TH ʧɐl^{I} / ʧɛl^{I}, ZO/TE/SI ʦl^{I} *male (n)*. MI ʦɐl^{III}, ZA ʦɛl^{III}, TH ʧɐl^{III}, ZO/TE/SI ʦl^{III} *forehead (n)*.

ʦɐl¯ — MI/ZA ʦɐl^{IIA}, TH ʧɐl^{I}, SI t^{h}ɐl^{II} *small bamboo (n)*.

ʦɐm¹ — MI ʦɐm^{I} ~ ʦɐm^{III}, TH ʧɐm^{I} ~ ʧɐm^{III}, ZO/TE/SI ʦm^{I} ~ ʦm^{III} *level (v)*.

ʦɛ̯̆n² — MI/ZA ʦɐn^{IIA} ~ ʦɐn^{III}, TH ʧɛn^{II} ~ ʧɛn^{III}, ZO ʦɛn^{II} ~ ʦɛn^{III} *slice (v)*; TE ʦɛn^{II} ~ ʦɛn^{III} *cleave (v)*. SI ʦɛn^{II} ~ ʦɛn^{III} *desist (v)*. MI ʦɐn^{III} *slice (n)*. TH ʧɐn^{III}, ZO/TE/SI ʦn^{III} *portion (n)*.

ʦɐŋ¹ — TH ʧɐŋ^{I} ~ ʧɐn^{III}, ZO/TE/SI ʦŋ^{I} ~ ʦn^{III} *straight (v)*.

ʦɐŋ² — MI/ZA ʦɐŋ^{IIA} ~ ʦɐn^{III}, TH ʧɐŋ^{II} ~ ʧɐn^{III}, ZO/TE/SI ʦŋ^{II} ~ ʦn^{III} *obtain (v)*.

ʦɐs — MI ʦaʔ, TE ʦɐʔ, SI ta^{III} *bait (v)*. *cf.* **ʤɐs**

ʦɛ̯̆t — (ST *tjat).[245] MI/ZA ʦɐt ~ ʦɐʔ, ZA ʦɛt ~ ʦɛʔ, ZO/SI ʦt ~ ta^{III}, TE ʦt ~ ʦʔ *snap (rope) (v)*; TH ʧɐt ~ ʧa^{III} *snap (chicken's neck) (v)*.

ʦa² — TH ʧa^{II} ~ ʧat^{II}, TE ta^{II} ~ tat^{II} / tak^{II} *scare (v)*; SI ta^{II} ~ tat^{II} / tak^{II} *scare (v)*.[246]

[245] See Vol.1, Ch.6, #26.

[246] Stern (1963:245) glosses SI FORM-II tat^{II} as *scare (v$_i$)* and tak^{II} as *scare (v$_t$)*.

ʦaj² — MI ʦaj^{IIA} ~ ʦaj^{III} *play (v$_i$)*; ZA ʦaj^{III} *play tug-of-war (v)*. ⇨ **ʦ^{h}aj²**

ʦam¹ — (ST *ʦam).[247] MI/ZA ʦam^{I} ~ ʦam^{III}, TH ʧam^{I} ~ ʧam^{III}, ZO/TE/SI tam^{I} ~ tam^{III} *sojourn (v)*.

ʦaŋ¹ — MI/ZA ʦaŋ^{I}, TH ʧaŋ^{I}, ZO/TE/SI taŋ^{I} *joint (n)*.

ʦaŋ² — MI/ZA ʦaŋ^{IIA} ~ ʦan^{III}, TH ʧaŋ^{II} ~ ʧan^{III}, SA taŋ^{II} ~ tan^{III} *wait for prey (v)*. ZO taŋ^{II} *hunting ground (n)*.

ʦaw¯ — MI/ZA ʦaw^{III} ʦɐwʔ, TH ʧaw^{III} *tire (v)*. ZO –taw^{III} ~ ʦw^{III}, –TE taw^{III} ~ ʦwʔ *worry (v)*. SI taw^{III} ~ ʦw^{III} *grieve (v)*.

ʦɛm¹ — MI ʦɛm^{I}, TH ʧɛm^{I}, ZO ʦm^{I}–, TE/SI ʦm^{I} *knife (n)*.

ʦek — MI/ZA ʦek^{IIB} ~ ʦɛʔ *axe (v)*.

ʦel¯ — ZA –ʦel^{III}, TH –t̲el^{III}, ZO/TE –tel^{III}, SI –tɛal$^{(II)}$ *earthworm (n)*. TH ʧal^{I} ~ ʧal^{III} *slither (v)*. *cf.* **tvl¯**

ʦɪap — MI ʦɪaʔ *soak (v)*; ZA ʦɪap^{IIB} *soak (v$_i$)*, ʦɪaʔ *soak (v$_t$)*.

ʦɪar¹ — MI –ʦɪar^{I} (~ ʦɪar^{III}) *chatter (v)*, ʦɪar^{III} *boil (v$_t$)*; ZA –ʦɪar^{I} ~ ʦɪar^{III} *grumble (v)*; TH ʧeɪʔ^{I} ~ ʧeɪʔ^{III}, ZO ʧɪeʔ^{I} ~ ʧɪeʔ^{III}, TE ʧɪak^{I} ~ ʧɪak^{III}, SI ʧiɐk^{I} ~ ʧiɐk^{III} *grumble, chatter, wheeze, bubble (v)*.

ʦɪl¹ — MI/ZA ʦɪl^{I}, TH/ZO/TE/SI ʧɪl^{I} *saliva (n)*.

ʦɪm² — TH ʧɪm^{II} ~ ʧɪm^{III}, ZO/TE/SI ʧɪm^{III} ~ ʧɪp *collapse (v)*.

[247] See Vol.1, Ch.6, #151.

tsɪŋ² — MI tsɪŋ^{IIA} ~ tsɪn^{III} *tend (v)*. TH/ZO/TE/SI ʧɪŋ^{II} ~ ʧɪn^{III} *guard (v)*.

tsi² — (ST *tsjəʔ). [248] MI/ZA tsi^{IIB}, TH/ZO/TE/SI ʧi^{II} *seed (n)*.

tsis — MI/ZA tsi^{III}, TH/ZO/TE/SI ʧi^{III} *salt (n)*.

tsɔk — MI/ZA tsɔk ~ tsɔʔ, TH ʧɔʔ ~ ʧo^{III}, ZO/SI tɔʔ ~ to^{III}, TE tɔk ~ tɔʔ *stir (v)*.

tsɔl¯ — MI tsɔl^{IIB}, ZA tsɔlʔ, TH ʧɔl^{II}, ZO/TE/SI tɔl^{II} *yeast (n)*.

tsɔm² — MI tsɔm^{IIA} ~ tsɔm^{III}, ZA tsɔm^{II} *shrink (v)*; ZA tsɔm^{II} ~ tsɔm^{III} *curl up (v)*; TH ʧɔm^{II} ~ ʧɔm^{III}, ZO/TE/SI tɔm^{II} ~ tɔm^{III} *short (v)*.

tsɔw² — (ST *tswəʔ). [249] MI tsɔw^{IIA} ~ tsɔʔ, TH ʧɔw^{II} ~ ʧo^{III}, ZO/SI tɔw^{II} ~ to^{III}, TE tɔw^{II} ~ tɔʔ *dig (v)*.

tsol² — TH ʧol^{II} ~ ʧol^{III}, ZO/TE tol^{II} ~ tol^{III} *tired (v)*. MI tsol^{III} ~ tsolʔ, TH ʧol^{III}, ZO tol^{III}–, TE tol^{III}, SI tol^{III}– *rest, stop (v)*; ZA tsol^{III} ~ tsolʔ, *rest, stop (v$_i$)*, tsolʔ *stop (v$_t$)*.

tsʊ̊aj¹ — MI tsoj^{I} ~ tsoj^{III} / tsɔjʔ, ZA tsoj^{I} ~ tsoj^{III}, TH ʧoj^{I} ~ ʧoj^{III} / ʧɔj^{III}, ZO/TE toj^{I} ~ toj^{III}, SI tɔaj^{I} ~ tɔaj^{III} *heft (v)*. ZA tsʊaj^{I} *weight (n)*.

tsʊaŋ¹ — MI tsʊaŋ^{I} ~ tsʊan^{III}, TH ʧoʊŋ^{I} ~ ʧoʊn^{III}, ZO tʊoŋ^{I} ~ tʊon^{III}, TE tʊaŋ^{I} ~ tʊan^{III}, SI tuɐŋ^{I} ~ tuɐn^{III} *ride (v)*. ⇨ **ts^{h}ʊaŋ¹**

tsʊap — MI/ZA tsʊap^{IIB}, TH ʧoʊp^{II}, ZO tʊop^{II}, TE tʊap^{II}, SI tuɐp^{II} *lungs (n)*.

tsum² — SI tum^{II} ~ tum^{III} *increase (water) (v)*. MI tsum^{III} ~ tsum^{IIB}, SI tum^{III} ~ tʊp *punch (v)*; ZA tsum^{III} ~ tsum^{IIB} *thump fist down (v)*; TH ʧum^{III} ~ ʧʊp, ZO/TE tum^{III} ~ tʊp *flood, punch (v)*.

tsʊŋ² — MI tsʊŋ^{IIA}, ZA –tsʊŋ^{IIA}, TH ʧoŋ^{II}, ZO/TE/SI tʊŋ^{II} *top, above (n)*.

tsus — MI tsu^{III} ~ tsʊk, ZA tsʊk ~ tsʊʔ, TH ʧu^{III} ~ ʧʊʔ, ZO tu^{III} ~ tʊʔ, TE/SI tu^{III} ~ tʊk *peck (v)*.

tsvŋ² — MI tseŋ^{IIA} ~ tsen^{III}, ZA tse<u>n</u>^{II} ~ tsen^{III}, TH/ZO/TE ʧin^{II} ~ ʧin^{III}, SI ʧiŋ^{II} ~ ʧin^{III} *downpour (v)*.

tsvp — *(Austroasiatic)*. [250] MI/ZA tsɛp ~ tsɛʔ, TH ʧɛp ~ ʧe^{III}, ZO/TE/SI tɛp ~ te^{III} *clamp (v)*. MI tsep^{IIB} *cramp (v)*. MI/ZA tsɪp ~ tsɪʔ, TH/SI ʧɪp ~ ʧi^{III} *nibble, shut (v)*. MI tsip^{IIB}, ZO/TE ʧɪp ~ ʧɪʔ *shut from both sides (v)*. ZO/TE/SI ʧip^{II} ~ ʧip^{III} *compact (v)*.

tsvp — MI tsɐp *adze (v)*; ZA tsɔp *adze (n)*; TH ʧɐp *felled tree (n)*.

tsvr¯ — MI tsɪrʔ *mire (n)*; TH ʧɪʔ *pond (n)*; ZA tsɪrʔ, LA tsɛrʔ, ZO ʧɪa^{III}, TE/SI ʧɪk *spring (n)*.

