PROTO
NORTHERN
CHIN

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University of California, Berkeley
PROTO NORTHERN CHIN

by

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Sino-Tibetan Etymological Dictionary and Thesaurus Project
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Department of Linguistics research unit
University of California, Berkeley

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For Cingh No
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
vb  benefactive verb
vi  intransitive verb
vt  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 ε in the same way as i to i and u to u.
o  Corresponds to o in the same way as i to i and u to u.
A  /v/ /a/
E  /ɛ/ /e/
I  /ɪ/ /i/
O  /ɔ/ /o/
U  /ʊ/ /u/
V  Unspecified vowel

K  Alternation of /k/ with /h/ (or rarely /t/)
D  Alternation of /ŋ/ with /k/ (or rarely /w/)
T  Alternation of /t/ with /d/
TS  Alternation of /ts/ with /dz/
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 /h/b/
H  Alternation of /h/ with /ʔ/
C  Unspecified consonant

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

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

vi. Burmese Inscriptional Sources

BD  Inscriptions Collected by King Bodawpaya in Upper Burma
    – Taw Sein Ko (1913)
IB  Inscriptions of Burma
    – Luce & Pe Maung Tin (1933-56)
LK  The Lokahteikpan
    – Ba Shin (1962)
MZ  The Burmese Face of the Myazedi Inscription at Pagan
    – Duroiselle (1919)
OBEP  Old Burma – Early Pagán (Volume 3)
    – Luce (1969-70)
<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Authors/Editors</th>
<th>Years</th>
</tr>
</thead>
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<tr>
<td>SIP</td>
<td><em>Selections from the Inscriptions of Pagan</em></td>
<td>Pe Maung Tin &amp; Luce (1928)</td>
<td></td>
</tr>
<tr>
<td>UB</td>
<td><em>Inscriptions Collected in Upper Burma (Volume 1)</em></td>
<td>Taw Sein Ko (1900-03)</td>
<td></td>
</tr>
<tr>
<td>WK</td>
<td><em>Wetkyi-in Kubyauk-gyi</em></td>
<td>Luce &amp; Whitbread (1971)</td>
<td></td>
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</tbody>
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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 ᶢ ᶠ bãme¹ Burma and ᶠ / ᶢ mrem'me¹ Myanmar of the same Old Burmese word,¹ is of no consequence here; the former term is used in accordance with historical linguistic convention.

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 distinctions2 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

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 (1933-56:1.I;2.I;3.I;4.I;4.V;4.8-10) are even more discerning than Duroiselle, although Luce (1969-70:1.96) 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 (1985:1.82-6:2.70-87); 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 jow⁴. Konow (1904:1-2;58) notes the name Chin to be a Burmese exonym, क्षित्स: kʰj̥ːn̥i⁷,⁷ 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:

२केरिफरसिफफ्तिअरकान (UB 49.21)
The Arakanese King... who ruled over the Thet, Mrun and Chin.⁹

Luce (1959a:25-6, 1959c:89, 1976:35, 1985:1.80) suggests the homophony shared with क्षित्स: kʰj̥ːn̥i⁷ companion, ally is due to a history of relative amicability between the Chins and the Burmans. However, if Luce’s (1959a:25, 1959b:60, 1985:1.86) 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 kʰj̥ːn̥i⁷:¹⁰

क्षित्सयोगा०५०... (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 (1985:1.94-5) 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 अङ्गेलिा चिंदिविन गार्डन. Luce (1985:1.77) 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 mi²² person and zow⁴ 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 -ej and -ej, discussed in 1.1.2.3, and Chhangte’s (1993:59) observation of an alveopalatal fricative allophone - 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 middle and zow⁴ 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.

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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 \([\varepsilon:]\) and \([\sigma:]\) will be treated here in the same structural relationship to \(e\) and \(o\) as \(i\) and \(u\) with \(i\) and \(u\). 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 \(e\) to extend it further to \(o\) and \(o\). 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 \(e\) and \(a\) to give the following vocalic distinctions in Northern Chin:

\[
\begin{array}{ccc}
1/i & e/e & o/u \\
\sigma/\sigma & e/a & o/o \\
\end{array}
\]

The two spectrograms below of the Sizang words \(lm\) image and \(lm\) 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 Diphthongs

The analysis here treats -j and -w as codas that may freely occur after all vowels excluding /i/ and /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 observations 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 /a/ in all environments except before -t, -n and in open syllables,16 and Sizang o to /a/ 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:

<table>
<thead>
<tr>
<th></th>
<th>NC</th>
<th>Mizo</th>
<th>Zahau</th>
<th>Thado</th>
<th>Zo</th>
<th>Tedim</th>
<th>Sizang</th>
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<tr>
<td>*ia</td>
<td>ia</td>
<td>ia</td>
<td>iε</td>
<td>iε</td>
<td>iε</td>
<td>iε</td>
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<td>oε</td>
<td>oε</td>
<td>oε</td>
<td>oε</td>
<td>oε</td>
</tr>
</tbody>
</table>

16 The diphthong /εa/ is not noted by Stern (1963), but is noted by Luce (1962:tableA).
The following surface variations may be noted: Zo oo and Sizang ue surface as oe and ue respectively before -j; Mizo, Zahau and Sizang reduce the unrounded diphthong to e before -n in inflected forms while all six languages, excepting Tedim, reduce the rounded diphthong to o in the same environment;¹⁷ all six languages reduce the rounded diphthong before -m to o in inflected forms. It should also be remarked that the Thado diphthongs -oo and -et 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 -ow [oʊ]¹⁸ and -ɛj from which they are nonetheless consistently discernible in words like koow³ burrow and kow⁴ call or the inflected forms hle⁴ snap and hlej⁴ 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 [au].
Weidert’s (1981:31-2) rather arbitrary rejection of Henderson’s (1948:721) proposal to interpret the high vowel components in Mizo /a/ and /a/ 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 piaŋ’ and Sizang pienŋ’ come into being below exemplify the difference in syllable weight between the two languages:

\[\text{Spectrogram 1}\]

\[\text{Spectrogram 2}\]

Benedict (1940:120, 1972a:58, 1977:12) supposes the pure vowels /e/ and /o/ to be secondary derivations from /a/ and /a/ 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 /e/ and /o/ as /e/ and /o/ or /e/ and /o/, follows a proposal originally made in Luce (1959a:table i), 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 /o/ and /e/. However, in addition to the respective alternations of /a/ and /a/ with /e/ and /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 /a/ and /a/ surface as /e/ and /a/ 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 /a/ vowel in Sino-Tibetan /a/ and /a/ could not maintain a dipthongal articulation like /ja/ and /wa/ which gave /a/ and /a/, 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 \(ie\) is more likely a secondary development from an original placement in the latter part of the syllable as \(ia\), although it may simply reflect a slightly different evolution. Notably, the secondarily derived Sizang diphthongs \(ea\) and \(oa\) 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

<table>
<thead>
<tr>
<th>NC</th>
<th>Mizo</th>
<th>Zahau</th>
<th>Thado</th>
<th>Zo</th>
<th>Tedim</th>
<th>Sizang</th>
</tr>
</thead>
<tbody>
<tr>
<td>*-k</td>
<td>-k</td>
<td>-k</td>
<td>-?</td>
<td>-?</td>
<td>-k</td>
<td>-k</td>
</tr>
<tr>
<td>*-η</td>
<td>-η</td>
<td>-η</td>
<td>-η</td>
<td>-η</td>
<td>-η</td>
<td>-η</td>
</tr>
<tr>
<td>*-t</td>
<td>-t</td>
<td>-t</td>
<td>-t</td>
<td>-t</td>
<td>-t</td>
<td>-t</td>
</tr>
<tr>
<td>*-n</td>
<td>-n</td>
<td>-n</td>
<td>-n</td>
<td>-n</td>
<td>-n</td>
<td>-n</td>
</tr>
<tr>
<td>*-p</td>
<td>-p</td>
<td>-p</td>
<td>-p</td>
<td>-p</td>
<td>-p</td>
<td>-p</td>
</tr>
<tr>
<td>*-m</td>
<td>-m</td>
<td>-m</td>
<td>-m</td>
<td>-m</td>
<td>-m</td>
<td>-m</td>
</tr>
<tr>
<td>*-j</td>
<td>-j</td>
<td>-j</td>
<td>-j</td>
<td>-j</td>
<td>-j</td>
<td>-j</td>
</tr>
<tr>
<td>*-r</td>
<td>-r</td>
<td>-r</td>
<td>-?</td>
<td>-? / -a</td>
<td>-k</td>
<td>-k</td>
</tr>
<tr>
<td>*-l</td>
<td>-l</td>
<td>-l</td>
<td>-l</td>
<td>-l</td>
<td>-l</td>
<td>-l</td>
</tr>
<tr>
<td>*-w</td>
<td>-w</td>
<td>-w</td>
<td>-w</td>
<td>-w</td>
<td>-w</td>
<td>-w</td>
</tr>
<tr>
<td>*-s</td>
<td>-? / -(\text{III})</td>
<td>-? / -(\text{III})</td>
<td>-(\text{III})</td>
<td>-(\text{III})</td>
<td>-? / -(\text{III})</td>
<td>-(\text{III})</td>
</tr>
</tbody>
</table>

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 \(-?\) in Thado and Zo, is discussed in 1.2.2. When derived from original \(-r\), the Zo glottal coda is only retained after the mid-vowels \(e/e\) and \(o/o\); after \(i/i\), \(o/u\) and \(e/a\) it has vocalised to \(a\).20 The resulting reflexes of \(ia\) and \(oa\) remain distinct from the original Zo diphthongs \(ie\) and \(vo\) discussed in 1.1.1. The glottal coda in Zo is much weaker than in Thado; the distinction between Zo \(-?\) and Tedim \(-k\) in the spectrograms below for Zo pe\(\text{\text{\text{-}}}\) back kick and Tedim pek\(\text{\text{\text{-}}}\) 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 \(-k\) and \(-η\) to \(-nt\) and \(-m\) 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 na?\(\text{\text{\text{-}}}\) nose which should regularly correspond to Mizo \(\text{\text{\text{\text{-}}}ha\text{\text{\text{-}}}\) as na\(\text{\text{-}}}\) but is most likely a late loan in place of the more commonly used binome npkoo\(\text{\text{\text{-}}}\) 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 Sibilant -s

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 Zahau -owʔ / -vwʔ

Zahau -owʔ tends to be pronounced with a more open articulation than in the other five languages where it surfaces as [oʊ]. Consequently words like təwʔ seat (v*I) are barely distinguishable from the inflected form təwʔ 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 -əw and -ẹj with -ẹj is contradicted by the evidence here. In light of the historical association, discussed in 1.1.1, of -əa- with -ɛ- and -əa- with -ɛ-, the lack of the diphthongs -əaj and -əaw in Northern Chin may seem superficially supportive of VanBik’s suggestion. However, the discussion in 5.1 shows the source of -ẹj and -əw 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 -əj/-aj and -əj/-oəj such that his other distinctions may be rejected accordingly: the data in Weidert (1975:24) suggests Bright’s -ej, contrasting with regular -əj, 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 -ej is the word həməj III muzzle which, as the only instance in the word list, contrasts with -oəj in Zahau həməjIII visage and represents an Austroasiatic loanword; there are no cases of variation before -w, for which -iw, -ew, -əw, -əw are attested, except for hərew I leech for which an external origin is suggested by its irregular correspondence with a lateral initial in Thado and Zo həlew I.