[248] See Vol.1, Ch.6, #137.
[249] See Vol.1, Ch.6, #45.
[250] See Vol.1, Ch.6, #140.

tsʰ

tsʰɐk — MI tsʰɐk *east (n)*; ZA/TE/SI sɐk, TH/ZO sɐʔ *north (n)*.

tsʰɐm¹ — MI tsʰɐm^{IIB}, TH –sɐm^{I} ~ sɐm^{III}, ZO/TE/SI sɐm^{I} ~ sɐm^{III} *chant (v)*. *cf.* **tsʰɪm¹**

tsʰɐm⁻ — MI tsʰɐm^{III} ~ tsʰɐm^{IIB}, ZA sɐm^{III} ~ sɐm^{IIB}, TH/ZO/TE/SI sɐm^{III} ~ sɐp *need (v)*.

tsʰɐs — MI tsʰɐʔ, ZA/TE sɐʔ, TH/ZO/SI sa^{III} *thick (v)*.

tsʰaj² — MI tsʰɐjʔ *tease (v_t)*; ZA sɐjʔ *kick in jest (v)*. ⇨ **tsaj²**

tsʰaŋ¹ — MI tsʰaŋ^{I} ~ tsʰan^{III} *requite (v)*; ZA saŋ^{I} ~ san^{III} *borrow (v)*, sɐn^{IIB} *lend (v)*; TH/ZO/TE/SI saŋ^{I} ~ san^{III} *accept (v)*.

tsʰɛk — MI tsʰɛk, ZA sɛk *hatchet (n)*; TH/ZO sɛʔ, TE/SI sɛk *hammer (n)*.

tsʰɛr¹ — MI tsʰɛr^{I} ~ tsʰɛr^{I}, ZA sɛr^{I} ~ sɛr^{I}, TE sek^{I} ~ sek^{I}, SI sɛak^{I} ~ sɛak^{III} *forge (v)*.

tsʰem¹ — MI tsʰem^{I} ~ tsʰem^{III} / tsʰɛm^{IIB} *blow, fan flames (v)*; ZA sem^{III} ~ sɛm^{IIB}, TH/ZO sem^{I} ~ sem^{I} *blow (v)*; TE sem^{I} ~ sem^{I}, SI sɛam^{I} ~ sɛam^{I} *fan flames (v)*.

tsʰeŋ² — MI tsʰek^{IIB} ~ tsʰɛʔ, ZA sek^{IIB}, LA sɛŋ^{IIB}, ZO/TE/SI sɛŋ^{II} ~ sɛn^{III} *store (v)*.

tsʰɪa² — MI tsʰɪa^{III} ~ tsʰɪat^{IIB}, ZA sɪa^{IIB} ~ sɪat^{IIB}, TH seɪ^{II} ~ seɪt^{II}, ZO sɪe^{II} ~ sɪet^{II}, TE sɪa^{II} ~ sɪat^{II}, SI siɐ^{II} ~ siɐt^{II} *ruin, bad (v)*. MI tsʰɪa^{IIB} *something bad (n)*.[251] ZO sɪet^{II} *deprecate (v)*; TE sɪat^{II}, SI siɐt^{II} ~ siɐt^{III} / siɐ^{III} *blame (v)*. MI tsʰɪaʔ, ZA sɪaʔ *offer food to deceased (v), tax (n)*; TH seɪ^{III}, ZO sɪe^{III}, SI siɐ^{III} *earmark food (v), tax (n)*; TE sɪaʔ *earmark (v), tax (n)*.[252]

tsʰɪm¹ — ZA sɪm^{I} ~ sɪm^{IIB} *say, tell (v)*; TH/ZO/TE/SI sɪm^{I} ~ sɪm^{III} *count, read (v)*. *cf.* **tsʰɐm¹**

tsʰɪm² — TH/ZO/SI sɪm^{II} ~ sɪm^{III} *attack (v)*.[253]

ts(ʰ)iŋ⁻ — MI tsʰiŋ^{I} ~ tsʰin^{III}, TH/ZO/TE/SI siŋ^{I} ~ sin^{III} *short, shut eyes (v)*; ZA siŋ^{I} ~ sin^{III} *shut eyes (v)*. ZA tsiŋ^{IIA} ~ tsin^{III} *short (v_i)*, tsin^{IIB} *shorten (v_t)*. MI tsik^{IIA} ~ tsik^{III} *disproportionately small (v)*; ZO ʧiʔ^{II} ~ ʧi^{III} *narrow (v)*; TE/SI ʧik^{III} *concentrated (v)*; SI ʧɪk *tiny (v)*.

ʦ(ʰ)om⁻ — MI tsʰɔm^{IIB}, ZA sɔm^{IIB} *make a bonfire (v)*. MI fɔm^{I} ~ fɔm^{III}, TH ʧɔm^{I} ~ ʧɔm^{III} / ʧɔp, ZO/TE/SI tɔm^{I} ~ tɔm^{III} *gather firewood (v)*. MI fom^{III}, TH ʧom^{III} / ʧɔp, TE/SI tom^{III} ~ tɔp *pick up (v)*.

tsʰʊak — (ST *tʰwak).[254] MI tsʰʊak^{IIB} ~ tsʰʊaʔ, ZA sʊak^{IIB} ~ sʊaʔ, TH soʊk^{II} ~ soʊ^{III}, ZO sʊok^{II} ~ sʊo^{III}, TE sʊak^{II} ~ sʊak^{III} / sʊaʔ, SI suɐk^{II} ~ suɐk^{III} / suɐ^{III} *emerge (v_i)*. MI tsʰʊaʔ, ZA sʊaʔ, TH soʊ^{III}, TE sʊaʔ *produce (v_t)*; ZO sʊo^{III} *unload (v_t)*; SI suɐ^{III} *produce, unload (v_t)*.

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[251] MI tsʰɪa^{IIB} from Chhangte (1993:88).
[252] See Lehman (1963:141) for the semantics.
[253] VanBik (2009:171) has Lai ts^{h}-.
[254] See Vol.1, Ch.6, #56.

tsʰʊaŋ¹ — MI tsʰʊaŋ^{I}, ZA sʊaŋ^{I}, TH soʊŋ^{I}, ZO sʊoŋ^{I}, TE sʊaŋ^{I}, SI suɐŋ^{I} *cockscomb (n)*. MI tsʰʊaŋ^{I} ~ tsʰʊan^{III}, ZA sʊaŋ^{I} ~ sɔn^{IIB}, TH soʊŋ^{I} ~ soʊn^{III}, ZO sʊoŋ^{I} ~ sʊon^{III}, TE sʊaŋ^{I} ~ sʊan^{III} *perch* (v_{i}); SI suɐŋ^{I} ~ suɐn^{III} *perch on stove/head (v)*. TE sʊaŋ^{III} *protrude (forehead) (v)*; SI suɐŋ^{III} ~ suɐt *protrude (occiput) (v)*. ⇨ **tsʊaŋ¹**. *cf.* **tsʰʊaŋ²**

tsʰʊaŋ² — ZA sʊaŋ^{IIA} ~ sʊan^{III} *perch on stove* (v_{i}), sɔn^{IIB} *perch on stove* (v_{b}). *cf.* **tsʰʊaŋ¹**

tsʰʊk — MI tsʰʊk ~ tsʰʊʔ, ZA sʊk ~ sʊʔ, TH/ZO sʊʔ, TE/SI sʊk *descend (v)*.

tsʰʊ*n*⁻ — MI tsʰʊn^{III} ~ tsʰʊn^{IIB}, ZA sʊn^{III} ~ sʊn^{IIB}, TH/ZO/TE/SI sʊn^{III} ~ sʊt *prick (v)*.

tsʰʊt — MI tsʰʊʔ, ZO sʊt, TE sʊt ~ sʊʔ, SI sʊt ~ su^{III} *snatch (v)*.

tsʰu² — (ST *tʰəw$^{?}$).[255] MI tsʰu^{IIB}, ZA su^{IIB}, TH/ZO/TE/SI su^{II} *vagina (n)*.

tsʰu*n*⁻ — MI tsʰun^{III} *daytime (n)*. ZA/TH/ZO/TE/SI sun^{III} *noon (n)*.

tsʰUl⁻ — MI tsʰul^{III}, ZA/TE sul^{III}, TH/SI sʊl^{III} *womb (n)*.

tsʰUŋ¹ — MI tsʰuŋ^{I}, ZA/TH/ZO/TE/SI sʊŋ^{I} *inside (n)*.

tsʰUŋ² — MI tsʰuŋ^{IIA} ~ tsʰun^{III}, ZA suŋ^{IIA} ~ sun^{III}, TH/ZO/TE/SI sʊŋ^{II} ~ sʊn^{III} *pour (v)*.

ts$^{(h)}$VL⁻ — MI/ZA tsil^{I} ~ tsil^{III}, TH/ZO/TE/SI ʧɪl^{I} ~ ʧɪl^{III} *trample (v)*. MI tsɪlʔ, ZA tsɛlʔ *squash (v)*. ZO sia^{III}, TE sik^{II} ~ sik^{III}, SI sik^{II} ~ sik^{III} / si^{III} *tread (v)*.

[255] See Vol.1, Ch.6, #174.

W

wɛ̈j⁻ — *(Austroasiatic)*.[256] MI/ZA baj^{IIA} ~ baj^{III}, TH baj^{I} ~ baj^{III} / bɐj^{III}, ZO vaj^{I} ~ vaj^{III}, ZO/TE/SI baj^{I} ~ baj^{III} *lame (v)*. MI vɛj^{IIA}, TH/ZO/TE/SI vɛj^{II} *left (n)*.

wɛ̈M⁻ — MI ɛm^{I} ~ ɛm^{III} *scorch (v)*; ZA ʔɛm^{I} ~ ʔɛm^{III} *dry over fire (v_i)*, ʔɛm^{IIB} *dry over fire (v_t)*; ZO/TE/SI ɛm^{I} ~ ɛm^{III} *roast (v)*. TH/ZO/TE/SI am^{III} ~ ɐp *glow (embers) (v)*; TH ɐm^{II} ~ ɐm^{III} *glow (charcoal) (v)*. MI/ZA vam^{IIA} *embers (n)*; MI vap^{II}, TH/ZO/TE/SI vam^{II} *ashes (n)*. MI/ZA vam^{IIA} ~ vam^{III} *red hot (v)*.

wɛ̈n¹ — (ST *wan).[257] ZA vɔn^{I} ~ vɔn^{III}, LA vʊn^{I} ~ vʊn^{III} *pregnant (v_i)*, ZA vɔn^{IIB}, LA vʊn^{IIB} *impregnate (v_t)*. ZO/TE/SI vɔn^{I} *offspring (n)*. MI vɔn^{III}–, ZO/TE/SI vɐn^{III} *load (n)*.[258] *cf.* **wʊ̈n²**

wɛ̈t — (ST *wat).[259] MI/ZA –vɐt, TH/ZO/TE/SI vɔt *leech (n)*.

wa² — MI/ZA va^{IIB}, TH/ZO/TE va^{II}, SI vɐ– *bird (n)*.

waj¹ — MI/ZA/TH/ZO/TE/SI vaj^{I} *foreigner (n)*.

ẅaj¹ —[260] MI/TH/ZO/TE/SI vaj^{I} *chaff (n)*; ZA vaj^{I} *parboiled rice (n)*. MI p^{h}ʊaj^{I} *shavings (n)*.[261]

wak — MI/ZA vak^{IIB} ~ vɐʔ, TE vak^{II} ~ vak^{III} *walk (v)*; TH/ZO vaʔ^{II} ~ va^{III} *roam (v)*; SI vak^{II} ~ vak^{III} / va^{III} *exit (v)*.

r-wɐs — (ST *r-was).[262] MI/ZA rʊaʔ, TH goʊ^{III}, ZO gʊo^{III}, TE gʊaʔ, SI ŋuɐ^{III} *rain (n)*.

wɛl⁻ — MI/ZA vel^{III} ~ vɛlʔ, TH vel^{II} ~ vel^{III}, ZO/TE/SI vɛl^{I} ~ vɛl^{III} *strike (v)*.

wɪ̈l¹ — MI vɪl^{IIA} ~ vɪl^{III}, ZA vɪl^{III}–, TH/ZO/TE/SI vɪl^{I} ~ vɪl^{III} *tend (v)*. MI/ZA vʊlʔ, TH/ZO vʊl^{III} *rear animals (v)*; TE vʊl^{III} ~ vʊlʔ, SI hʊl^{III} *rear (v_b)*.

wɪ̈t — MI/ZA vɪt ~ vɪʔ, TH/ZO vʊt ~ vu^{III}, TE vʊt ~ vʊʔ, SI hʊt ~ hu^{III} *pierce (v)*.

wɔk — (ST *waq).[263] MI/ZA/TE/SI vɔk, TH/ZO vɔʔ *pig (n)*.

wɔm¹ — (ST *wəm).[264] MI –vɔm^{I}, ZA/TH/ZO/TE/SI vɔm^{I} *bear (n)*.

wɔm¹ — TH/ZO/TE/SI vɔm^{I} ~ vɔm^{III} *black (v)*.

wor¹ — MI vor^{I} ~ vor^{III} *sing (v)*; ZA vor^{III}, SI vok^{I} ~ vok^{III} *discard (v)*; TE vok^{I} ~ vok^{III} *throw (v)*. MI/ZA vɔrʔ, TH/ZO/SI vo^{III}, TE vɔʔ *sow (v)*.

wʊj¹ — *(Austroasiatic)*.[265] MI/ZA vʊj^{I}, ZO vʊ̲j^{I}–, TE vʊj^{I}–, SI v̲ʊj^{I}– *elephant (n)*.

wʊ̈n² — MI/ZA vʊn^{IIA}, TH/ZO/TE vʊn^{II}, SI hʊn^{II} *skin (n)*. TH/ZO vɔn^{II} ~ vɔn^{III} *wear (v)*. TH vɔn^{III} *clothes (n)*. *cf.* **wɛ̈n¹**

[256] See Vol.1, Ch.6, #104.
[257] See Vol.1, Ch.6, #12.
[258] Compare the association between *bear* and *bairn* for the semantics.
[259] See Vol.1, Ch.6, #103.
[260] See Vol.1, Ch.6, #34.
[261] MI p^{h}ʊaj^{I} from Weidert (1987:144).
[262] See Vol.1, Ch.6, #131.
[263] See Vol.1, Ch.6, #130.
[264] See Vol.1, Ch.6, #11.
[265] See Vol.1, Ch.6, #55.

wʊt — MI/ZA/TH/ZO/TE vʊt, SI v̲ʊt *ash (n)*.

wur¹ — MI/ZA vur[I], TH bu?[I], ZO vʊa[I], TE vuk[I], SI huk[I] *frost, snow (n)*.

wvj⁻ — MI/ZA vɔj?, TH vɛj[III] *fart (n/v)*; ZO/SI vɛj[III], TE vɛj? *fart (n)*.

wvl⁻ — *(Austroasiatic)*.[266] MI vɐl[I], TH/ZO/SI vɐl[III], TE vɐl? *ring shaped stand (n)*. MI vɐl? *noose (n), make a noose (v)*; vɐl[IIA] ~ vɐl[III] *circular, radiate in a circle (v)*; vɐl[III] *ring (n)*. ZA vɐl[IIB] *wrap with string (v)*. MI – v̲el[IIB], ZA vɛl[IIB], TH vel[II] ~ vel[III], TE – vel[III] ~ vɛl?, SI vel[III] ~ vɛl[III] *encircle (v)*; ZO vel[II] ~ vel[III] *look all over (v)*; TH vel[II] *surroundings (n)*. MI vɪal[I] ~ vɪal[III] *coil (v$_i$)*, vɪal[III] *coil (v$_t$)*; TH vɐɪl[II] ~ vɐɪl[III], ZO vɪel[III], TE vɪal[III] ~ vɪal?, SI viɐl[III] *coil (v)*; SI viɐl[II] ~ viɐl[III] *wander (v)*. ZO –vɪel[I], TE vɪal[I] *ringlet (n)*. TH vɐɪl[II], ZO vɪel[II], TE vɪal[II], SI viɐl[II] *times (n)*. TH vaj[II] ~ vaj[III] / vɐj[III], ZO vɐj[II] ~ vɐj[III], SI vaj[II] ~ vaj[III] *hunt (v)*; TH/SI vaj[II], ZO vaj[II]– *work commute (n)*. MI vaj[III] ~ vɐj?, ZA –vaj[III] *bewildered (v)*. ZA vaj[III] ~ vɐj? *migrate (v)*. MI vɐj[IIB], ZA vɐj[IIB] ~ vɐj? *wave (v)*. TH/ZO/SI vaj[III] ~ vɐj[III], TE vaj[III] ~ vɐj? *dizzy (v)*. MI vɛj[III], ZA vɔj[III] *complete (yearly cycle), swing (v)*. MI vɔj[III] *times (n)*. ZA vɛj[III], TH/ZO/TE/SI vɛj[I] ~ vɛj[III] *swing (v)*. TH/ZO/TE/SI val[I] ~ val[III] *excessive (v)*; TE/SI val[II] ~ val[III] *bulge (eyes / pregnant belly) (v)*. MI hɔj[I] ~ hɔj[III] *turn to face (v)*, hɔj?– *accommodate guest (v)*; ZA hɔj[I] ~ hɔj[III] *face (v$_i$)*, hɔj? *turn to face (v$_t$)*; TH/ZO/TE/SI hɛj[I] ~ hɛj[III] *rotate (v)*; ZO/TE/SI hɔj[II] ~ hɔj[II] *sway (v)*. MI/ZA hɛr[I] ~ hɛr[III] *revolve (v$_i$)*; TH he?[I] ~ hɛ?, ZO he?[I] ~ he?[III], TE hek[I] ~ hek[III], SI hɛak[I] ~ hɛak[III] *twist (v)*; MI/ZA hɛr? *revolve (v$_t$)*; TH/ZO hɛ? ~ he[III], TE hɛk ~ hɛ?, SI hɛk ~ he[III] *sprain (v)*. MI hel[IIA] ~ hel[III], TH/ZO/TE hel[II] ~ hel[III], SI hɛal[II] ~ hɛal[III] *court, woo (v)*; MI/ZA hel[IIB] *go/walk around (v)*. ZA hol[IIA] ~ hol[III] *seek (v$_{i/t}$)*, hɔl? *seek (v$_b$)*; TH hol[II] ~ hol[III] *seek (v)*. *cf.* **lvl⁻**, **ʰlvl⁻**

wvŋ⁻ — *(Austroasiatic)*.[267] MI vaŋ[I] ~ van[III] *sparse, extensive (v)*, ZA vɐŋ[I] *widened (hole) (v)*, TH vaŋ[I] ~ van[III] *perforated (v)*, ZO/TE/SI vaŋ[I] ~ van[III] *sparse, hollow (v)*. TE vɐŋ[I] *hole (n)*. MI vaŋ[IIA] *width (n)*; ZA vaŋ[IIa] ~ van[III] *illuminate (v$_i$)*, vɐn[IIB] *illuminate (v$_t$)*; TH vaŋ[II] ~ van[III] *illuminate (v)*. SI vaŋ[II] *twilight (n)*. MI/ZA/TH/ZO/TE/SI van[III] *sky (n)*. TH/ZO/TE/SI vaŋ[III] *glory (n)*. MI vɐŋ[I] *neighbourhood (n)*. TH vɐŋ[I] *ward (n)*; ZO/TE vɐŋ[I], SI vɛaŋ[I] *neighbour, ward (n)*. MI/TH vɐŋ[I] ~ vɐn[III] *guard (v)*; ZA vɐŋ[I] ~ vɐn[III] *gird (v$_i$)*, vɛn[IIB] *gird (v$_t$)*; ZO/TE vɐŋ[I] ~ vɐn[III] *neighbour (v)*. MI vɐt̲[IIB] ~ vɛ?, TH/ZO/SI vɛt̲ ~ vɐ[III], TE vɛt̲ ~ vɛ? *gird (v)*. MI vɔŋ[II] ~ vɔn[III] *keep (v)*.

[266] See Vol.1, Ch.6, #37.

[267] See the data in Shorto (1973:375-8, 2006:232-3).

<u>Index by English Gloss</u>

a

b

c

calescent (**HVL⁻**); *calf* (**pʰɛj⁻**); *call* (**KV(w)¹**); *canyon* (**rʊam²**); *capable* (**klɛj²**, **tʰɛj⁻**); *captive* (**sɐl²**); *carry* (**joŋ¹**, **K⁽ʰ⁾Vj⁻**, **k(l)ʰaj¹**, **lʊaŋ¹**, **paj²**, **pʰʊ(L)⁻**); *cart* (**leŋ²**); *carve* (**tus**); *catapult* (**pɛr¹**); *catch* (**mɛ̝̈n¹**, **nɐŋ¹**, **P⁽ʰ⁾ɛ̝̈Ɒ⁻**, **TVɒ⁻**); *cave* (**kʰUL¹**, **Pʊ̝̊k**); *cavitied* (**HVŋ⁻**); *certain* (**ʤɛl²**); *chaff* (**Waj¹**); *chant* (**tsʰɐm¹**); *charcoal* (**HVL⁻**); *chatter* (**tsɪar¹**); *cheek* (**bɪaŋ¹**); *chest* (**KʰVM⁻**, **Kraŋ¹**); *chew* (**k(l)ʰaj²**); *child* (**naw¹**); *child's skirt* (**ʤeŋ¹**); *chilly* (**dAM⁻**); *chin* (**kʰa²**); *choke* (**HVk**); *choose* (**kl⁽ʰ⁾ɛ̝̈ŋ¹**, **klʰɛj²**, **ʰrɪl¹**); *chop* (**ʔɛk**, **tus**); *cinder* (**HVL⁻**); *circular* (**bɪal¹**, **PVM⁻**, **WVL⁻**); *city wall* (**kUl⁻**); *clamp* (**tsVp**); *clan* (**ʰnɐm²**); *clap* (**bEŋ⁻**); *clash* (**ʔEL⁻**); *claw* (**hɐm¹**, **tɪn²**); *clean* (**ʤaj²**, **ʰ(r)ɪat**, **tʰɪaŋ¹**); *clear* (**ʤim¹**, **sɪal²**); *cleave* (**ʔat**, **tsɛ̝̈n²**); *clench* (**sVM⁻**, **tVm⁻**); *clever* (**ʤim¹**); *clitoris* (**mV*n*⁻**); *close* (**kʰaL²**, **kʰʊp**, **mVm⁻**); *clothes* (**wʊ̝̈n²**); *cloud* (**mɛj¹**); *cob* (**kom¹**); *cock* (**ʰluj¹**); *cockscomb* (**tsʰʊaŋ¹**); *cockspur* (**sɪak**); *coffin* (**kʊaŋ¹**); *coil* (**kVL⁻**, **ʰlVm²**, **WVL⁻**); *cold* (**sɪk**); *collapse* (**tsɪm²**); *collect* (**kʰɔL⁻**); *collide* (**su⁻**); *colugo* (**ʰlʊk**); *column* (**krʰʊam⁻**); *comb* (**K⁽ʰ⁾Vj⁻**, **Pɔt**, **ʰ(r)ɪat**, **tʰɪs**); *combine* (**rVm⁻**); *come* (**hVŋ²**); *come into being* (**pVɒ⁻**); *comfort* (**ʰnVM⁻**); *comfortable* (**nVm⁻**); *commute* (**WVL⁻**); *compact* (**tsVp**); *compete* (**dɛm²**); *complain* (**ʰ(r)am²**, **sVM⁻**); *complete* (**kɪM⁻**, **klɪŋ¹**, **WVL⁻**); *compose* (**pʰVɒ⁻**, **sɪam¹**); *compress* (**nVm²**); *concave* (**KVm⁻**, **Pʊ̝̊k**); *conceal* (**KʰVM⁻**); *concentrated* (**ts⁽ʰ⁾iɒ⁻**); *congeal* (**kʰaL²**); *consign* (**pʰVL⁻**); *console* (**KʰVM⁻**); *container* (**bVŋ⁻**); *contaminate* (**sʊ̝̊an²**); *contemplate* (**sVM⁻**); *contemptuous* (**ʔEL⁻**); *contradict* (**ʔEL⁻**, **ʰnɪal²**); *convalesce* (**ka(ɒ)⁻**); *converse* (**bɪas**); *co-occur* (**kʰɐt**); *cooked rice* (**bʊs**); *cool* (**dVL⁻**); *coop* (**PVM⁻**, **rɪl²**); *copulate* (**lu²**); *corner* (**kVL⁻**); *corpse* (**Lʊaɒ⁻**); *correct* (**dɪɒ²**); *cough* (**kʰʊs**, **Kʰu²**); *count* (**tsʰɪm¹**); *counter for containers* (**bVŋ⁻**); *counter for spherical objects* (**PVM⁻**); *couple* (**kɜ̝̊p**); *court* (**WVL⁻**); *cover* (**kʰus**, **KʰVM⁻**); *crab* (**ʔaj²**); *crack* (**kA̰k**, **kʰVŋ⁻**); *crack a flea* (**dɛs**); *cram* (**nVm²**); *cramp* (**tsVp**); *crave food* (**dʊs**); *create* (**sɪam¹**); *creeper* (**⁽ʰ⁾rʊj²**); *criticise* (**sVj²**); *crotch* (**kɐp**, **krʰal⁻**); *crouch* (**kVL⁻**, **tVm⁻**); *crow* (**ʔak**, **kʰʊaŋ¹**); *crown of head* (**jaŋ¹**, **tʊk**); *crust* (**kʰaL²**); *cubit* (**Tʊŋ¹**); *cunning* (**kʰɛl²**); *cup* (**ʰ(r)aj⁻**); *cup hand* (**KVm⁻**); *curl* (**kVL⁻**, **(k)l⁽ʰ⁾Vp**, **tsɔm²**); *curry* (**⁽ʰ⁾mɛs**); *cut* (**ʔat**, **KʰEw⁻**, **tɐn²**)