Excluding -oəj, to be discussed below, the Mizo rhymes -əj/-aj, -əj/-oəj, -ẹj, -iw, -ew, -əw, -əw may be extended to the other five Northern Chin languages, although Thado FORM-II derivations with -oəjIII, -oəjIII and -uəjIII tend to surface as -əjIII, -oəjIII and -uəjIII such that gəjI pregnant may occur in FORM-II regularly as gəjIII or in a reduced form gəjIII while gəjIII impregnate and its regular FORM-II gəjIII are invariable. The only exceptions are mainly confined to a handful of words in Thado: Thado has -iw instead of -iw in kwəwIII 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 həwI reprove, quarrel as an ablaut of həwI elsewhere; Thado has xəwIII scrape and thəwII graze, along with həwII prune comparing with Zo həwIII shave, cut hair, in an externally influenced word family attesting -ew elsewhere.

A clear distinction between -oəj and -uəj 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 -oəj, while Zo conversely merges them as -uəj 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.
A few exceptions may be noted: the status of Zo vəjɪ— *elephant* as an Austroasiatic loanword is supported by its irregular initial in Sizang; Thado təjɪ *egg* and təjɪli *water* contrast with Tedim tajɪ and tajɪli, yet Luce (1962:59;85;tableA) has Thado tajɪ *egg* and tɪli *water*, while in Teizang, which would be expected to correlate with Tedim, Henderson (1963:551) has təjɪ *egg* and təjɪli *water*; Thado nəjɪli *sad, sleepy* compares with Tedim ənəjɪli *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 ɪ back kick is peʔ, which can no longer bear distinctive tone,24 rather than peʔɪli 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 peʔ *flat*. 
1.2 Initials

<table>
<thead>
<tr>
<th>NC</th>
<th>Mizo</th>
<th>Zahau</th>
<th>Thado</th>
<th>Zo</th>
<th>Tedim</th>
<th>Sizang</th>
</tr>
</thead>
<tbody>
<tr>
<td>*k-</td>
<td>k-</td>
<td>k-</td>
<td>k-</td>
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<td>k-</td>
<td>k-</td>
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<td>k-</td>
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</tr>
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<td>x-</td>
<td>x-</td>
<td>kʰ-</td>
</tr>
<tr>
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<td>rʰ-</td>
<td>hʳ-</td>
<td>t-</td>
<td>(tʰ-)</td>
<td>t-</td>
</tr>
<tr>
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<td>rʰ-</td>
<td>hʳ-</td>
<td>tʰ-</td>
<td>hʰ-</td>
<td>x-</td>
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<td>*kʰ-</td>
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</tbody>
</table>

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 /g97- and /g102-. VanBik (2009:64-5) suggests that implosion may have originally been characteristic of the voiced obstruent series with g- shifting to k- due to a similar lack of g- in some Austroasiatic and Tai-Kadai languages which attest /g97- and /g102-. 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/k- > g- > ɣ- 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 t- and t’- along with kr- and kl-, but this is unwarranted: Mizo t’hal’ summer and t’u’i’ ~ t’uk’i’ fall do not correlate with Tedim p’hel’i’ winter and puk’i’ fall, but with Tedim k’hel’summer and tuk’i’ fall; Mizo t’ha’i’ ~ t’hui et good and the avian name t’ai’i’ – do compare with Tedim p’h’a’i’ ~ p’hui et and b’ai’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 t’ow’i’ ~ t’ow’i’i’ and Tedim p’ow’i’ ~ p’ow’i’i’ sprout (v); Zahau t’hui, for which there is no Mizo correlate, and Tedim p’hui’i’ needle.27

The Zo h’l- and h- reflexes of k’h’l- generally reflect speaker idiosyncrasy. The evidence of one speaker suggests a lexical distinction between the two such that moon is always h’la’i’ and wing, feather is always ha’i’. Only the transcription h’l- is used in the word list.

1.2.2 Rhotics

Luce (1962:52, 1985:1.81-2) and Peterson (2000:81-5) note that several Southern Chin reflexes of r- have a uvular k- 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 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- > ɣ- which is also noted for Teizang by Henderson (1965:551). Notably, Luce (1962:52,noteA, 1985:II.70-87) actually transcribes Zo, Thado and Tedim g- as ɣg-. Although this provides a nice bridge between Thado, Zo and Tedim g- and Sizang ɣ-, 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 gem’ forest, territory and ɣem’i’ dare do not conclusively warrant a transcription of ɣg- for the former:

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25 The avian name is not in the word list, but supported in Luce (1962:tableB).
26 For the latter, compare Mizo bak’i’a, in irregular TC-IIA rather than TC-IIB, and Tedim bak’i’ bat with Khualsim pral’i’a 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 Lößfler (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 \(ts\)- and \(ts^h\)- are retained as such in Mizo.\(^{28}\) Benedict’s (1940:123, 1972a:18) derivation of Mizo \(f\)- from Tibeto-Burman \(dx\)- is supported by Lößfler (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 \(g\-\) to \(f\-\) in Cockney English; VanBik (2009:26;174) actually reconstructs original Chin \(g\-\). 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

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\(^{28}\) The shift of \(ts\-\) to \(t\-\) in Tedim leads Matisoff (1988b:4-9) to suggest an erroneous association between Northern Chin \(ts\-m\) level and \(dm\-\) full.

\(^{29}\) Benedict’s further derivation of Mizo \(f\-\) from a voiced sibilant \(z\-\) is rejected in 5.2.2.
and Zahau,\textsuperscript{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 \textit{g} of Zo, Tedim and Sizang \textit{t}- before \textit{t/i} which is reflected as \textit{s}- when from underlying \textit{t} except in Sizang where it becomes \textit{gh}-. The origin of Northern Chin \textit{th} in Tibeto-Burman \textit{s}-, discussed in 5.2.2, leads VanBik (2009:17) to suggest that \textit{t/i} inhibited the shift of \textit{s} \(\rightarrow\) \textit{th} in Tedim, but the evidence for palatalisation elsewhere suggests a circular shift of \textit{s} \(\rightarrow\) \textit{th} \(\rightarrow\) \textit{s}- in this restricted environment.

1.2.5 \textit{Glides}

Peterson’s (2000:94) observation that \textit{j}- in some Southern Chin languages corresponds to \textit{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 \textit{z}- first occurred in languagues 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 \textit{z}- which appears to be slipping towards the alveolar \textit{z}; this variation is also noted by Luce (1962:noteb). In the word list only the transcription \textit{z}- is used.\textsuperscript{31} Peterson’s (2000:94) proposal for an original \textit{hj}- in Southern Chin is not noted by Luce (1962:39) or VanBik (2009:271).

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

1.2.6 \textit{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 \textit{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 \textit{?oj} \(\textit{dog}\) is clearly evident when compared to Tedim \textit{oj} \(\textit{dog}\):
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.

<table>
<thead>
<tr>
<th></th>
<th>Mizo</th>
<th>Zahau</th>
<th>Thado</th>
<th>Zo</th>
<th>Tedim</th>
<th>Sizang</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>\</td>
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<tr>
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<tr>
<td>III</td>
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</tr>
</tbody>
</table>

The tripartite division follows Luce’s (1959a:28-9, 1985:1.83) assumption that Mizo and Zahau have undergone a later split of TC-II. 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 Ʌ is also supported here, but his treatment of the frequent Sizang high level tone Ʌ 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

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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 -I 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 tʰek¹ new, corresponding to Mizo tʰer¹ new, is also noted by Henderson (1965:20), and may be contrasted with Tedim tʰek itch which, along with Mizo tʰek 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 se-, also means serow; the irregular correspondence between the Mizo and Zahau forms, tʰar¹ and tʰer² respectively, suggests an external origin which is the case for Tedim kək¹ peel from Austroasiatic. The sole other case in the word list involves Tedim hək¹ 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

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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-IUA and TC-IUB in Zahau except as a result of surface intonation. The primary distinction posited here is supported by Luce (1959a:tablet, 1962:tableA;noteC).

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-IUA and TC-I, excepting when an obstruent coda in Thado, Zo, Tedim and Sizang corresponds to an original -r, never occur with obstruent codas. Löfler (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 Löfler (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-IUA or TC-IIB, but while Luce (1962, 1985:1.83;II.82) and Weidert (1979:80;90;114-5) do not treat open rhymes in TC-IUA as aberrant, they do both note an abundance in TC-IIB.38 Cases of TC-IUA 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:

<table>
<thead>
<tr>
<th></th>
<th>Mizo</th>
<th>Zahau</th>
<th>Thado</th>
<th>Zo</th>
<th>Tedim</th>
<th>Sizang</th>
</tr>
</thead>
<tbody>
<tr>
<td>open</td>
<td>IIB</td>
<td>IIB</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>stop</td>
<td>IIB</td>
<td>IIB</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
<tr>
<td>closed</td>
<td>IIA</td>
<td>IIA</td>
<td>II</td>
<td>II</td>
<td>II</td>
<td>II</td>
</tr>
</tbody>
</table>

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-IUA or TC-III, with obstruent 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-IIIB 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-IIIB, discussed in 1.3.2, and, as with Zahau TC-IIIB, 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:\(^{41}\)

<table>
<thead>
<tr>
<th></th>
<th>Mizo</th>
<th>Zahau</th>
<th>Thado</th>
<th>Zo</th>
<th>Tedim</th>
<th>Sizang</th>
</tr>
</thead>
<tbody>
<tr>
<td>*-k</td>
<td>-?</td>
<td>-?</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
</tr>
<tr>
<td>*-k(^{II})</td>
<td>-?</td>
<td>-?</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-?</td>
<td>-k(^{III}) / -ØIII</td>
</tr>
<tr>
<td>*-k(^{III})</td>
<td>-?</td>
<td>-?</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
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<tr>
<td>*-t</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
<td>-ØIII</td>
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<tr>
<td>*-t(^{II})</td>
<td>-ØIII</td>
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<td>-ØIII</td>
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<td>-ØIII</td>
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<td>*-t(^{III})</td>
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<tr>
<td>*-p</td>
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<td>*-p(^{II})</td>
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<td>*-p(^{III})</td>
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<tr>
<td>*-ØII</td>
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<tr>
<td>*-ØIII</td>
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<tr>
<td>*-ØI</td>
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<td>*-ØII</td>
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<td>*-ØIII</td>
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</table>

\(^{39}\) Following Osbourne (1975:120) and Chhangte (1993:75), numerals may be classified as intransitive verbs.