d

dam (**dVL⁻**, **kʰaL²**); *damp* (**nVl⁻**, **ʰnɔm¹**); *dance* (**lam¹**); *dare* (**ƉAM⁻**); *dark* (**jVŋ⁻**, **KʰɪM¹**, **raw¹**); *daub* (**bVL⁻**); *daughter-in-law* (**mɔw¹**); *dawdle* (**ŋVŋ¹**); *daytime* (**tsʰu*n*⁻**); *deaf* (**ŋɔŋ¹**); *debt* (**lɛj¹**); *deceive* (**klʰem²**); *decorate* (**sɪam¹**); *decrease* (**kɪam²**, **kʰɪam²**, **krʊm²**, **krʰʊm²**); *decrepit* (**rɐm²**); *deep* (**tʰuk**, **tʰum²**); *deer* (**kʰi¹**, **jʊk**); *defecate* (**ʔe²**); *defend* (**dVL⁻**); *deflate* (**tʰVp**); *delicious* (**ʰlɪm¹**, **tuj¹**); *delineate* (**riN¹**); *demolish* (**KLʰV²**); *dense* (**jVŋ⁻**); *deny* (**ʰnɪal²**); *deplete* (**KʰEw⁻**); *deprecate* (**tsʰɪa²**); *descend* (**krʊm²**, **tsʰʊk**); *descendant* (**KLʰV²**, **sʊ̝̊an¹**); *desire* (**rʊl⁻**); *desist* (**⁽ʰ⁾rVl⁻**, **tsɛ̝̈n²**); *detach* (**pVL⁻**, **pʰVL⁻**); *deteriorate* (**rOM⁻**); *deviate* (**pVL⁻**); *devour* (**⁽ʰ⁾mʊ̝̊am¹**); *dew* (**dVL⁻**); *diaphragm* (**la²**); *dice* (**(k)l⁽ʰ⁾Vp**); *die* (**mɔŋ²**, **pVL⁻**, **pʰɐm¹**, **tʰi¹**); *different* (**dɐŋ²**); *difficult* (**hɐr¹**); *dig* (**K⁽ʰ⁾Vj⁻**, **laj⁻**, **tsɔw²**); *dilute* (**pol¹**); *dim* (**mɐl²**); *diminish* (**KʰEw⁻**); *dirt* (**bal⁻**); *dirty* (**bal⁻**); *disappear* (**KʰVM⁻**, **⁽ʰ⁾lVM⁻**); *disapprove* (**ma²**); *discard* (**paj⁻**, **wor¹**); *discolour* (**kir²**);

discriminate (**dɐŋ²**); *discuss* (**rel¹**); *disdain* (**ʰnvŋ⁻**, **sʊam¹**); *disgusted* (**kri¹**); *dish* (**klʰeŋ⁻**); *dislocate* (**klʰɔŋ⁻**); *disparage* (**KV(w)¹**); *dispel* (**pʰVL⁻**); *disperse* (**KLV²**); *display on pole* (**tar¹**); *disproportionately small* (**tsʰiɲ⁻**); *dissect* (**sɛm⁻**); *dissolve* (**JVL⁻**); *distend* (**krɐŋ⁻**);
distribute (**jVL⁻**, **ʰLom¹**); *divaricate* (**kaw¹**, **pʰɛn²**); *divulge* (**pvɲ⁻**, **pʰvɲ⁻**); *dizzy* (**WVL⁻**); *do secretly* (**pʰVL⁻**); *do thoroughly* (**bɛl²**); *dog* (**ʔʊj²**); *door* (**kɔŋ¹**, **kɔt**, **Pʰɛ̞ɲ⁻**); *doorway* (**kɔŋ¹**); *dooryard* (**kɔt**); *dorsum* (**jaŋ¹**); *dove* (**krʰu¹**); *downpour* (**tsVŋ²**); *dream* (**mɐŋ²**); *dress in finest* (**tʰʊam²**); *drink* (**ʔɪn¹**, **dvN¹**, **ʰ(r)vp**); *drip* (**ʤ̯ɛ̞r¹**); *drive* (**ʰ(r)ol¹**); *droop* (**jvm¹**); *drop* (**ʤ̯ɛ̞r¹**, **KLV²**, **KLʰV²**, **krɪl²**, **krʰɪl²**, **pVL⁻**); *drum* (**kʰʊaŋ¹**, **tʊm²**); *dry* (**HVL⁻**, **krɐŋ⁻**, **raw¹**, **rOM⁻**, **rO(w)¹**, **ʰrAm⁻**, **tɐŋ¹**, **wɛ̞M⁻**); *dull* (**mol⁻**, **mvɲ²**); *durable* (**klɔw¹**); *dusk* (**jvŋ⁻**); *dusty* (**pol²**)

e

ear (**bɛŋ¹**, **bɪl²**, **ʰna¹**); *ear wax* (**bɛŋ¹**); *earmark* (**tsʰɪa²**); *earn* (**lɐm²**, **ʰlɔs**); *earthworm* (**tsel⁻**); *east* (**tsʰɐk**); *easy* (**ʔOl⁻**); *eat* (**ʔɛj¹**, **lʊs**, **ʰmɛs**, **ʰne²**, **ʰ(r)vp**); *echo* (**KʰVŋ¹**); *edge* (**kVL⁻**, **mɔŋ²**); *egg* (**tuj¹**); *eight* (**LIat**); *elbow* (**kIw⁻**, **ʰŋOɲ²**); *elder sibling* (**ʔu¹**); *elderly* (**tɛ̞r¹**); *elephant* (**saj¹**, **wʊj¹**); *elevated* (**ka(ɲ)⁻**); *elope* (**jʊaŋ¹**); *embers* (**Wɛ̞M⁻**); *emerge* (**tsʰʊak**); *emit* (**rɪŋ¹**); *empty* (**KVm⁻**, **rʊak**); *emulous* (**ʔam²**); *encircle* (**WVL⁻**); *enclosure* (**ʰ(r)ʊaŋ¹**); *end* (**mɔŋ²**); *enemy* (**ral¹**); *ensorcel* (**doj¹**); *enter* (**klʊm¹**, **lut**); *entire* (**kIM⁻**); *entrance* (**kɔŋ¹**, **Pʰɛ̞ɲ⁻**); *entrust* (**sʊ̯an²**); *envy* (**ʔeŋ²**); *epidemic* (**(k)lʰvŋ⁻**); *equal* (**kIM⁻**); *erect* (**ʤ̯ɔ̞k**, **tʊŋ¹**); *err* (**mɔs**); *escort* (**Kʰ(r)ʊ̯aL⁻**); *establish* (**dɪŋ¹**); *evade* (**rvl⁻**); *evaporate* (**kAŋ⁻**); *evil spirit* (**kraw⁻**); *exaggerate* (**ʔʊ̯aŋ¹**, **PVM⁻**); *excessive* (**WVL⁻**); *exchange* (**klʰED²**); *exclaim* (**KV(w)¹**); *exempt* (**Pʰɛ̞ɲ⁻**); *exert* (**krɐŋ⁻**); *exhausted* (**ʰnvŋ⁻**); *exist* (**ʔʊ̯m²**); *exit* (**wak**); *extend* (**PVM⁻**); *extension* (**PVM⁻**); *extensive* (**WVŋ⁻**); *extinguish* (**mɪt**, **pʰVL⁻**); *extremity* (**mɔŋ²**); *eye* (**mɪt**)

f

fade (**kɔk**); *faeces* (**ʔe²**); *fall* (**KLV²**, **pVL⁻**); *fall asleep* (**ʰmu¹**); *famous* (**tʰɐŋ¹**); *fan flames* (**tsʰem¹**); *far* (**ʰla⁻**); *fart* (**wVj⁻**); *fast* (**rAŋ²**); *fasten* (**kɪl²**); *fat* (**tʰaw¹**); *father* (**pa²**); *fathom* (**ʰlAm¹**); *feed* (**bar¹**, **ʤ̯ɐs**, **ʰmʊ̯am¹**); *fell* (**KLʰV²**, **pʰVL⁻**); *felled tree* (**tsvp**); *female* (**nu²**)
female animal (**la¹**); *fence* (**dVL⁻**, **rol¹**, **ʰ(r)ʊaŋ¹**); *ferment* (**hiŋ¹**); *ferret* (**kʰɛj²**); *few* (**klvm¹**); *field* (**lɔw²**); *fields within region* (**jaw¹**); *fig* (**tʰɛj²**); *fight* (**dɔw¹**, **sʊal⁻**, **TVɲ⁻**); *file* (**jv²**); *fill* (**dɪm²**); *fillet* (**sɛm⁻**, **tEl⁻**); *finger* (**jvŋ²**); *finish* (**bɛj¹**, **jɔw²**, **ʰmɐn²**); *fire* (**mɛj²**); *fire slingshot* (**saj¹**); *firm* (**rʊs**, **tɛ̞r¹**); *fish* (**ʰŋa²**); *fist* (**tvm⁻**); *fist-measure* (**svM⁻**); *fittable* (**tʰvl⁻**); *five* (**ŋa¹**); *flame* (**HVL⁻**); *flap* (**jap**); *flash* (**kl(ɪ)aŋ¹**, **lɛ̞p**, **pʰɪa̯⁻**); *flat* (**pÆ̞L⁻**, **Pʰɛ̞ɲ⁻**, **jVL⁻**); *flavoursome* (**tʰɛ̞ŋ⁻**); *flea* (**ʰli¹**); *flesh* (**tɐk**); *flexible* (**nvm⁻**); *flip* (**ʰlvm⁻**); *float* (**jvm¹**, **lam¹**, **pʰvɲ⁻**); *flood* (**tsum²**); *flow* (**lʊaŋ¹**); *flower* (**pÆ̞L⁻**); *fly* (**jʊaŋ¹**, **jvm¹**, **(k)lʰvŋ⁻**, **tʰɔw⁻**); *flying ant* (**ʰlvM⁻**); *foam* (**pʰvɲ⁻**); *fog* (**mvɲ²**); *fold* (**(k)lʰvp**); *follow* (**jot**, **JVL⁻**); *food* (**ʔɛ̞n²**); *foolish* (**ʔa²**); *foot* (**kvŋ⁻**, **kʰes**, **pÆ̞L⁻**, **pʰɛj⁻**); *footloose* (**ʰmɐn²**); *footstep*