\(^{41}\) A reconstructed FORM-I base is used for simplicity of exposition. A coda *-s is not included due to its early convergence with -ØIII or, in the case of short surface vowel length in Mizo, Zahau and Tedim, its development into -ØIII 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, 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.

2.1.1 Stopped Syllable Variation

The alternative Sizang reflexes of -k/t/p are in free-variation; in Tedim they are only in free-variation after the diphthongs ia and va 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. Significantly, Osburne (1975:140) notes a similar variation in a few verbs in Zahau where -k/t/p give either -k/t/p or -ʔ although only reflexes in -ʔ exist in the Zahau recorded here. In Thado, the variation appears confined to reflexes of -ʔ when derived from Northern Chin -ʔ, and only cases of variation across the word list rather than free-variation were noted.

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 hu smoke (n) correlates with khu 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 develops from secondarily derived TC-III. 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 -ʔ/after coronal initials, always developing FORM-II inflections in -it II regardless of tone. Occasional 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.

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 phaʔ of Tedim p h at II ~ p h at II 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 thu III ~ thu III deep is also attested in Mizo, Thado and Zo. Benedict (1972a:66-7) compares t u phuʔ phuʔ phuʔ phuʔ thickly, but its rhyme shows it to be a non-native word whose verbal source phu phu phu phu is noted by Luce (1973:lista) to be Mon or Shan in origin.
46 The Zo reflexes in -ʔ 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-)dʰ whereby the dentalisation triggered by the -dʰ 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 /g595/ (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, Löfler (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. Löfler (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; /g595/ 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

Löfler succeeds in identifying most of the main derivational patterns outlined above, but the phonological development of his -t coda is rather arbitrary. Significantly Löfler (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 /g595/ 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 /g595/, -t and -k remain to be discussed.

48 Löfler’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 -m/-n/-η? 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 -η? to Mizo -n 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 -/g446III which should all be attested as -/g446nIII if derived from an original -/g446ηIII with suffixal -s causing coronalisation. The situation is similar to that of -/g446ηIII-s becoming -/g446ηIIB or -/g446k in Mizo or Tedim respectively but -/g446ηIIB, -/g446t in Zahau, Sizang or Thado/Zo respectively.

2.1.5 Causativity Paradigms

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 Matioff (2003:472-3) who focus on Lai, to suggest a distinctive FORM-III inflection in cases like Zahau t’ọηII – t’ọηIII return (vJ) and t’ọηIIb return (vJ). Correlates like Thado h’loŋII ~ h’loŋIII arrive (vJ) and h’loŋII ~ h’lot bring (vJ) 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 denI ~ denIIb throw (vb) appears superficially appear irregular, but its variant FORM-II denIII is entirely regular and shows denIIb, still attested in Zahau with its derived benefactive sense throw (vb), to have simply merged grammatically with denIIII while

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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 occasionally reflect -t instead of -k or -ʔ respectively in their derivations of η₃-s > -ηʔ > -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 -η₃-s > -nʔ > -t appears to have been adopted by Zo and Sizang in some items. Sizang makes a secondary semantic distinction between neŋ₃ ~ nek sluggish and neŋ₃ ~ net ill which also occurs in ŋat₃ ~ ŋat₃ / ŋa₃ tight (v) and ŋak₃ ~ ŋak₃ / ŋa₃ tighten (v) in which -t and -k do not appear to be derived. Stern (1963:245) notes a similar distinction in the FORM-II of ta₃ ~ tat / tak III scare (v) which he treats as tat II fear (vi) and tak II fear (vt), 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 reconstructational significance.

2.1.7 Alternation of -o₃ and -ow₃

Some words with the rhyme -ow have developed FORM-II reflexes in -o₃ in Mizo, Zahau and Tedim or -o₃ in Thado, Zo and Sizang. The expected FORM-II reflex would be -ow₃ which even if ousted by a further derived form would be reflected as -ow in Mizo, Zahau and Tedim or retained as -ow₃ 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 $s$ and Tedim $s$ 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, and Benedict appears unaware that Thado actually reflects both $s$ and $s$. The Thado case is reflective of a sporadic Northern Chin $v/a$ and $e/e$ 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 k̀k crack (v t) and k̀k crack (v t); Thado ter hard and ter elderly.

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

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52 Benedict’s (1972a:159) further comparison with Old Chinese ကောင် ဗျာနား ဗျာနား 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

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<thead>
<tr>
<th>ð</th>
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<th>ñ / ñ</th>
<th>-u</th>
<th>-Ø</th>
<th>-a</th>
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<td>ñ-</td>
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<td>-uij</td>
<td>-øj</td>
<td>-aj</td>
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<tr>
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<td>-um</td>
<td>-ø (-)</td>
<td>-am</td>
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<tr>
<td>ñ-</td>
<td>-in</td>
<td>ñ / ñ</td>
<td>-um</td>
<td>-ø (-)</td>
<td>-an</td>
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<tr>
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<td>-unj</td>
<td>-øj</td>
<td>-aj</td>
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<tr>
<td>ñ-</td>
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<td>ñ / ñ</td>
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<tr>
<td>ñ-</td>
<td>-it</td>
<td>ñ-ø</td>
<td>-ut</td>
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<td>-at</td>
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<tr>
<td>ñ-</td>
<td>-ik</td>
<td>ñ-ø</td>
<td>-uk</td>
<td>-øj</td>
<td>-ak</td>
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<tr>
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<td>-uw</td>
<td>ñ-ø / ñ-ø</td>
<td>-aw</td>
<td>-ø-ø / -ø-ø</td>
<td>-aqn</td>
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</table>

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 -ø / -ø 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 -\(\hat{\circ}\) -\(\acute{a}\)c and -\(\hat{\circ}\)g\(\acute{a}\)n disregards Shafer’s proposal (1941:22) to treat them as reflecting Old Burmese -\(\acute{i}\)k and -\(i\)\(\acute{\eta}\) 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 \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{i}\) and \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{a}\), Jones’ -\(\acute{i}\)k and -\(i\)\(\acute{\eta}\), represent.

### 3.1.2 Gong’s Three Vowel i/u/a System

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<th>(\hat{\circ})</th>
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<td>-(\hat{\circ})</td>
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<td>-ik</td>
<td>-(\hat{\circ})(\acute{\circ})(\acute{i})</td>
<td>-(\hat{\circ})</td>
<td>-ak</td>
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<td>-(\hat{\circ})</td>
<td>-uw</td>
<td>-(\hat{\circ})</td>
<td>-aw</td>
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</table>

Luce (1940:304, 1973:listA/B, 1985:I.100) suggests that most words with \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{i}\) and \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{a}\), Jones’ -\(\acute{i}\)k and -\(i\)\(\acute{\eta}\), 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 -\(\acute{u}\)k and -\(u\)\(\acute{\eta}\) in contrast to the short rhymes -\(u\)k and -\(u\)\(\acute{\eta}\) which gave \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{i}\) and \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{a}\) 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 \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{i}\) and \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{a}\) 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 -\(w\)\(a\), Pulleyblank (1963:214-8) reanalyses -\(u\) as -\(w\)\(i\) thereby reducing the system to a two vowel i/a contrast.

\(^{53}\)Shafer, who makes no comment regarding the status of the orthographic form \(\hat{\circ}\)\(\acute{\circ}\)\(\acute{a}\) suggests that -\(i\)\(\acute{n}\) merged with -\(i\)\(\acute{\eta}\) to give \(\hat{\circ}\)g\(\acute{a}\); this is discussed in 3.1.4.
Pulleyblank (1963:217-8) literally interprets  and  , the latter composed of the individual form  of  and the tonal variant  of  , to support an underlying  , but these are orthographic conventions of no phonological import. Regardless of the symmetry afforded with , Nishi’s (1999a:678) suggestion that Pulleyblank’s system has little value is overly dismissive: Pulleyblank’s observation of the medial  in the Written Burmese form  of  -wij, which rhymes with  /oω/, is supported by Benedict (1972a:67) and provides a simpler diachronic account than Nishi’s (1999a:678) proposed vowel-breaking of -uj > -wui;  Pulleyblank’s treatment of Jones’ and Gong’s phonological distinction of  and  as  and  resolves the lack of any real phonetic distinction, unless distinctive vowel length is assumed, in their systems; Pulleyblank’s (1963:218) suggestion that his  may originally stem from  unwittingly resolves the similar lack of phonetic distinction between Jones’ and Gong’s -i and -ij which may be distinguished as -i and -ij.