(**kAL⁻**); *ford* (**kAL⁻**); *forehead* (**P$^{(h)}$ɛ̞ɒ̃⁻**, **tsɛ̞l¹**); *foreigner* (**waj¹**); *forest* (**rɐm¹**); *forge* (**K^{h}Vŋ¹**, **ts^{h}ɛr¹**); *forge pot* (**PVM⁻**); *forget* (**haj¹**, **mol⁻**); *fork* (**ka(ɒ)⁻**); *form proud flesh* (**PVr¹**); *four* (**li¹**); *fowl* (**ʔar¹**); *free* (**KLV²**, **KL^{h}V²**); *fresh* (**^{h}rɪŋ¹**); *friend* (**lom¹**); *fringe* (**ʤeM¹**); *front* (**^{h}mVL⁻**); *frost* (**Wur¹**); *froth* (**p^{h}VL⁻**, **p^{h}Vɒ⁻**); *frozen with excitement/fear* (**Liɒ²**); *fruit* (**rɐs**, **t^{h}ɛj²**); *fry* (**kAŋ⁻**); *full* (**dɪm²**, **k^{h}ɐt**); *fumble* (**^{h}mɐj²**); *fumigate* (**HVL⁻**); *funnel* (**t^{h}al¹**)

g

garlic (**sʊ̯̊an⁻**); *garment* (**pʊan²**); *gasp* (**HVk**, **^{h}(r)Vp**); *gate* (**kɔt**); *gather* (**jVŋ⁻**, **kom¹**, **k^{h}om¹**, **sVM⁻**, **TS$^{(h)}$Om⁻**); *gaunt* (**rOM⁻**); *generation* (**sʊ̯̊an¹**); *generous* (**ʤɪŋ⁻**); *ginger* (**t^{h}iŋ¹**); *gird* (**k^{h}AM⁻**, **wVŋ⁻**); *give* (**pɪ̯̊a²**); *glans penis* (**$^{(h)}$li⁻**); *gloomy* (**jVŋ⁻**); *glory* (**wVŋ⁻**); *glossy* (**kl(ɪ)aŋ¹**); *glow* (**Wɛ̯̊M⁻**); *glutinous mass* (**k^{h}aL²**); *gnaw* (**dit**); *go* (**ʤɪ̯̊aC**, **pɛ̯̊j⁻**); *go and return the same day* (**(k)l$^{(h)}$Vŋ⁻**); *go far* (**jVm¹**); *goat* (**kel⁻**); *gobble* (**^{h}(r)Vp**); *gold* (**k^{h}ɐm⁻**); *good* (**P-^{h}ras**); *gore* (**k^{h}i²**); *gourd* (**K^{h}VM⁻**); *govern* (**ʔʊk**); *grandchild* (**sʊ̯̊an¹**, **tu²**); *grandfather* (**pu¹**); *grandmother* (**pi¹**); *granular* (**te²**); *graze* (**K^{h}EW⁻**, **$^{(h)}$nVL¹**); *grease* (**^{h}rɪak**); *greasy* (**klɔr¹**, **nVl⁻**); *great grandchild* (**sʊ̯̊an¹**); *greedy* (**ʔam²**); *green* (**ʔɛŋ¹**, **dʊm¹**, **^{h}rɪŋ¹**); *grey* (**Pʊaŋ¹**); *grieve* (**tsaw⁻**); *grind* (**rot**); *groin* (**kAL⁻**); *grope* (**jot**); *ground* (**lɛj²**); *group* (**pol¹**); *growl* (**$^{(h)}$ŋVr⁻**); *grumble* (**tsɪar¹**); *guard* (**kɪl²**, **tsɪŋ²**, **wVŋ⁻**); *gums* (**$^{(h)}$ni²**); *gush* (**p^{h}VL⁻**); *guzzle* (**dVk**)

h

haggard (**^{h}rAm⁻**); *hail* (**rɪal¹**); *hair* (**^{h}mʊl²**, **sɐm²**); *hair bob* (**tʊk**, **tVm⁻**); *hairspring* (**li²**); *halter* (**HVk**); *hammer* (**K^{h}Vŋ¹**, **tus**, **ts^{h}ɛk**); *hand* (**k$^{(h)}$ʊt**); *hand-cuffs* (**kɔl²**); *handle* (**dOm²**, **kVŋ⁻**, **t^{h}ɐm²**); *handspan* (**k^{h}ap**); *hang* (**jVL⁻**, **k(l)aj¹**, **k(l)^{h}aj¹**, **P$^{(h)}$ɛ̞ɒ̃⁻**); *happy* (**nVm⁻**); *hard* (**sɐk**, **tɛ̞r¹**); *hare* (**bɛŋ¹**); *harmonise* (**rVm⁻**); *harrow* (**laj⁻**); *hatch* (**kew⁻**); *hatchet* (**ts^{h}ɛk**); *haunt* (**(k)l$^{(h)}$Vŋ⁻**); *have* (**nɛj⁻**); *haze* (**mɛj¹**); *head* (**lu¹**); *head for pastures new* (**jʊaŋ¹**); *head hair* (**sɐm²**); *heal* (**dɐm¹**); *hear* (**ja²**, **K^{h}Vŋ¹**); *heart* (**lʊŋ¹**); *hearth* (**tɐp**); *heavy* (**k^{h}iŋ⁻**, **rɪk**); *hedge* (**dVL⁻**); *heel* (**TVl⁻**); *heft* (**tsʊ̯̊aj^{I}**); *help* (**^{h}ru⁻**, **$^{(h)}$rVŋ¹**); *herd* (**bEŋ⁻**, **k^{h}ɛ̞l⁻**, **K^{h}VM⁻**); *hew* (**sɪam¹**); *hiccup* (**ʔVr¹**); *hide* (**bu⁻**, **rVl⁻**, **t^{h}ʊp**); *high* (**saŋ¹**); *hill* (**klaŋ¹**, **mʊal¹**); *hinder* (**TVɒ⁻**); *hip* (**k^{h}el²**); *hoe* (**riN¹**, **tus**); *hoist* (**k(l)^{h}aj¹**); *hold* (**dOm²**, **k(l)aj¹**); *hold in mouth* (**$^{(h)}$mʊ̯̊am¹**); *hold to bosom* (**PVM⁻**); *hole* (**HVŋ⁻**, **KVm⁻**, **k^{h}UL¹**, **wVŋ⁻**); *holey* (**HVŋ⁻**); *hollow* (**HVŋ⁻**, **kʊar¹**, **KVm⁻**, **k^{h}ʊar¹**, **wVŋ⁻**); *hop* (**pɛt**); *horn* (**ki²**); *horse* (**kɔL²**, **raŋ²**); *host party* (**TVɒ⁻**); *hot* (**HVL⁻**, **sa¹**, **tɐŋ¹**, **Wɛ̯̊M⁻**); *house* (**ʔɪn²**); *howl* (**^{h}(r)am²**); *huddle* (**tVm⁻**); *hug* (**PVM⁻**); *humble* (**jɛ̯̊k**); *hunchbacked* (**kVL⁻**); *hundred* (**jas**); *hundred thousand* (**sVŋ²**); *hunt* (**WVL⁻**); *hunting ground* (**tsaŋ²**); *hurt* (**na¹**); *husk* (**kom¹**, **K^{h}VM⁻**); *husked* (**ʤaj²**); *hut* (**kl^{h}am¹**, **Pʊ̯̊k**)

i

I (**kɛj**^{1}); *idolise* (**ʔeŋ**^{2}); *ill* (**na**^{1}, **⁽ʰ⁾nᴠŋˉ**); *ill-natured* (**joŋ**^{1}); *illuminate* (**ᴘar**^{1}, **wᴠŋˉ**); *image* (**⁽ʰ⁾lᴠᴍˉ**); *imitate* (**ᴊᴠʟˉ**); *immerse* (**ʰnim**^{1}); *impregnate* (**raj**^{1}, **wᵓɐn**^{1}); *in prime of life* (**pᴱᴀʟˉ**); *in touch* (**kom**^{1}); *include* (**tᴇlˉ**); *inclusive* (**ᴋʰᴠᴍˉ**); *increase* (**krʰɐŋ**^{1}, **ʦum**^{2}); *indent at back of head* (**tʊk**); *indented* (**ᴋᴠmˉ**); *individual* (**rʊak**); *infant* (**naw**^{1}); *inform* (**ᴋᴠ(w)**^{1}, **pʰᴏɒˉ**, **ʰrɪl**^{1}); *inhale* (**dip**, **dᴠk**); *inherit* (**lᵒʊak**); *inner ear* (**ʰna**^{1}); *insect* (**lʊŋ**^{2}); *insert* (**ᴋʰᴠᴍˉ**, **tʰʊn**^{1}); *inside* (**ʦʰᴜŋ**^{1}); *intelligent* (**ʥim**^{1}); *intend* (**tʊmˉ**); *intercept* (**ᴛᴠɒˉ**); *interval* (**kᴀʟˉ**); *intestines* (**jᴠŋ**^{1}, **rɪl**^{1}); *intimate* (**nᴠlˉ**); *intoxicant* (**ru**^{2}); *invert* (**lᴇt**); *invite* (**ꜱᴠᴍˉ**); *iron* (**tʰir**^{2}); *irradiate* (**kl(ɪ)aŋ**^{1}); *itch* (**jᴠ**^{2}, **kʰʊat**, **ʰ(r)ɪat**, **tʰɐk**)

j

javelin (**tɪaŋ**^{2}); *jaw* (**kʰa**^{2}, **klʰaŋ**^{1}); *jealous* (**tʰik**); *jhoom hut* (**klʰam**^{1}); *join* (**jᴠm**^{1}); *joint* (**ʦaŋ**^{1}); *joke* (**ʥɪam**^{1}); *joyful* (**ʰlɪm**^{1}); *jump* (**(k)l⁽ʰ⁾ᴠŋˉ**); *jungle* (**tu**^{1}); *jut* (**dᴏk**)

k

keep (**wᴠŋˉ**); *keep secret* (**ᴋʰᴠᴍˉ**); *kernel* (**mu**^{2}); *kick* (**pɛr**^{1}, **ʦʰaj**^{2}); *kidney* (**kᴀʟˉ**); *kill* (**tʰɐt**); *knead* (**ʰlᴠm**^{2}); *knee* (**kʰuk**); *knife* (**ʦɛm**^{1}); *knock* (**kɪɒˉ**, **tɔk**); *know* (**tʰɛjˉ**)

l

lac (**rɪp**); *ladle* (**sᵒʊak**, **tʰʊr**^{1}); *lake* (**dil**^{2}, **li**^{1}); *lame* (**wᵋɐjˉ**); *lane* (**rol**^{1}); *languid* (**jom**^{2}); *lap up* (**ʥᴠp**, **ʰ(r)ᴠp**); *late* (**klaj**^{2}); *laugh* (**⁽ʰ⁾nuj**^{1}); *launch* (**ʰlon**^{1}); *launder* (**sop**, **su**^{2}); *lay* *lay* (**jᴠʟˉ**, **kʰaŋ**^{2}, **ʰlʊmˉ**, **pʰᴱᴀʟˉ**, **tuj**^{1}); *layer* (**dᴠʟˉ**, **tʰʊap**); *lead* (**harˉ**); *leaf* (**ʰnɐs**); *leak* (**dᴏk**, **ᴊᴠʟˉ**); *leaky* (**kᴱᴀk**); *lean* (**ŋɐm**^{1}); *leap* (**jʊaŋ**^{1}); *learn* (**ᴊᴠʟˉ**); *leave* (**jʊaŋ**^{1}, **ma**^{2}, **pᵒᴜt**, **⁽ʰ⁾rᴠlˉ**); *leech* (**ʰʟɛw**^{1}, **ʰʟit**, **wᵓɐt**); *left* (**wᵋɐjˉ**); *leg* (**koŋ**^{2}, **kᴠŋˉ**, **ᴘᴠᴍˉ**, **pʰɛjˉ**); *lend* (**krom**^{1}, **ʦʰaŋ**^{1}); *length* (**ᴛᵒʊŋ**^{1}); *lengthen* (**saw**^{2}); *leopard* (**kɛj**^{1}, **klᴠ**^{2}); *level* (**jaŋ**^{1}, **jᴠʟˉ**, **pʰɛj**^{1}, **ʦɐm**^{1}); *lever* (**kᴀʟˉ**); *lick* (**lɪak**, **ʰlɪaw**^{1}); *lidded pot* (**ᴋʰᴠᴍˉ**); *lie* (**jaw**^{1}, **jᴠm**^{1}, **lʊmˉ**, **⁽ʰ⁾mu**^{1}); *lift* (**dᴏm**^{2}, **lam**^{1}); *light a wick* (**de**^{1}); *lightning* (**krek**); *lightning concretion* (**krek**); *lightweight* (**jaŋ**^{2}); *line* (**riɴ**^{1}); *lion* (**kɛj**^{1}); *lip* (**ʰnɛs**, **ʰmᴠʟˉ**); *liquor* (**ju**^{1}); *listen* (**ŋaj**^{1}); *liver* (**tʰɪnˉ**); *load* (**wᵓɐn**^{1}); *locality* (**tʊal**^{1}); *loins* (**koŋ**^{2}); *long* (**saw**^{2}); *long feathers near bird's tail* (**ʥeᴍ**^{1}); *look* (**ʔɛn**^{2}, **ᴡᴠʟˉ**); *loose* (**tʰᴠlˉ**); *lopped off* (**bᴠʟˉ**); *louse* (**ʰrɪk**); *love* (**dʊs**, **ŋaj**^{1}); *low* (**kᴠʟˉ**, **⁽ʰ⁾nɪam**^{2}); *lumber* (**kʰɔʟˉ**); *lungs* (**ʦʊap**)