3.1.4 A Two Vowel /i/e System

54 See Shorto’s comments in Pulleyblank (1963:218).

55 Nishi (1999a:678) suggests -uj > -wij on the basis of a few later inscriptive cases of  , but the attestation of this form in a very early inscription, discussed by Luce (1969:1.108-9, 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 /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 Ꚙ would make the rhyme Ꚙ əj Ꚙ violate the phonotactic constraint prohibiting a parallel Ꚙaj. The discussion in 5.1 shows the source of this rhyme to be Ꚙəə > Ꚙəə > Ꚙəə whose overlap in phonological development with Ꚙəə > Ꚙəə > Ꚙəə explains why Luce (1981:i) 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 Ꚙəə -ən and Ꚙ -əc which are vying with Ꚙəə -in / Ꚙəə -ən and Ꚙəə -it / Ꚙəə -ək for the same slots. Pulleyblank (1963:218) accepts Shafer’s derivation of Ꚙəə -ən and Ꚙ -əc from Ꚙ -ək and Ꚙəə. Bradley (1985:194) claims that Ꚙ -əc has been pronounced Ꚙəə, 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 Ꚙ -ək must have been much closer in pronunciation to Ꚙ -əc 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 Ꚙəə -əc and Ꚙəə -ən, not noted by Pulleyblank, is superficially supportive, but the source of the palatal codas -ən and -əc in Sino-Tibetan əəj and Ꚙəəj, discussed in 5.1, makes the source of medial -ən-, which could not co-occur with -ə-, curious. The sparseness of the evidence for the rhymes makes an alternative explanation likely: Luce (1981:50;60, n.d.) treats Ꚙ -əc as a scribal variant of Ꚙəə -ən, which it settles as in Written Burmese; Luce’s (1973:17) observation of Ꚙəə Ꚙəə klwiə for the sole nasal form Ꚙəəə / Ꚙəə Ꚙəə klwiə² serve allows a similar suggestion for Ꚙəə Ꚙəə and Ꚙəə Ꚙəə.

Gong’s (1980:459) three vowel proposal does not mention Shafer’s (1941:22) suggestion that -in merged with -ən as Ꚙəə -ən. Matisoff’s (1968:895) proposed shift of Ꚙəə -əc parallels that of Ꚙ -ən > Ꚙ -əc and restores symmetry to Shafer’s proposal. Benedict (1972a:75-6;79-80) suggests that Ꚙəə -in may derive from a long vowel -i:n; Matisoff (1972a:65, 1979:19) extends Benedict’s proposal to derive Ꚙəə -it from Ꚙəə. Noting a paucity of Lolo-Burmese comparative sets, Thurgood (1974:100-1) cautiously accepts the proposal for Ꚙəə -it, but suggests that Ꚙəə -in 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 Ꚙəə appears to have already lost its nasality.
conditioned cases of phonological change. 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 δωt / δτ / δτ / δτ with Mizo δτ / δτ which suffers from internal irregularities in Northern Chin; Benedict’s (1972a:79) comparison of δcdef / δcdef kh / δcdef n¹ with Mizo kh / δcdef is similarly problematic. Further support comes from the occupation of the -ik and -ij slots by externally sourced δi -ik and δi δ -ij.

Observing that the digraph δi is restricted to the velar codas -δ -w, -δ -k, -δ -η, Jones (1976:45;49) logically concludes that the phonetic change undergone before velars by the sound represented by δ caused the scribes to use a different symbol δi 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 δ and δi makes it curious how much the phonological value of the latter has been debated since it was correctly identified by Blagden (1914:138). The value posited here is first supported by Okell’s (1995:8-9) observation that Arakanese has merged δuf / δuf / δuf / δuf with δuf / δuf / δuf / δuf and δi δ -ij with the secondary palatalised rhyme δ -an to be discussed in 3.3.1.2.

3.2 Pure Initials


58 See the discussion of δωt(ω) / δωt(ω) mij’t(mw) woman under [#128] Person in Chapter 6; Thurgood’s proposal for a suffixal δ -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 ρωδδ / ρωδδ akδ δδ delta; and the discussion in Lehman (2008). Whatever the provenance of the digraph, Yanson appears to be erroneously conflating Dempsey’s opinion with that of Nishi (1955:22, 1972:259-60), Miller (1957:42) and Gong (1980:461) who interpret δ as the unrounded vowel -u regardless of the orthographic -w -δ, while Dempsey treats δ as -aw.
Initials with slightly misleading orthography under the effects of medials -j- and -w-, discussed in 3.3.1, are enclosed in parentheses: \( k^h - n^j - /S_W - h^j \) and \( h^j - n^j \). The laryngeals are also incuded in parentheses: the rare initial \( h^- \) is shown in 5.2.4 not to be from original Lolo-Burmese; initial \( ?^- \) 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 18\(^{th}\) century, had no effect on the orthography: the appropriation of the original sibilant value of \( s^- \), which was shifting to a new dental fricative articulation, by palatal \( c^- \) whose aspirated partner \( \infty c^- \) became a typologically rare aspirated sibilant; the merger of \( q^- r^- \) with \( \omega j^- \).\(^{62}\)

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-

\[
\begin{array}{cccc}
\infty j^- & k^- & \omega j^- & k^h^- \\
\infty j^- & \omega j^- & \omega j^- & k^h^- \\
\infty j^- & (\omega j^-) & \omega j^- & k^h^- \\
\infty j^- & \omega j^- & \omega j^- & k^h^- \\
\infty j^- & \omega j^- & \omega j^- & k^h^- \\
\end{array}
\]

\(^{62}\) 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 18\(^{th}\) century.
Following the discussion in 3.1.4, the medials -j- and -w- are only attested orthographically before /g527/. Medial -jw- clusters, including /g527/ jw- < njw-/<jw-, are omitted due to their secondarily derived or external origins. Orthographic fluctuations of /g527/ -jw- clusters, including /g561/ w- < njw-/<njw-, are omitted due to their secondarily derived or external origins. Orthographic fluctuations of /g527/ -jw- clusters, including /g561/ w- < njw-/<njw-, are omitted due to their secondarily derived or external origins.

3.3.1.1 /g561/ -c- < /g613/

Nishi’s (1974:1, 1999a:668-9) correlation of Inscriptional Burmese -jen and -jet with Written Burmese -ηn and -εc via a palatalizing medial -j- attests a second wave of palatalisation after the development of original Old Burmese -ηn and -εc 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 -¿ and -¿² respectively. Consequently, Nishi (1974:16) is able to distinguish Old Burmese /g613/ -c- concurrent with Matisoff’s (1969:157) Lolo-Burmese distinction, which have merged as φ- c- by the time of the inscriptions.

In spite of a few cases of /g527/ -j- in Written Burmese, which Nishi (1974:19;42-3) treats as peripheral to the Old Burmese phonological system, the shift of /g527/ > c- occurred prior to Old Burmese.

3.3.1.2 /g527/ -p- < /g551/

An account for Pe Maung Tin & Luce’s (1963:97) remarks on inscriptional fluctuations between /g551/ -n- and /g446/-i- is made by Nishi’s (1974:18-20) identification of confusion between /g446/-j- and /g551/-n- in words like /g527/-j/ /g551/-n/ “younger brother”, in which medial -j- is

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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 /g527/-j/ /g551/-n/, whose unaspirated /g527/-j/ /g551/-n/ put side by side supports an original rhotic and a secondary palatalised coda -¿. Note also Pe Maung Tin’s (1933:33) and Yanson’s (2002b) discussion of /g527/-j/ /g551/-n/ “be, have whose rare initial -h- has developed via the same epenthetic medial -j-, discussed in 3.3.1.2, to give orthographic /g527/-h/ in Written Burmese.

65 Bradley’s (1985:194) attribution of ¿ to loanwords is incorrect, but Hla Pe’s (1960:92-3) observation of frequent interchange between ¿ and ¿ in Pali loanwords does support a coronal origin.

66 Matisoff’s (1988b:6) comparison of /g527/-j/ /g527/-t/, /g595/-j/ /g527/-n/ “plank” may be rejected on these grounds.

67 This rejects Benedict’s (1972a:17-8;52) comparisons of the old literary form /g527/-t/ ni’tajuv of /g527/-t/ ni’tuv /g527/-t/ maz/ “very red, which Bernot (1978:92-VII:65-7) shows to attest such a meaning only when preceded by /g527/-ni/-t/ red, with Mizo sn/ red, as discussed further in 2.4, and /g72/-y/ tjkajı /g527/-t/ maz/ “tekttek completely with Mizo tek real.

68 Sagart’s (1999b:35) comparison of Old Chinese /g527/-y/ 1jajı “younger brother with /g527/-y/ 1jajı “younger brother does not take into account the original velar initial in Old Burmese.
epenthetic after a velar initial before ʰnjen⁴  ill-treat in which Nishi suggests the medial -j- that palatalised the coda has been omitted in the inscriptive form. Similar cases like ʰnjen⁴ night⁷⁰ and ʰnjen⁴ trumpet, support Yanson’s (1990:57-9, 2006:104-5) observation that orthographic nj- did not occur in the inscriptions; he alternatively draws an interesting link with orthographic ʰnj- yjr-.

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 y-, Bradley (1979:147) follows Benedict (1972a:38;44) to reconstruct ʰnj- in the inscriptions; he alternatively draws an interesting link with orthographic ʰnj- yjr-.

Evidence may be found in cases like ʰnj- inferior whose ablaut variant ʰnj- inferior retains the original coronal due to medial -j- being lost in its merger with ʰn prior to Old Burmese.

3.3.1.3 ʰnj-

Yanson’s (2002a:166) rejection of Benedict’s (1972a:54) suggestion that inscriptive ʰnj- rj- has unequivocally simplified to Written Burmese ʰnj- r- is problematic: Hla Pe (1967a:75), supported by Peiros (1997:245), provides a Mon source for ʰnj- rj- dry field whose Written Burmese initial ʰnj- 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 inscriptive evidence has been found for ʰnj- which appears to have simplified to ʰnj- prior to Old Burmese.

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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 ʰnj- parrot attest no inscriptive medial -j-.

⁷⁰ Benedict (1972a:100;188) appears unaware of the original initial y- or coda -n, attested in cases like IB (170.46) and LK (221) respectively, in his comparison of Mizo/Zahau zan⁴/zan⁴ night via prefixal n- which would not have supported the shift of s- n to s- jn via medial -j- due to the merger of nj- with nj- 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 \(\text{q}^\text{b}^\text{j} \) \(/\text{q}^\text{b}^\text{j}\) sjem\(^2\) Shan, discussed in Luce (1959b:68-9), although Nishi (1999a:675) suggests it may simply represent a variant inscriptive form \(\text{q}^\text{b}^\text{j} \) of \(\text{q}^\text{b}^\text{j} \) \(\text{j}\text{r}^\text{h}\) and \(\text{q}^\text{b}^\text{j} \) \(\text{j}\text{r}^\text{h}\).

3.3.2 Medials -l- and -r-

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<tr>
<td>jk-</td>
<td>pr-</td>
<td>/gS/</td>
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<tr>
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<tr>
<td>jk-</td>
<td>pr-</td>
<td>/gS/</td>
<td>pl-</td>
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Disregarding orthographic \(\text{g}^\text{b}^\text{r}\)- \(\text{hr}\)-, 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 inscriptive -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

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<tr>
<td>I</td>
<td>-</td>
<td>¹</td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>-</td>
<td>(-(\text{g}^\text{b}^\text{r}))</td>
<td>²</td>
</tr>
<tr>
<td>III</td>
<td>-</td>
<td>/gS/</td>
<td>²</td>
</tr>
</tbody>
</table>

The inscriptions generally, albeit inconsistently, mark TC-III as \(\text{g}^\text{b}^\text{r}\) -? 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 (1969-70:1.111-3), where TC-II is often marked with \(-\(\text{g}^\text{b}^\text{r}\) -h which appears to correspond to the later Written Burmese use of Sanskrit \(\text{visarga} \) – which also represents -\(h\). Egerod (1971:168-9), Haudricourt (1975:342) and Pulleyblank (1978:175) note a similarity with the glotallic -? 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.

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\(^{71}\) 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 \(\text{g}^\text{b}^\text{r}\) /\(\text{g}^\text{b}^\text{r}\) mlwik north which Luce (1973:85, 1978:580) and Ohno (1976:87) show to be a compound of \(\text{g}^\text{b}^\text{r}\) /\(\text{g}^\text{b}^\text{r}\) mlwik river and \(\text{g}^\text{b}^\text{r}\) /\(\text{g}^\text{b}^\text{r}\) Twik under.

\(^{72}\) See Okell (1971:15-20) and Nishi (1977:44-7) for a discussion of some exceptional cases. Of particular notes is \(\text{g}^\text{b}^\text{r}\) /\(\text{g}^\text{b}^\text{r}\) \(k^\text{b}\text{j}\text{r}^\text{h}\) - \(k^\text{b}\text{j}\text{r}^\text{h}\) 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 ?-\(k\text{j}\text{r}^\text{h}\) does not compare with his Lahu data that suggests ?-\(k\text{j}\text{r}^\text{h}\).
Pe Maung Tin & Luce’s (1960:243) and Sawada’s (2003:330) observation that -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 concomitant suggestion that it could have represented breathiness, Sawada’s (2003:339;346) suggestion that -h may not have represented a separate tonal category tends toward the fact that the transcription of short vowels with -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 -ʔ to -ʔ, the orthographic form of -h is unrelated to -ʔ 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, 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) criticises 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 causativity paradigms. Thurgood’s (1981:67-9) further association of verbal

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

<table>
<thead>
<tr>
<th>Yin</th>
<th>Yang</th>
<th>Ru</th>
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<tbody>
<tr>
<td>I</td>
<td>侵 -əm, -iəm</td>
<td>緝 -əp, -iəp</td>
</tr>
<tr>
<td>II</td>
<td>談 -əm, -iəm</td>
<td>衛 -ət, -iət</td>
</tr>
<tr>
<td>III</td>
<td>微 -əd, -iəd</td>
<td>文 -ən, -iən</td>
</tr>
<tr>
<td>IV</td>
<td>歌 -ar, -uar, -iar</td>
<td>元 -an, -uan, -ian</td>
</tr>
<tr>
<td>V</td>
<td>脂 -id</td>
<td>真 -in</td>
</tr>
<tr>
<td>VI</td>
<td>支 -ig</td>
<td>耕 -iŋ</td>
</tr>
<tr>
<td>VII</td>
<td>之 -ag, -iag</td>
<td>蒸 -əŋ, -iəŋ</td>
</tr>
<tr>
<td>VIII</td>
<td>魚 -ag-, iag</td>
<td>陽 -aŋ, -iaŋ</td>
</tr>
<tr>
<td>IX</td>
<td>幽 -agw, -iagw</td>
<td>冬 -əŋw</td>
</tr>
<tr>
<td>X</td>
<td>侯 -ug</td>
<td>東 -uŋ</td>
</tr>
<tr>
<td>XI</td>
<td>霖 -agw, -iagw</td>
<td>藥 -akw, -iakw</td>
</tr>
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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 distributional 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/-ŋ, labiovelar -w/-kʷ/-ŋʷ, and uvular -x/-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.
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 metathesized 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 -γ which he suggests to have very little frication; Pulleyblank (1995c:297-8) modifies it to -ʊɨ and treats it as a case of epenthesis used to make open syllables well-formed.
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 -i/k with -in/t is well-founded, but difficulties with his further association of -i/k with -e/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

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75 This is originally presented in Button (2010:7) without detailed discussion.
Pulleyblank’s (1977-8:188, 1979:29) suggestion that the coda of -an and -ac were retracted to velar articulations -jɨ and -jk in Middle Chinese is unlikely. Pulleyblank’s (1991a:47) reinterpretation of Old Chinese -n and -c as -ŋj and -ŋk is phonologically more plausible in terms of Middle Chinese, but his concomitant reanalysis of -q as -kʷ, 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 -an/c as -jaŋ/k, to contrast with -ŋan/c from an original -jaŋ/k prior to the Shijing, allows a reanalysis of -anʷ/kʷ and -ŋanʷ/kʷ as -waŋ/k and -waŋ/k. Their Middle Chinese reflexes with -ŋ/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 -jŋ/t which has merged with -jŋ/k as -ŋ/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 -ak 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, the reflexes of -ak are always rounded such that Pulleyblank suggests a shift of -ak > -ãk > -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 -ã > -ã, 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 -ŋk of -ŋq, representing -lokw and -lwk in Li’s and Baxter’s respective systems, is unrounded. The merger of -aq with -ak is addressed in 5.1.2.3, while the necessity to distinguish Sino-Tibetan -wə from its merger with -w 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 -l 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 ultimately being allophones of what are treated here as underlying ja, wo, 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 -jan/t and -jango/k here while the former as -jango/k and -jango/k in support of Pulleyblank’s (1982a) proposed ə/a ablaut. As Pulleyblank (1963:220-1, 1965a:238-9, 1984a:238-9, 1991b: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, upheld in 5.1.

4.3 Tonality

The Old Chinese system with TC-I and TC-II as basic and TC-III as derived, 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

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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 causativisation. 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 polI group only retaining its FORM-II derivation polIII 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) terminology, 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-IIIB 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**

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The system adopted here essentially follows that of Sagart (1999b:25-42) and Baxter & Sagart (2008) without their uvular hypothesis.\footnote{See the original presentation in Button (2010:7) without detailed discussion. Sagart’s (1999b:28) initial \textit{?} is treated as \textit{?} which is functionally \textit{?} followed by medial \textit{-w}, but see the discussion in 5.2.4} 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 \textit{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 \textit{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. \textit{m-t} and \textit{d} are both treated as \textit{d}) in the Old Chinese reconstructions presented here.

Other morphological prefixes convincingly identified by Sagart (2001, 2005b) are \textit{k} and \textit{m} with the latter being distinct from the source of intransitive prenasalisation.\footnote{Sagart’s (1999b:124-130) differentiation of monosyllabic and iambisyllabic prefixes concurs with
similar proposals for Tibeto-Burman by Matisoff (1972a:25-6), but requires further research.  

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-.

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81 Possibly of relevance are Northern Chin forms like (k)raŋ‘ white and (k)ral¹ 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; no position is adopted here regarding the various approaches towards the exact nature of this association.

5.1 Rhymes

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82 See Miller (1988) and Beckwith (2002a) for dissenting views.
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5.1.1 Open Rhymes & Glide Codas

5.1.1.1 Shafer’s ‘Graded’ i/u/e/o/a System

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<td>-jəš?</td>
<td>-jəs</td>
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<tr>
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<td>-əš/-uš</td>
<td>-əwš?</td>
<td>-əwš</td>
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<td>-əš?</td>
<td>-wš</td>
</tr>
<tr>
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<td>-ək/-ak</td>
<td>-ək</td>
<td>-əq</td>
</tr>
<tr>
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<td>-ək/-ak</td>
<td>-ək</td>
<td>-aq</td>
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<td>-ɪk/-ik</td>
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</tr>
<tr>
<td>-jaq</td>
<td>-ɪk/-ek, -iak</td>
<td>-jək</td>
<td>-jaq</td>
</tr>
</tbody>
</table>

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 a 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 unwieldy 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/a System

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 -a and -aw 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 -aj/-aw 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 æ 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/-ow, further augmented by his new distinctions of -i/-aj and -o/-ow, is difficult to make: Benedict’s (1973b:7;13, 1977:3) suggestion that -aj and -aw 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 -ia and -ia concurs well with the discussion in 1.1.1 and leads Benedict (1973b:7;13) to hanker for the same original i/u/(o)/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 -aij and -aiaw 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 -waj which, paralleling Shafer’s -wi, is limited to open syllables, but the

84 Benedict’s (1972a:187) discussion of Old Chinese ǎ, 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/-ow 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 -waŋ, but Matisoff falls victim to the same
overly literal interpretation of Written Burmese 幫, 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 ø/a System

Benedict’s diphthongs 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 diphthongs with -i and -u as -j and -w, Benedict draws tantalizingly close to
achieving a vertical ø/a system which may be achieved by some reanalysis;86 Benedict
(1972a:61-2) contrasts the pure vowels -i/-u with -øj/-øw, treated here as -øj/-øw and
-øj/-øaw respectively, to account for Old Burmese -i/-wi as opposed to -i/-iw, yet
Benedict’s -i and -u are actually the sources of Northern Chin -ej and -ow 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 respectively, and the lack of supporting evidence for the
handful of cases where he retains pure vowels. It is perhaps not insignificant that
Benedict (1972a:69-70) retains the possibility of Pulleyblank’s (1965) proposals for a
Sino-Tibetan ø/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 ø/a
system underlying Old Chinese.

5.1.2 Other Closed Rhymes

Benedict’s (1972a:76;79-80, 1977:2) distinction of i from ì, before velars and coronals,
and u from ù, 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 -waŋ without adopting 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 Ꝑ ꝓ red with Mizo ꝑ ꝓ gums is semantically unlikely; the onomatopoeic association
between Ꝑ Ꝑ twiŋ hammer and Mizo Ꝑ Ꝑ- hammer is bolstered by the Mizo verbal inflection tek carve being
compared by Benedict (1972a:82) with Ꝑ Ꝑ Ꝑ twik 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 -η/η and -k/t to -n 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. Erroneous 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 -q would have given Old Burmese -c in the same way as -j, 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 supports such an assumption in one branch.