m

machan (**⁽ʰ⁾laŋ**^{2}); *maggot* (**lʊŋ**^{2}); *maggoty* (**lʊŋ**^{2}); *maimed* (**bᴠʟˉ**); *main entrance* (**ᴘ⁽ʰ⁾ᵋɐɒˉ**) *make a bonfire* (**ᴛꜱ⁽ʰ⁾ᴏmˉ**); *make a noose* (**ᴡᴠʟˉ**); *make run into mouth (by mythical human-eating snake)* (**hɐm**^{1}); *male* (**pa**^{2}, **ʦᵋɐl**^{1}); *malleable* (**ʰnᴠᴍˉ**); *mango* (**haj**^{1});

Manipur river (**run^1**); *man-made hole* (**k^{h}UL^1**); *mantel* (**rɐp**); *many* (**tɐm^2**); *marrow* (**kl^{h}ɪɒ^2**); *mass* (**k(l)^{h}aj^1**); *massage* (**^{h}mEC**); *mat* (**p^{hE}AL$^-$, P$^{(h)}$^{ɛ}ɐɒ$^-$**); *meat* (**sa^2**); *meet* (**TVɒ$^-$**); *melt* (**jʊŋ^1, tuj^2**); *membrane* (**dVL$^-$, ^{h}lɐm^1**); *mentally note* (**tɪam^1**); *method* (**da*n*$^-$**); *middle* (**laj^1**); *migrate* (**PVM$^-$, WVL$^-$**); *milk* (**^{h}noj^2**); *millet* (**ʥAŋ$^-$**); *mire* (**ʦVr$^-$**); *misdeed* (**mɔs**); *miserable* (**ɒʊ(a)j$^-$**); *misplace* (**paj$^-$**); *mithun* (**sɪal^1**); *mix* (**h^{ɛ}ɐl^2, pol^1**); *moan* (**taw^2**); *mollusc* (**kɛp**); *monkey* (**joŋ^1, ŋaw^1**); *moon* (**kl^{h}as**); *morning* (**jVŋ$^-$**); *mortar* (**sʊm^2**); *mosquito* (**kaŋ^2**); *mother* (**nu^2**); *mountain* (**klaŋ^1, mʊal^1**); *mountain range* (**klaŋ^1**); *mouth* (**kɐm^1, ka(ɒ)$^-$, mɔŋ^2**); *move* (**krin^2, kr^{h}in^2**); *muddle* (**mol$^-$**); *murky* (**nu^1, $^{(h)}$nVL^1**); *muscle* (**tɐk, t^{ɛ}ɐl^1**); *mushroom* (**pa^2**); *mutually assist* (**lom^1**); *muzzle* (**^{h}mVL$^-$**); *mythical man-tiger* (**klV^2**); *mythical tiger* (**kɛj^1, klV^2**)

n

nail (**tɪn^2**); *name* (**^{h}mɪŋ^1**); *nap* (**mɛŋ^1**); *nape* (**$^{(h)}$rVɒ$^-$**); *narrow* (**ʦ$^{(h)}$iɒ$^-$**); *nauseate* (**k^{h}AM$^-$, ɒʊ(a)j$^-$**); *navel* (**laj^1**); *near* (**$^{(h)}$naj^2**); *neck* (**^{h}ŋoŋ^1, $^{(h)}$rVɒ$^-$**); *need* (**ʦ^{h}ɐm$^-$**); *needle* (**P-^{h}rɪm^1**); *neighbour* (**wVŋ$^-$**); *neighbourhood* (**wVŋ$^-$**); *nervous* (**ti^2**); *nest* (**bu^2**); *new* (**t^{h}ɐr^1**); *new generation* (**s^{o}ʊan^1**); *news* (**t^{h}u^2**); *nibble* (**ʦVp**); *night* (**jVŋ$^-$**); *nine* (**kʊa^2**); *nit* (**^{h}ru^1**); *nook* (**dum^2**); *noon* (**ʦ^{h}u*n*$^-$**); *noose* (**WVL$^-$**); *north* (**ʦ^{h}ɐk**); *nose* (**^{h}nar^1**); *notch* (**ʔat**); *now* (**tu^2**); *nubile* (**la^1**); *nurse* (**K^{h}VM$^-$, K^h(r)^{o}ʊaL$^-$**); *nut* (**mVm$^-$**)

o

oak (**t^{h}ɐl^1**); *obedient* (**ʥɪŋ$^-$, ʥim^1, klɛj^2**); *obstruct* (**k^{h}AM$^-$**); *obtain* (**ʦɐŋ^2**); *occiput* (**PVM$^-$**); *occupy* (**l^{o}ʊak**); *off-colour* (**pol^2**); *offer food to deceased* (**ʦ^{h}ɪa^2**); *offspring* (**ʥa^2, w^{o}ɐn^1**); *oil hair* (**t^{h}ɪs**); *old* (**^{h}luj^1**); *on deathbed* (**$^{(h)}$nVŋ$^-$**); *one* (**k^{h}ɐt**); *onion* (**s^{o}ʊan$^-$**); *open* (**HVŋ$^-$, ka(ɒ)$^-$, mɛŋ^1, p^{h}Oɒ$^-$**); *opposite* (**ral^1**); *otter* (**^{h}r^{ɛ}ɐm^2**); *oval* (**Jol$^-$**); *overcast* (**^{h}nim^1**); *overflow* (**lEt, $^{(h)}$lVM$^-$**); *overlay* (**dAM$^-$**); *overlong* (**ʥʊal^2**); *overlook* (**^{h}mɐj^2**); *overshadow* (**dEp**); *overshoot* (**(k)l$^{(h)}$Vŋ$^-$**); *overtake* (**k^{hɛ}ɐl$^-$, (k)l$^{(h)}$Vŋ$^-$**); *owe* (**ba^1**); *ox* (**boŋ$^-$**); *ox's nose piercing* (**p$^{(h)}$eC**)

p

pacify (**lɛm^1**); *pair* (**TVɒ$^-$, t^{h}ʊap**); *palatable* (**ŋaj^1**); *palate* (**dɐŋ^1**); *pale* (**ŋɔw^1**); *palisade* (**pɐl^1**); *palm* (**P$^{(h)}$^{ɛ}ɐɒ$^-$**); *parboiled rice* (**Waj^1**); *pare* (**(k)l$^{(h)}$Vp**); *parrot* (**ki^2**); *participate* (**PVM$^-$**); *partition* (**dɐŋ^2**); *pass* (**pVL$^-$**); *pass away* (**$^{(h)}$lVM$^-$**); *patch* (**bVL$^-$**); *paternal aunt* (**ni^1**); *paternal aunt's husband* (**rɐŋ^1**); *path* (**kɔŋ^1**); *paunch* (**p^{h}ur^1**); *pay* (**p^{h}VL$^-$**); *peaceful* (**lɛm^1**); *peck* (**ʦus**); *peel* (**dVk, JVL$^-$, kɔk, K^{h}Vk, pVL$^-$**); *pelvis* (**P$^{(h)}$^{ɛ}ɐɒ$^-$**); *penis* (**jVŋ^2, $^{(h)}$li$^-$**); *perch* (**ʥus, ʦ^{h}ʊaŋ^1, ʦ^{h}ʊaŋ^2**); *perforate* (**HVŋ$^-$, pɔp, wVŋ$^-$**); *perforation* (**pɔp**); *permeate* (**JVL$^-$**); *permit* (**p^{h}VL$^-$**); *person* (**mi^2**); *pewter* (**har$^-$**); *pheasant* (**$^{(h)}$LIk**); *phlegm* (**k^{h}a(K)**); *pick* (**K^{h}EW$^-$**); *pick up* (**s^{o}ʊak, TS$^{(h)}$Om$^-$**); *piebald* (**(k)raŋ^1, pol^2**); *piece* (**p^{h}VL$^-$**); *pierce* (**dot, w^{o}ɪt**); *pig* (**wɔk**); *pile* (**pVɒ$^-$**); *pillow* (**k^{h}AM$^-$**); *pinch* (**sɪk, s^{o}ʊak**); *pine* (**ʥar^1, ŋaj^1**); *pit trap*

(KVm⁻); *place* (ʰmʊ*n*⁻); *placenta* (ʰlɐm¹); *plan* (rel¹); *plane* (ʤaj²); *plank* (pÆ̞L⁻); *plant* (tʊs); *play* (ʤɪam¹, lɛk, ʦaj²); *play tug-of-war* (ʦaj²); *pleasing* (ŋaj¹); *pliant* (nVl⁻); *plot* (ʔEL⁻); *pluck* (ʔɛk, (k)lʰɔw², Pɔt); *plump* (PVM⁻); *pod* (kom¹); *point* (ʰmVL⁻, tɔk); *poison* (ru²); *pond* (ʦVr⁻); *pool* (dum², li¹, JVL⁻); *poor* (joŋ¹); *pop* (pu̥t); *porcupine* (kʊs); *portion* (ʦɛ̞n²); *posterior* (mɔŋ²); *pot* (bel¹, KʰVM⁻, PVM⁻); *pound* (KLʰV², su⁻); *pour* (bʊas, tʰʊn¹, ʦʰUŋ²); *praise* (PVr¹); *prawn* (kAj⁻); *precipice* (kʰam¹); *precipitous* (kʰam¹); *pregnant* (raj¹, wɜ̯n¹); *prepare* (ʰmɪn¹); *press* (bEŋ⁻, nɛŋ², nVm²); *prevent* (ʰrVŋ¹); *prick* (ʦʰʊn⁻); *prisoner* (mɛ̞n¹); *prod* (ʰ(r)ol¹, sɔw¹); *produce* (ʦʰʊak); *proficient* (tʰɪam²); *prohibit* (kʰAM⁻); *proliferate* (jVL⁻); *promise* (tɪam¹); *prop up* (nɐŋ¹); *propitiate* (bɪas); *prostrate* (bɔk); *protect* (KʰVM⁻, ʰru⁻); *protrude* (ʦʰʊaŋ¹); *provoke* (TVƉ⁻); *prowl* (klV²); *prune* (KʰEw⁻, ʰ(r)ɪat); *public* (klaŋ¹); *pull* (dOk, kÆ̞k, k(l)aj¹); *pulsate* (tʊr¹); *pumpkin* (maj¹); *punch* (ʦum²); *pungent* (tur⁻); *pursue* (JVL⁻); *pus* (ʰnaj¹); *push* (nVm², sʊ̯an²); *put in mouth* (ʰmʊ̯am¹); *put on* (bVL⁻, ʤeŋ¹, KʰVM⁻, sɪL²); *put to sleep* (klʰɪm¹, ʰmu¹)