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89 Matisoff (2003:409-13) credits VanBik with associating Northern Chin -il/il and Old Burmese -wįį, 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 -il/il and Old Burmese -i 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 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.

<table>
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<td>~ g-</td>
<td>k-</td>
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<td>~ dz-</td>
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<td>?-</td>
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<td>Ø-</td>
<td>?-</td>
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5.2.1 Affricate ts'h- and Coronal t'(h)'

Benedict (1972a:18) treats Tibeto-Burman ts- as a source of Northern Chin s-. However, the data here suggests that Tibeto-Burman ts- remains unchanged in Northern Chin while ts'h- gives Northern Chin s-. Benedict’s (1972a:17) proposal that Tibeto-Burman t'(h)' is the
source of Northern Chin $\theta^h$- is supported here.\footnote{More specifically, Benedict suggests that $\theta^h$- reflects $\theta$- when aspirated by default in initial position.} When not derived from $\theta$-, a further source of Northern Chin $\theta$- and Old Burmese $\theta^h$- is $\theta j$- which, as with $\theta j$- > -s in 5.2.2, is restricted to a vocalism and does not pertain to cases where diphthongs in -ia- have developed.

### 5.2.2 Sibilant s-

Sino-Tibetan s- regularly gives Northern Chin $\theta^s$-\footnote{Benedict’s (1972a:46) comparison of Mizo soj$^{18}$ whittle with OB $\omega j$ / $\omega j^2$ swij$^2$ whittle appears exceptional, but its internal correspondences in Northern Chin are irregular; see [\#76] Follow in Chapter 6.} for which, as discussed in 5.2.1,\footnote{VanBik (2009:186) distinguishes $\theta^h$- 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 dz- and z- at the Lolo-Burmese level without any further implication.} Benedict’s (1972a:53) further suggestion that $\theta j$- gives Northern Chin s- should be restricted to a vocalism in the same environment as $\theta j$- > $\theta$- discussed in 5.2.1. VanBik (2009:186) distinguishes $\theta^h$- 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 dz- and z- at the Lolo-Burmese level without any further implication.

### 5.2.3 Glide w- and Obstruent p-

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 Glottal ?-

A glottal initial ?- 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 $\theta$- 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 $\theta j$- and $\theta w$-. 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
onset to give ʔf- may alternatively represent a merger of ʃ- and ʔf-, but w- and ᵁw- remain distinct.

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 Lolo-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/ʃ/-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 kw- and ᵁw-

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

5.3 Tonality

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<tr>
<td>III</td>
<td>*_-5</td>
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5.3.1 Benedict’s Two Tone System

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<tbody>
<tr>
<td>I</td>
<td>LOW / FALLING</td>
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<tr>
<td>II</td>
<td>HIGH / RISING</td>
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The tentative correlation of Old Chinese ʔf- with Tibeto-Burman (h)ʃ- requires confirmatory evidence.

Although Pulleyblank’s account of the emergence of a glottalic onset ᵁw- is not adopted here, the co-occurrence of w- and ᵁw- 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.  

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.


5.3.2 Weidert’s Four Phonation Types

| I  | VOICE |
| II | CREAK |
| III | BREATH |
| IV | WHISPER |

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 | - |
| III | -s |

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92 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 \(-\eta\), 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 incompatibility of TC-II with \(-\eta\) in Old Chinese and Old Burmese as discussed 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 \(-\eta\) 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 \(\alpha\). Northern Chin generally retains the velar nasal in such an environment, although there are several cases in the word list of sporadic alternations between \(-\eta^v\) and \(-k\); Old Chinese retains the velar nasal but shifts TC-II to TC-I which helps explain the paltry evidence for Old Chinese \(-\eta^v\).\(^{97}\)

#### 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

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\(^{96}\) 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 \( a/a \) 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) \( a/a \) 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 \( a/a \) ablaut, albeit in modified form, has much to recommend it.

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\(^98\) 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[rjəŋ]  
NC h[rəŋ]; OB ʈə ʈ[rən]; OC 生- rjaŋ, 青 *h[rjəŋ]

[#2] Armpit (Areal)  
NC jek; OB ʈə h[k]; OC 腋/腋/腋 lək

[#3] Ashamed  
NC jək; OB ʈə h[rak]; OC 赫 *h[rak]

[#4] Back *h[nwəŋ]  
NC h[əŋ]; OB ʈə h[nwəŋ]; (h[nwəŋ]) nwiŋ⁴, ʈə ʈ[nwık]

[#5] Bamboo *waʔ  
NC rəv; OB o₁: we²; OC ʈə r-ba²

[#6] Bamboo Rat (Austroasiatic)  
NC boj¹; OB ʈə pwij²

[#7] Barking Deer *kʰjo  
NC kʰi¹; OB ʈə ʈ[kʰjʊ]

[#8] Base (Austronesian)  
NC boVL; OC 本 pwən²

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100 OB alive. The simplification of *h[rj]- to OB *h[r]- accounts for Matisoff’s (2008:52) allofamic variation.
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 ʈə h[nwəŋ] hereafter and ʈə ʈ[nwık] late; TC-II concurs well with a hardening -n 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.
106 See Matisoff (1976:286) for the AN association. Matisoff (2000a:179) notes internal irregularities in LB.
#9 Bat (Austroasiatic)\(^{107}\)
NC p-lak; OC 蝙 -pək

#10 Bean (Austroasiatic)\(^{108}\)
NC be\(^2\); OB ő / ɕəŋ pej\(^2\)

#11 Bear (n) *wəm
NC wəm\(^1\); OB ő wəm\(^1\); OC 熊 wəm\(^1\)

#12 Bear (v) *wan\(^{109}\)
NC wən\(^1\); OB ɕ\(^\) wən\(^1\)

#13 Beautiful (Sinitic)\(^{110}\)
NC moj\(^1\); OC 美 mrəj\(^2\)

#14 Bed (Austroasiatic)\(^{111}\)
NC kʰən\(^1\); OB ʂ kʰwəm\(^1\)

#15 Bee (Areal)\(^{112}\)
NC kʰəj\(^1\); OB ɕ kʰwəm\(^1\); OC 蝴  kʰwəm

#16 Belly (Austroasiatic)\(^{113}\)
NC pǐk; OB ʂŋ pik; OC 腹 pwək, 襄 pʰwək

#17 Bend\(_1\) (Austroasiatic)\(^{114}\)
NC kvl\(^-\); OB ɕŋ  kwiŋ\(^2\); OC 腹 kwiŋ

#18 Bend\(_2\), Knee (Austronesian)\(^{115}\)
NC kʰuk; OB ɕŋ kwiŋ; OC 駁 kəwak, 曲 kʰwak, 局 gwak

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\(^{107}\) See Luce (1985:II.96) and Shorto (2006:200;564) for the AA association.


\(^{109}\) OB load. Matisoff’s (2000a:141-2) comparison of OB ɕəŋ wam\(^2\) belly to Mizo ɕəŋ wəm\(^2\) have diarrhoea is not supported.


\(^{111}\) Hla Pe’s (1967a:83) treatment of OB raised platform as a Mon loanword may be extended to ʂ kʰwəm\(^2\) convex which Benedict (1972a:78) compares with Mizo kom\(^1\) 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.


[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) comparesŋŋ nek black, deep, but it is associated withŋŋ nek cram.


[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 k'at bone, which Sagart (2005a:163) links with AN, in favour of骨 rwat as a counter for pitch-pipes; neither is supported here.

[121] Matisoff (1983:470-1) compares Mizo t'liŋ로 marrow, but OBŋŋ ษt'liŋ only attests this meaning via a literal sense of bone fat.

[122] OB brittle.


[124] OB stairs; OC ladder. See Benedict (1967:282;311) for the AN association.
[#29] **Bud** (Austroasiatic)\(^{125}\)
NC \(\text{mVm}^r\); OB \(\ddot{q} \text{ mwim}^l\)

[#30] **Buffalo** (Tai-Kadai)\(^{126}\)
NC \(\text{loj}^l\); OB \(\dddot{q} \text{ klwej}^2\)

[#31] **Call** (Austroasiatic)\(^{127}\)
NC \(\text{kv(w)}^l\); OB \(\dddot{q} \text{ kew}^l, \dddot{q} \text{ krew}^l\); OC 號 \(\text{gaw}^l\)

[#32] **Carry** (Austroasiatic)\(^{128}\)
NC \(\text{p}^h(\text{v})^l\); OB \(\ddot{q}^l / \dddot{q}^l \text{ piw}^2\); OC 負 \(\text{b}^2\), 抱 \(\text{b}^2\)

[#33] **Cart** (Austroasiatic)\(^{129}\)
NC \(\text{le}^l\); OB \(\dddot{q}^l: \text{le}^2\)

[#34] **Chaff** –\(^{130}\)
NC \(\text{waj}^l\); OB \(\ddot{q}^l / \dddot{q}^l \text{ p}^h\text{wej}^2\)

[#35] **Chest** *rañ*\(^{131}\)
NC \(\text{rañ}^l\); OB \(\dddot{q}^l \text{ reñ}^l\)

[#36] **Child** *dzø*\(^{132}\)
NC \(\text{dzø}^2\); OB \(\dddot{q}^l: \text{sw}^2\); OC 子 \(\text{ts}^2\)

[#37] **Circular** (Austroasiatic)\(^{133}\)
NC \(\text{wvl}^l\); OB \(\ddot{q}^l: \text{wen}^2\); OC 員 \(\text{w}^n\)

[#38] **Clasp** (Austroasiatic)\(^{134}\)
NC \(\text{kep}\); OC 夾 \(\text{krjap}\)

\(^{125}\) 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:table5) for the AA association; Lehman (1963:38) associates [#22] *Boat* in NC. The OB inscriptive form with \(\text{hr}^-\) in WK (3.367) may evince scribal error rather than an external source.

\(^{130}\) OB *husk*. The alternation between Mizo vaj \(\text{chaff}\) and \(\text{p}^h\text{vaj}^l \text{ shavings}\) suggests external influence. Matisoff’s (2000b:365) compares OC 撲 \(\text{paj-s} < \text{par-s sow}\) which Matisoff (2003:394;425) compares with the Mizo \(\text{var}^l\) \(\text{sow}\).

\(^{131}\) 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 \(\text{dz}^-\) and \(\text{z}^-\), corresponding to OB \(\text{ts}^-\) and \(\text{s}^-\), respectively. Sagart (2006a:219) rejects Benedict’s (1972a:158, 1972b:30) comparison of 親 \(\text{ts}^n\) *parents, relatives*.


\(^{134}\) See Shafer (1952:157) and Shorto (2006:342) for the AA association.
The variation of liquid coda in NC suggests external influence.

OB *con*; control; brood; OC *jion*; cover. See Shafer (1952:142), Schuessler (2007:274-5) and Matisoff (2009:16) for the AA association; see also Shorto (2006:339-40).


Schuessler (2007:47;478) suggests OC TC-II to be derived.

Luce (1981:32) conflates OB *qei*; awl, pierce and *qej*; thorn. Benedict (1972a:63-4) compares Thado/*s* panji, but VanBik’s (2009:160) comparison here is preferable.

Okell (1969:208) suggests OB *qei*; reject, decline and *qei*; push/set aside may reflect a lost transitivity distinction. OB *qej*; break off and OC *paj*; break, smash are plausibly related, but Benedict’s (1972a:59) comparison of Mizo *paj* (< *paj*; bore) is unlikely; Matisoff (2008:31-2) compares NC *paj* due to its common meaning of pregnant, but the root meaning is carry on self rather than conceive.


See Benedict (1996a) and Pulleyblank (1995a:179-80) for areal associations.
Dove *kʰraw\(^{143}\)
NC kʰru¹; OB ʰ r / ʰ r sar / ʰ r kʰ(r)iw⁴²; OC ] ʰ r k(r)aw

Dream *məŋ\(^{144}\)
NC məŋ²; OB ə̌ ə̌ ə̌ mek; OC ə̌ ə̌ ə̌ məŋ(-s)

Dry (Austroasiatic)\(^{145}\)
NC kəŋ⁻; OB ə̌ ə̌ ə̌ kəŋ¹

Dumb *ʔa\(^{146}\)
NC ʔa²; OB œ ə ə ə; OC ʔ(r)ə ʔ(r)ə ʔ(r)ə

Ear *hb na\(^{147}\)
NC ʰ na¹; OB ɾə ɾə ɾə ɾə; OC ɾə ɾə ɾə ɾə

Eight *hb rjet\(^{148}\)
NC Liat; OB ʰ r / ʰ r s ʰ rjet; OC ʰ r ʰ rjet

Elephant (Austroasiatic)\(^{149}\)
NC waj¹; OC ɾə ɾə ɾə ɾə

Emerge *twak
NC tsʰak; OB ɾə ɾə ɾə ɾə ɾə

Enclosure (Austroasiatic)\(^{150}\)
NC ʰ(r) vaŋ¹; OB ɾə ɾə ɾə ɾə ɾə

Erect *dzwak\(^{151}\)
NC dzək; OB ɾə ɾə ɾə ɾə ɾə

\(^{143}\) 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 ɾə ɾə ɾə ɾə ɾə composure in compounds concerning somnambulism is unrelated.

\(^{145}\) See Schuessler (2007:261-3) for the AA association.


\(^{147}\) See Nishi (1974:18) for the OB reconstruction.

\(^{148}\) 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\(^{1}\) elephant and zaj\(^{2}\) temperament may both be related to OC ɾə ɾə ɾə ɾə material, talent is rejected by Baxter (1994a:28-9).


[#59] Exchange (Areal)\footnote{152}
NC lej\textsuperscript{2}; OB ɔɔ ~ ɔɔ ~ ɔɔ \(\text{h}l\text{ej}\textsuperscript{1/2}\)

[#60] Excrement *h\textipa{l}\textipa{j}a\footnote{153}.
OB ɛqì / \$ ɔɔ k\textipa{h}\textipa{j}i; OC 屎 \(\text{h}\textipa{j}\textipa{a}\)

[#61] Extinguish *mj\textipa{t} / *mj\textipa{t}\footnote{154}
NC mt; OC 滅 m\textipa{c} < mj\textipa{t}, 萎 mj\textipa{t}

[#62] Eye (Austroasiatic)\footnote{155}
NC mt; OB ɛqÌ .mj\textipa{k}; OC 目 mw\textipa{k}

[#63] Face, Lips (Austroasiatic)\footnote{156}
NC ʰmvl\textsuperscript{2}; OC 吻 mw\textipa{n}, 面 m\textipa{j}an-s

[#64] Fall (Austroasiatic)\footnote{157}
NC kl\textipa{v}\textsuperscript{2}; OB ɔqì / \$ kl\textipa{e}; OC 下 - gr\textipa{a}(-s)

[#65] Fat *saw\footnote{158}
NC t\textipa{h}aw\textsuperscript{4}; OC 膀 saw

[#66] Father *pa\footnote{159}
NC pa\textsuperscript{2}; OB ʰ / o p\textipa{h}; OC 父 ba\textsuperscript{7} / pa\textsuperscript{7}

\footnote{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.}

\footnote{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 ʔe\textipa{2} defecate, excrement.}

\footnote{154}{Matisoff (1983:472) compares OB ɛq Reef shut eyes, which Benedict (1972a:99) treats as a variant of ɛq def; ʰmin² have eyes closed, doze, yet the discussion in 3.1.4 shows the rhymes -\textipa{n} and -\textipa{t} to be suggestive of external influence. OC ᄰ has an MC ablaut in a.}

\footnote{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).}

\footnote{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.}

\footnote{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-.}

\footnote{158}{Matisoff (1974:189) tentatively compares ɛq ʰwil\textsuperscript{1} fat, but Matisoff (2001:14) reverts back to Benedict’s (1972a:63-4) original distinction.}

\footnote{159}{OB ʰ/ə father, a 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 ʰə / ʰəəə / ʰəɨj father may perhaps be a later variant is supported by similar forms under \#114 Mother.}
Fathom *(b)lam 160
NC (b)lam¹; OB ες lam¹; OC 卌’lam¹, 卸 s-lam¹

Feed *(b)das 161
NC дээс; OB 喂 tse²

Fire *(b)maj² 162
NC maj²; OB ṭi²; OC 火 ’maj²

Fish *(b)na² 163
NC (b)na²; OB cl: ηe²; OC 魚 ηa

Five *(b)na² 164
NC na¹; OB cl: ηe²; OC 五 ’na²

Flap, Flat (Austroasiatic)165
NC (k)l(h)vp, (h)lvm*, jap; OB εςδ ~ εςδ hljep, εςδ lip, εςδ jep; OC 葉 lap, 簾蝶 ’ljap

Flea *(b)lij 166
NC lij¹; OB εςξ: / εςδ hlij²

Flesh *(b)sja² 167
NC sa²; OB ςςς: se²

Flower, Burn (Austroasiatic)168
NC pər¹, pɪl*, hvl*; OB əl we¹, ə pa², əδ: pen²; OC 喘 ’baj, 燈 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 ʤ-, but notes Thurgood’s (1977:193) ʤ- 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 ρ ν ke² in Hla Pe’s (1967a:88-9) piscine loanwords from Mon, yet Hla Pe’s (1967a:86) identification of ρςςς ~ ρςςς tem(8)yε fisherman as a Mon loanword suggests possible AA influence and compares favourably with OC TC-I.
164 NC TC-I 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 εςδ and εςδ. See Shorto (2006:344;349;355-6) for the AA link.
166 Weidert (1987:440-1) suggests TC-I 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 ρεδ; pen² flower and accounting for Weidert’s (1987:125-6;132) difficulty in associating TC-II with NC TC-I.
[76] Follow (Sinitic)\textsuperscript{169}
NC 随 s-lwaj

[77] Forest, Woods *ram\textsuperscript{170}
NC 木 r-em; OC 林 r-am, 森 s-ram

[78] Foot, Leg *pʰaj\textsuperscript{171}
NC pʰaj\textsuperscript{2}; OB ა = pʰa\textsuperscript{2}

[79] Fork (Austroasiatic)\textsuperscript{172}
NC ka(ŋ)\textsuperscript{2}, kʰa\textsuperscript{2}; OB კო kʰe\textsuperscript{2}, ხი kʰe\textsuperscript{2}; OC ར ལ ga\textsuperscript{7}

[80] Four *lja\textsuperscript{173}
NC 利 l\textsuperscript{1}; OB ლო l\textsuperscript{2}; OC 四 s-lja-s

[81] Fruit \textsuperscript{*}sa\textsuperscript{174}
NC tʰ\textsuperscript{j}\textsuperscript{2}; OB სი s\textsuperscript{2}

[82] Fruit, Rice (Austronesian)\textsuperscript{175}
NC 粗 ras; OC 粗 ras

[83] Ginger (Areal)\textsuperscript{176}
NC tʰi\textsuperscript{ŋ}\textsuperscript{1}; OB ჰე j\textsuperscript{2}; OC 薑 kaŋ

[84] Give *pjā\textsuperscript{2} / *pja\textsuperscript{177}
NC pa\textsuperscript{6}; OB ფო/ ფი s\textsuperscript{2}; OC 畀 pja-s

\textsuperscript{169} See Sagart (1995a:251) for the Sinitic association. Matisoff’s (1992:164-5) comparison of აქ siw\textsuperscript{7} to, thus stems from his overly literal interpretation of დ as თ u and ი as discussed in 3.1.3.

\textsuperscript{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 ჰ ~ ჰ: rwim\textsuperscript{12} cluster; gather which Hla Pe (1967a:85) and Shorto (2006:213) identify as a MK loan.

\textsuperscript{171} Matisoff (1978b:30) rejects Nishida’s (1968:22) proposal that OB pʰ- corresponds to velar initials elsewhere. Hla Pe (1967a:84) identifies the second syllable of ჰი pʰnep sandal as a Mon loanword.

\textsuperscript{172} OB ჯა - ჯ: door; branch; OC door. See Shafer (1952:151-2) and Shorto (2006:177) for the AA link.

\textsuperscript{173} OB ჯა - ჯ: door; branch; OC door. See Shafer (1952:151-2) and Shorto (2006:177) for the AA link.


\textsuperscript{175} OC 粗 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\textsuperscript{2} and lat attest the sporadic hardening of -s in numerals and loanwords.