q

quarrel (hu̥w¹); *quiet* (dVL⁻, KʰIm¹, Ɖʊ(a)j⁻)

r

radiate (kl(ɪ)aŋ¹, WVL⁻); *raft* (lOŋ⁻); *rain* (jus, su̥r¹, r-wɐs); *rainy season* (ʤur⁻); *raise* (kʰaŋ²); *rake* (Kʰ⁾Vj⁻); *rape* (sʊal⁻); *ravine* (rʊam²); *raw* (ʰrɪŋ¹); *reach* (ban¹, jVm¹, (k)lʰ⁾Vŋ⁻); *read* (ʦʰɪm¹); *ready for harvesting* (kVL⁻); *real* (tɐk); *rear* (wɜ̯l¹); *rearable* (klɛj²); *recall* (JVL⁻, pʰOƉ⁻); *receive* (ŋɐs); *recline* (jVL⁻); *recoil* (ʰŋOƉ²); *red* (sɛ̞n¹); *red hot* (HVL⁻, Wɛ̞M⁻); *reek* (tʰɛ̞ŋ⁻); *refill* (sɪL²); *regurgitate* (dip); *rehearse* (ʰ⁾lVM⁻); *reject* (ʰnʊ̈ŋ¹); *rejoice* (lom²); *relieve* (ʔOl⁻); *relocate* (ʰ⁾nVL¹, tɪar¹, tʰɪar¹); *remain* (Pʰ⁾ɛ̞Ɖ⁻); *remote* (kVL⁻); *remove* (klʰɛj²); *repeat* (tʰʊap); *reply* (TVƉ⁻); *repossess* (lʊ̯ak); *reprove* (hu̥w¹); *request* (ŋVŋ¹, tʰum²); *requite* (ʦʰaŋ¹); *rescue* (ʰru⁻, ʰ⁾rVŋ¹); *resolute* (ʰrat); *resound* (KʰVŋ¹); *rest* (ʦol²); *retain* (KʰVM⁻); *retch* (HVk); *retrace* (JVL⁻); *retract* (ʰ⁾li⁻); *retrieve* (lɐm²); *return* (ʤɪa̯C, kir², kʰir², (k)lʰ⁾Vŋ⁻); *reveal* (jVL⁻, ʰ⁾li⁻); *revolve* (pɛ̞j⁻, WVL⁻); *rice* (bʊs, ʤAŋ⁻, waj¹); *rice grain* (ʤAŋ⁻); *rich* (lɪa*n*⁻); *rid* (pʰVL⁻); *ride* (ʦʊaŋ¹); *right* (tɐk); *righteous* (ʤɛl²); *ring* (WVL⁻); *ringlet* (WVL⁻); *rinse* (kleŋ⁻); *ripe* (ʰmɪn¹); *rise* (ka(Ɖ)⁻, k(l)aj¹); *river* (run¹); *road* (kɔŋ¹, lɐm²); *roam* (wak); *roast* (rO(w)¹, Wɛ̞M⁻); *rob* (lʊs); *rod* (jon¹, kVŋ⁻); *rodent* (ju²); *roll* (LVl⁻, ʰLVl⁻); *root* (jVŋ², ʰrAm⁻); *rope* (kʰaw¹, ʰ⁾rʊj²); *rot* (mʊat, tʰu²); *rotate* (WVL⁻); *rough* (ʰrAm⁻); *rounded* (bɪal¹); *rouse* (tʰɔw²); *rub* (not, ʰ⁾nVL¹); *ruin* (ʦʰɪa²); *run* (klAL⁻)

s

sad (dɐs, Ɖʊ(a)j⁻, ʰrɛs); *saddle of hill* (kVL⁻); *saliva* (ʦɪl¹); *sallow* (mVƉ²); *salt* (ʦis); *salt water spring* (sɪs); *salty* (ʔɐl¹); *sambur deer* (jʊk); *same* (kʰɐt); *sand* (nVl⁻); *sap* (ʰnaj¹);

sate (**kʰAM‾**); *satiate* (**kɭɐj^{1}, kʰɔM^{2}**); *saw* (**tɐn^{2}**); *say* (**sVj^{2}, tis, ʦʰɪm^{1}**); *scales* (**(k)l$^{(h)}$Vp**); *scare* (**bEŋ‾, krʰi^{1}, LiɒD^{2}, ʦa^{2}**); *scatter* (**pʰ^{E}AL‾**); *scoop* (**hɐm^{1}, lʊ̊ak, ʰ(r)Vp**); *scorch* (**kAŋ‾, W^{ɛ}ɐM‾**); *scowl* (**ʰŋɐl^{1}**); *scrape* (**KʰEw‾, ʰ(r)ɪat**); *scratch* (**KʰEw‾, kʰʊat, ʰ(r)ɪat**); *scrawny* (**$^{(h)}$rVɒ‾**); *search* (**JVL‾**); *season* (**sɔw^{1}**); *secluded place* (**dAM‾**); *see* (**ʰmu‾**); *seed* (**kɭʰaj‾, ʦi^{2}**); *seed pit* (**mu^{2}**); *seek* (**jɔŋ^{1}, lɐm^{2}, WVL‾**); *seek refuge* (**bVL‾**); *segregate* (**dɛj^{2}**); *sell* (**jʊar^{1}**); *send* (**KLʰV^{2}**); *sense* (**ʰr^{e}ɪa^{2}**); *separate* (**krʰɛn^{1}**); *serow* (**tʰAr‾**); *serve tea* (**KʰVM‾**); *set trap* (**kɐm^{1}**); *seven* (**LIS**); *sew* (**krʰuj^{1}**); *shack* (**Pů̊k**); *shade* (**dAM‾, $^{(h)}$lVM‾**); *shadow* (**$^{(h)}$lVM‾**); *shake* (**ʰŋOɒ^{2}, tʰɪŋ^{1}**); *shallow* (**dɐj‾**); *shallow depression* (**KVm‾**); *share* (**pʰVL‾**); *sharp* (**ʰrɪam^{1}, tat**); *shatter* (**k^{E}Ak**); *shave* (**dit, KʰEw‾, met**); *shavings* (**Waj^{1}**); *sheath* (**paj^{1}**); *sheet* (**dVL‾, (k)l$^{(h)}$Vp**); *shelf* (**jVL‾**); *shell* (**kom^{1}, pʰo̊^{2}**); *shift* (**hem^{1}, sʊ̊an^{2}**); *shin* (**ŋɐl^{1}**); *shoot* (**kap**); *short* (**toj^{2}, ʦɔm^{2}, ʦ$^{(h)}$iɒ‾**); *shortcut* (**ban^{1}**); *shoulder* (**kɔw^{2}, lɪaŋ^{1}**); *shout* (**ʔʊ̊aŋ^{1}, KV(w)^{1}**); *shrink* (**kɭɛp, rOM‾, ʦɔm^{2}**); *shrivel* (**rOM‾, soŋ^{1}, tʰVp**); *shrug* (**KVm‾**); *shut* (**kʰaL^{2}, KʰVM‾, ʦVp, ʦ$^{(h)}$iɒ‾**); *side* (**P$^{(h)ɛ}$ɐɒ‾**); *sift* (**kʰɛj^{2}, kɭʰɛj^{2}**); *silent* (**dAM‾**); *silver* (**ŋun^{1}**); *sinew* (**tʰa^{2}**); *sing* (**jVj‾, sas, wor^{1}**); *singe* (**HVL‾**); *sink* (**kɭʊm^{1}, pVL‾**); *sip* (**ʰ(r)Vp**); *siphon* (**k(l)ʰaj^{1}**); *sister-in-law* (**mɔw^{1}**); *sit* (**bɪal^{1}, kr$^{(h)}$u^{1}, mVɒ^{2}, tɔw^{1}**); *six* (**Lʊk**); *skewer* (**tul^{1}**); *skilful* (**jVj‾**); *skim* (**JVL‾, K$^{(h)}$Vj‾**); *skin* (**KʰVk, (k)l$^{(h)}$Vp, wʊ̊n^{2}**); *slant* (**lɛj^{1}**); *slap* (**bEŋ‾**); *sleep* (**ʔɪC, jVL‾, kɭʰɪm^{1}, $^{(h)}$mu^{1}**); *sleeping platform* (**kɭʰam^{1}**); *sleepy* (**$^{(h)}$mu^{1}, ɒʊ(a)j‾**); *slender* (**r^{ɛ}ɐk**); *slice* (**P$^{(h)ɛ}$ɐɒ‾, ʦ^{ɛ}ɐn^{2}**); *slide* (**tVl‾, tʰVl‾**); *slingshot* (**li^{2}**); *slip* (**dOk, pVL‾**); *slippery* (**nVl‾**); *slit* (**kɭʰɛj^{2}**); *slither* (**tVl‾, ʦel‾**); *slough* (**$^{(h)}$li‾**); *slow* (**ŋVŋ^{1}**); *sluggish* (**$^{(h)}$nVŋ‾**); *slurp* (**ʥVp**); *small* (**nɔw^{2}, te^{2}, ʦ$^{(h)}$iɒ‾**); *smear* (**ʰmɐj^{2}, nu^{1}, $^{(h)}$nVL^{1}**); *smell* (**nɐm^{1}, ʰnar^{1}, ʰnVm^{1}**); *smoke* (**Kʰu^{2}**); *smooth* (**jVL‾, nVl‾**); *smoulder* (**mut**); *snake* (**rul^{1}**); *snap* (**k(l)ɪak, k(l)ʰɪak, ʦ^{ɛ}ɐt**); *snatch* (**ʦʰʊt**); *sneak* (**rVl‾**); *sniff* (**ʰnVm^{1}**); *snore* (**ʰnar^{1}, ʰŋok**); *snort* (**pʰit**); *snot* (**ʰnɐp**); *snow* (**Wur^{1}**); *soak* (**ʦɪap**); *soft* (**nVl‾, nVm‾, ʰnVM‾**); *sojourn* (**ʦam^{1}**); *solar plexus* (**dip**); *solder* (**har‾**); *sole* (**P$^{(h)ɛ}$ɐɒ‾**); *solicit* (**TVɒ‾**); *solid* (**kʰaL^{2}**); *song* (**jVj‾, ʰla^{2}**); *son-in-law* (**mak^{2}**); *soot* (**krɪŋ^{1}**); *sooty* (**krɪŋ^{1}**); *sorcery* (**doj^{1}**); *soul* (**Kʰɪm^{1}**); *sound* (**tʰom^{2}, rɪŋ^{1}**); *sour* (**hiŋ^{1}, tʰur^{2}**); *south* (**kɭʰɐŋ^{1}**); *sow* (**wor^{1}**); *spacious* (**ʥan^{1}**); *span* (**kʰap**); *sparse* (**wVŋ‾**); *speak* (**paw^{1}, TVɒ‾**); *spear* (**ʥɛj^{2}**); *speech* (**paw^{1}**); *sperm* (**bʊ̊a‾**); *spew* (**pʰit**); *spherical* (**ʰlVm^{2}, PVM‾**); *spicy* (**tʰɐk**); *spin a top* (**lam^{1}**); *spindle* (**ʰmʊj^{2}**); *spine* (**ŋum^{1}**); *spirit* (**doj^{1}, kɭʰa^{1}, kraw‾, raw^{2}**); *splay* (**pʰɐs**); *spleen* (**la^{2}**); *split* (**pʰVL‾**); *spongy* (**tʰVp**); *spotted* (**Par^{1}**); *sprain* (**WVL‾**); *sprawl* (**jaw^{1}, jVm^{1}**); *spread* (**jVL‾, jVm^{1}, pʰ^{E}AL‾**); *spring* (**sɪs, ʦVr‾**); *sprinkle* (**pʰVL‾**); *sprout* (**mVm‾, P-rɔw^{1}**); *squash* (**ʦ$^{(h)}$VL‾**); *squint* (**hem^{1}**); *squirrel* (**ʰlɛj^{2}**); *squishy* (**JVL‾**); *stable* (**kɪM‾**); *stagger* (**p^{ɛ}ɐj‾**); *stalk* (**kVŋ‾**); *stand* (**dɪŋ^{1}, pOɒ‾, pʰOɒ‾, WVL‾**); *star* (**ʔar^{1}**); *startle* (**pʰOɒ‾**); *stay* (**rɪak**); *steadfast* (**krɐŋ‾**); *steal* (**ru^{2}**); *stealthy* (**kɭʰɪm^{1}**); *steam* (**HVL‾, Kʰu^{2}**); *steep* (**kʰam^{1}, kren‾**); *stick* (**bVL‾, m^{ɛ}ɐn^{1}, tɪaŋ^{2}**); *sticky* (**ʰnaŋ^{2}**); *sting* (**dɛs, tʰip**); *stink* (**hiŋ^{1}**); *stir* (**ʦɔk**); *stockade* (**kUl‾**); *stone* (**lʊŋ^{2}, sʊaŋ^{2}**); *stop* (**P$^{(h)ɛ}$ɐɒ‾, ʦol^{2}**); *stopover* (**pVL‾, P$^{(h)ɛ}$ɐɒ‾**); *stopper* (**ʰru‾**); *store* (**kʰɔL‾, ʦʰeɒ^{2}**); *storey* (**dVL‾**); *stove* (**tʰʊk**); *straight* (**dɪɒ^{2}, ʦɐŋ^{1}**); *strain* (**kɭʰi^{1}**); *strand* (**jVm^{1}, jVŋ^{1}**); *stranger* (**kʰʊal‾**); *stream* (**luj‾**); *stream pool* (**dum^{2}, li^{1}**); *stretch* (**dOk, ʥan^{1}**); *stride* (**kAL‾**); *strike* (**deŋ^{1}, wEl‾**); *string ball* (**ʰlVm^{2}**); *strip* (**ʰlVm‾**); *stripe* (**(k)rɪal^{1}**); *stroke* (**jut**); *strong* (**ʰrat**); *stubborn* (**rʊs**); *stuffy* (**HVL‾**); *stunted* (**bVL‾, kɭʰɛk**); *stupid* (**mol‾, ŋɔŋ^{1}**); *sturdy* (**ʦɐk**); *subdue* (**ʰmɪn^{1}**); *submerge* (**KʰVM‾**); *substitute* (**kɭʰEɒ^{2}**); *succeed* (**dVL‾**); *suck* (**dVk, dVN^{1}, ʥVp, ʰ(r)Vp**); *suckle* (**ʥVp, ʰne^{2}**); *suffer*

insomnia / night-seizure (**mɛŋ¹**); *sufficient* (**kʰɔM²**); *sugarcane* (**ʤu¹**); *suitable* (**lom¹**); *sulk* (**taw²**); *sulphur* (**kaN⁻**); *summer* (**krʰal¹**); *summon* (**joŋ¹**); *sun* (**ni¹**); *support* (**dOm²**); *surround* (**KʰVM⁻**); *surroundings* (**jaw¹**, **WVL⁻**); *survive* (**nʊŋ²**); *suspend* (**(k)l⁽ʰ⁾Vŋ⁻**); *swaddle* (**KʰVM⁻**); *swallow* (**lɛm⁻**); *swarm* (**PVM⁻**, **PVr¹**); *sway* (**WVL⁻**); *sweep* (**pʰɪat**); *sweet* (**klʰʊm¹**); *swell* (**bɔw²**, **PVM⁻**); *swill* (**krʰʊas**); *swim* (**jVm¹**); *swing* (**WVL⁻**)

t

tail (**mɛj²**); *take* (**la²**, **sʊ̊ak**); *take shortcut* (**ban¹**); *tall grass area* (**tu¹**); *tame* (**ŋɐm¹**); *tap* (**ʰnaj¹**); *taper* (**jʊm¹**, **JVL⁻**); *target* (**KʰVM⁻**); *taste* (**tɪ̆ɛ̆aM¹**); *tatter* (**krɛt**, **krʰɛt**); *tax* (**tsʰɪa²**); *teach* (**JVL⁻**, **ʰrɪl¹**); *tear* (**ʔɛk**, **kɐ̆̆k**, **krɛt**, **krʰɛt**); *tears* (**klʰi¹**); *tease* (**tsʰaj²**); *teat* (**ʰmVL⁻**); *tell* (**tsʰɪm¹**); *temperament* (**jVj⁻**); *temporary hut* (**klʰam¹**); *ten* (**ʰra¹**, **sVM⁻**); *ten thousand* (**sVŋ²**); *tend* (**Kʰ(r)ʊ̊̆aL⁻**, **tsɪŋ²**, **wʊ̈̆l¹**); *terrace* (**kʰAM⁻**); *territory* (**rɐm¹**); *testicle* (**tɪl²**); *tether* (**ʰreŋ¹**); *thick* (**PVr¹**, **tsʰɐs**); *thin* (**pa(L)²**); *thirst* (**HVL⁻**); *thorn* (**ʰlɪŋ¹**); *thousand* (**sVŋ²**, **tul⁻**); *thread* (**KʰVl¹**); *three* (**tʰʊm¹**); *throat* (**ʔVr¹**, **⁽ʰ⁾rVɲ⁻**); *throw* (**deŋ¹**, **ʰlon¹**, **wor¹**); *thump* (**tsum²**); *tickle* (**jV²**); *tie* (**kʰɪt**, **tVm⁻**); *tiger* (**kɛj¹**, **klV²**); *tight* (**rɐ̆̆k**); *time* (**hʊn²**); *times* (**WVL⁻**); *tiny* (**ts⁽ʰ⁾iɲ⁻**); *tip* (**ʰmVL⁻**); *tire* (**⁽ʰ⁾nVŋ⁻**, **ɲʊ(a)j⁻**, **tsaw⁻**, **tsol²**); *tongue* (**lɛj¹**); *tooth* (**ha¹**); *top* (**mɔŋ²**, **tsʊŋ²**); *torture* (**rot**); *toss* (**lɛk**); *touch* (**kom¹**, **tɔk**); *trample* (**ts⁽ʰ⁾VL⁻**); *transfer* (**kleŋ⁻**); *trap* (**kɐm¹**, **KVm⁻**, **tʰAŋ²**); *travel* (**jɪn²**, **(k)l⁽ʰ⁾Vŋ⁻**); *traveller* (**jɪn²**); *traverse* (**kAL⁻**); *tread* (**ts⁽ʰ⁾VL⁻**); *tree* (**tʰIŋ²**); *trickle* (**ʰnaŋ²**, **pʊ̊̆t**); *trivet* (**tʰu²**); *trouble indirectly* (**doj¹**); *true* (**dɪɲ²**); *trunk* (**kVŋ⁻**); *try* (**tɪ̆ɛ̆aM¹**); *tube* (**dVN¹**, **⁽ʰ⁾rVɲ⁻**); *turn* (**klɛp**, **WVL⁻**); *tusk* (**ʰŋɔw⁻**); *twenty* (**kʊl¹**); *twine* (**ʰLVl⁻**); *twinkle* (**kle²**, **lɐ̆̆p**, **pʰɪ̆a⁻**); *twist* (**WVL⁻**); *two* (**ʰnɪs**)

u

unabashed (**ʰŋɐl¹**); *unburden* (**TVɲ⁻**); *uncongealed* (**krʰIl²**); *uncover* (**pʰOɲ⁻**); *underbelly* (**taj²**); *undercooked* (**naw¹**); *underdeveloped* (**ʤeM¹**); *understand* (**ʤɛl²**, **tʰɪam²**); *unengaged* (**ʔOl⁻**); *unfurl* (**pɐ̆̆L⁻**, **pʰɐ̆̆L⁻**); *unload* (**tsʰʊak**); *unripe* (**PVM⁻**); *unspecified mass* (**k(l)ʰaj¹**); *untie* (**sut**); *upturn* (**kʰʊp**); *urinate* (**jʊŋ¹**); *urine* (**jʊŋ¹**); *use* (**bɛj¹**, **jɐŋ⁻**); *usurp* (**sʊ̊an²**); *utilise* (**ʰmɐŋ¹**)

v

vacant (**HVŋ⁻**); *vacate* (**HVŋ⁻**); *vagina* (**tsʰu²**); *valley* (**KVm⁻**); *vegetable* (**ʔɛ̆n²**, **klʰaj⁻**); *vein* (**⁽ʰ⁾rʊj²**); *village* (**kʰʊa¹**); *viscous* (**ʰnaŋ²**); *visit* (**kom¹**, **(k)l⁽ʰ⁾Vŋ⁻**); *vociferous* (**KV(w)¹**); *voice* (**ʔo²**); *vomit* (**lʊas**); *vulture* (**mu¹**)

W

wade (**nvk**); *wag* (**hem¹**, **pɛr¹**); *wage* (**ʰlɔs**); *waist* (**koŋ²**, **taj²**); *wait* (**ʰŋak**, **tsaŋ²**); *wake* (**krʰɐŋ⁻**, **pʰoɒ⁻**); *walk* (**jot**, **kal⁻**, **wak**); *wall* (**kom¹**, **kul⁻**, **p(h)ɛ̞ɒ⁻**); *wallow* (**bʊal¹**); *wander* (**wvl⁻**); *want* (**dʊs**); *ward* (**wvŋ⁻**); *warm* (**(h)lʊm¹**); *warp* (**tʊŋ¹**); *wash* (**bʊal¹**, **ʤaj²**, **pʰɪat**, **pʰit**, **sɪl²**); *watch* (**kʰɛ̞l⁻**); *water* (**tuj²**); *watertight* (**hvl⁻**); *wave* (**wvl⁻**); *wax* (**bɛŋ¹**, **(h)li⁻**); *waylay* (**p(h)ɛ̞ɒ⁻**); *weak* (**jom²**); *wear* (**ʔvr¹**, **wo̞n²**); *weave* (**krvn¹**, **pʰɐn²**, **tɐk**); *wedge* (**jɛp**); *weed* (**(k)lʰɔw²**, **ʰlɔw¹**, **ʰram⁻**); *weedy* (**ʰram⁻**); *weep* (**krɐp**); *weigh* (**kʰiŋ⁻**); *weight* (**tsʊ̞aj¹**); *west* (**klʰɐŋ¹**); *wheel* (**pɛ̞j⁻**); *wheeze* (**tsɪar¹**); *white* (**(k)raŋ¹**, **par¹**); *whittle* (**jvl⁻**); *wicked* (**sʊal⁻**); *wide* (**jaw¹**, **jvl⁻**, **kal⁻**, **pvr¹**, **wvŋ⁻**); *width* (**wvŋ⁻**); *wild boar* (**(h)ŋɐl¹**); *wilt* (**hvl⁻**); *win* (**jɔw²**); *wind* (**k(h)vj⁻**, **klʰi¹**); *winter* (**pʰɐl⁻**, **tɐŋ¹**); *wipe* (**(h)nvl¹**, **tʰɪar¹**); *wise* (**ʤɪŋ⁻**, **ʤim¹**); *wish* (**tʊm⁻**); *wither* (**ɒʊ(a)j⁻**); *withhold* (**rol¹**, **svm⁻**); *witty* (**kʰɛl²**); *wobble* (**hem¹**); *womb* (**tsʰul⁻**); *woo* (**wvl⁻**); *wood* (**tʰɪŋ²**); *word* (**paw¹**); *worry* (**tsaw⁻**); *wound* (**ʰlɪam¹**, **ʰma¹**); *wrap* (**ʤun²**, **tvm⁻**, **wvl⁻**); *wriggle* (**tvl⁻**); *wring* (**sö̞r¹**); *writing* (**laj⁻**)

y

yam (**ʰra¹**); *yawn* (**ʰ(r)am²**); *year* (**kvm⁻**); *yeast* (**tsɔl⁻**); *yellow* (**ʔɛŋ¹**); *yoke* (**kɔl²**); *you* (**nɐŋ²**); *young* (**moj¹**, **mvm⁻**, **nɔw²**, **sen¹**, **tʊaj¹**)

z

Zo (**jɔw¹**)