\textsuperscript{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 ნ bjt nose whose MC reflexes bjt and bjh\textsuperscript{b} evince a special development of -s as discussed under [#80] Four, [#138] Seven and [#173] Two.
Gobble (Austroasiatic)\textsuperscript{178}
NC $h(r)v; OB \varnothing\varnothing \, h\varnothing; OC \, \varnothing \, gap$

Grandfather *paw\textsuperscript{179}
NC pu\textsuperscript{1}; OB $\varnothing\varnothing$ / $\varnothing\varnothing \, p^{\text{iw}}$, $\varnothing$ / $\varnothing\varnothing \, p^{\text{iw}}$

Grandmother *pj\textsuperscript{180}
NC pi\textsuperscript{1}; OB $\varnothing\varnothing$ / $\varnothing\varnothing \, p^{\text{ji}}$; OC 姘 pj\textsuperscript{2}

Grease, Liquid *(h)rk\textsuperscript{181}
NC $h\varnothing\varnothing$; OB $\varnothing\varnothing$ / $\varnothing\varnothing \, r\varnothing$

Ground (Austroasiatic)\textsuperscript{182}
NC lej\textsuperscript{1}; OB $\varnothing\varnothing$ / $\varnothing\varnothing \, mlj\textsuperscript{1}$; OC 地 ljaj-s

Hair (body) *(h)mwl\textsuperscript{2}
NC $h\varnothing\varnothing$; OB $\varnothing\varnothing$ / $\varnothing\varnothing \, mwij$\textsuperscript{2}

Hair (head) (Austronesian)\textsuperscript{183}
NC sem\textsuperscript{2}; OB $\varnothing\varnothing$ ts$^{\text{h}}$em\textsuperscript{1}; OC ɔ ɔ sram

Head (Austronesian)\textsuperscript{184}
NC lu\textsuperscript{1}; OC 首 hlov\textsuperscript{2}

Heavy *rk\textsuperscript{185}
NC rk; OC 栗 rac

Hole (Austroasiatic)\textsuperscript{186}
NC $\text{hv}ν$; OB $\varnothing\varnothing$ k$^{\text{h}}$win\textsuperscript{2}; OC 空 k$^{\text{h}}$wan

\textsuperscript{178} OB bite, snap at; OC suck up. See Shorto (2006:356-7) for the AA link.

\textsuperscript{179} OB grandfather; masculine suffix. See the discussion under [#87] Grandmother for OB TC-II.

\textsuperscript{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 p$^{\text{i}}$ big (of female animals), an irregular reflex of NC pi\textsuperscript{2}, and ی$^{\text{r}}$ bj/g1317 female of animals.

\textsuperscript{181} OB liquid extract. Confusion with $\varnothing\varnothing$ arek 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 沥 lak liquid.

\textsuperscript{182} See Shafer (1952:134;148) and Schuessler (2007:210) for the AA association. The OC comparison is from Sagart (2006a:218).

\textsuperscript{183} See Matisoff (1976a:285) and Shorto (2006:237) for the AA association.

\textsuperscript{184} See Peiros & Starostin (1984:125) and Sagart (1999b:155, 2005a:163) for the AN association.

\textsuperscript{185} OC dense, compact. Benedict’s (1972a:104) comparison of OB ɔ$\varnothing\varnothing$ lij$^{2}$ heavy is not supported.

\textsuperscript{186} See Matisoff (1976a:285) and Shorto (2006:237) for the AA association.
See Pulleyblank (1966a:11) and Shorto (2006:220) for the areal association.

See Benedict (1972a:27) for the semantics of OB hungry.

Matysoff’s (1978a:110) comparison of *tʃət net 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.


Mizo/Zahau TC-IIA and the Tedim/Sizang irregular vocalism suggests external influence. The discussion in Matysoff (1970:31) suggests there may be a link with the AA loan [John].

OB slightly bitter, breath, life; OC breathe. The OB semantic link could be due to accidental homophony, but *ɪ mɪm odor, smell, for which see [John] Snell, and *ɪ sɪm sound, voice, related to *ɪ heart, mind by Benedict (1972a:51;184), seem to carry the semantic weight in the compounds *ɪ mɪm əʊdər and *ɪ sɪm əʊdər voice.

Matysoff (1988a:1185) reconstructs Loloish TC-II.

OB left; OC lame. See Hla Pe (1967a:76;89) for the AA association.
The NC variation suggests external influence.

Weidert (1987:36) provides further support for TC-II. Benedict (1972a:180) compares ṣan < sjan 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).

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.

OC night; evening. See Schuessler (2007:561) and [#163] Sun for evidence that OC -k was a later development.

See Benedict (1967:295) for the TK association.

See the discussion under [#66] Father for OB TC-III. Benedict’s (1972a:66;193) comparison of Mizo maw’ daughter/sister-in-law is not supported phonologically or semantically. OB mį’ mother, whose TC-II form is still attested in Bradley’s (1979:312-3) comparison of a compound with mawi child as mį’ somi’ daughter, and maw’ / maw’ mį’ 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 kəm₁; OB əkəm₁; OC 含 `gəm, 頜 `gəm², 啜 `ʔəm²

#116 Nail, Claw *sjæn² 204
NC təm²; OB (əkəm)əkəm: (lek)əpən²

#117 Name *(b) mjæn / *(b) mjaŋ 205
NC hmrjən¹; OB əkəm əmrjən¹, əkəm hmrjən¹; OC 名 mjaŋ

#118 Near *(b) naj² / *(b) naj² 206
NC (b) naj²; OB ən²; OC 邊 nəj²

#119 Neck (Areal)²⁰⁷
NC (b)rvəp; OB əkəm ıpən¹; OC 頸 rjən²

#120 New *sar ²⁰⁸
NC tʰər¹; OB əwən²; OC 鮮 san¹

#121 Nine *kʷəw² ²⁰⁹
NC kəa²; OB əkəm/əkəm əkw²; OC  רחב kʷən² < kʷəw²

#122 Nose *(h)nər ²¹⁰
NC hnr¹; OB əh ən²; OC 嘆 `s-nan-s

#123 Onion (Austroasiatic)²¹¹
NC sən²; OB =əkəm =əkw / -əkəm -swən¹; OC ṣənə `swan-s

#124 Otter *(h)ram² ²¹²
NC həm²; OB əkəm pʰəm¹

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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 æ ablaut.

206 Matisoff’s (1998:778) difficulty correlating Loloish naj² with OB stems from the æ/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 -ə 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 kʷ- seems to have also occurred in NC to allow lowering of -ə to -ə. 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:table11), 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 bon\(\mbox{\textsuperscript{\textordfisk}}\); OB ə\(\mbox{\textsuperscript{\textordfisk}}\) prwij\(\mbox{\textsuperscript{\textordfisk}}\); OC 犟 prwŋ

[#126] **Palm, Sole** (Areal)\(^{214}\)
NC p\(\mbox{\textsuperscript{\textordfisk}}\)es; OB -əː: we\(\mbox{\textsuperscript{\textordfisk}}\); OC 扶 pa

[#127] **Parrot** *gja?\(^{215}\)
NC ki\(\mbox{\textsuperscript{\textordfisk}}\); OB ə\(\mbox{\textsuperscript{\textordfisk}}\)/\(\mbox{\textsuperscript{\textordfisk}}\) kij\(\mbox{\textsuperscript{\textordfisk}}\)

[#128] **Person** *mja?\(^{216}\)
NC mi\(\mbox{\textsuperscript{\textordfisk}}\); OB ə\(\mbox{\textsuperscript{\textordfisk}}\)/\(\mbox{\textsuperscript{\textordfisk}}\) (\(\mbox{\textsuperscript{\textordfisk}}\)) mja?\(\mbox{\textsuperscript{\textordfisk}}\)(me\(\mbox{\textsuperscript{\textordfisk}}\))

[#129] **Pheasant** (Sinitic)\(^{217}\)
NC (h)lk; OB ə\(\mbox{\textsuperscript{\textordfisk}}\) rec; OC 鶴 ljaq

[#130] **Pig** *waq\(^{218}\)
NC wək; OB ə\(\mbox{\textsuperscript{\textordfisk}}\) wek; OC 灶 pra

[#131] **Rain** *was\(^{219}\)
NC r-wes; OB ə\(\mbox{\textsuperscript{\textordfisk}}\) rwe\(\mbox{\textsuperscript{\textordfisk}}\); OC 雨 wa\(\mbox{\textsuperscript{-s}}\)

[#132] **Ripe** *h
mjaŋ\(^{220}\)
NC h\(\mbox{\textsuperscript{\textordfisk}}\)mjaŋ; OB ə\(\mbox{\textsuperscript{\textordfisk}}\)\(\mbox{\textsuperscript{\textordfisk}}\)mjaŋ\(\mbox{\textsuperscript{\textordfisk}}\)

[#133] **Road** *lmaŋ\(^{2}\)
NC lem\(\mbox{\textsuperscript{\textordfisk}}\); OB ə\(\mbox{\textsuperscript{\textordfisk}}\) lem\(\mbox{\textsuperscript{\textordfisk}}\)

\(^{213}\) 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 ə\(\mbox{\textsuperscript{\textordfisk}}\)/\(\mbox{\textsuperscript{\textordfisk}}\) p\(\mbox{\textsuperscript{\textordfisk}}\)aw\(\mbox{\textsuperscript{\textordfisk}}\) palm, sole probably stems from ə\(\mbox{\textsuperscript{\textordfisk}}\)/\(\mbox{\textsuperscript{\textordfisk}}\) p\(\mbox{\textsuperscript{\textordfisk}}\)lekwe\(\mbox{\textsuperscript{\textordfisk}}\) in which ə\(\mbox{\textsuperscript{\textordfisk}}\)/\(\mbox{\textsuperscript{\textordfisk}}\) p\(\mbox{\textsuperscript{\textordfisk}}\)lek, from a MK root for palm in Shorto (2006:166), has been reanalysed as ə\(\mbox{\textsuperscript{\textordfisk}}\) p\(\mbox{\textsuperscript{\textordfisk}}\) v\(\mbox{\textsuperscript{\textordfisk}}\) foot as discussed in [#78] Foot, Leg and ə\(\mbox{\textsuperscript{\textordfisk}}\)\(\mbox{\textsuperscript{\textordfisk}}\) lek hand to give ə\(\mbox{\textsuperscript{\textordfisk}}\) p\(\mbox{\textsuperscript{\textordfisk}}\)w\(\mbox{\textsuperscript{\textordfisk}}\) sole and ə\(\mbox{\textsuperscript{\textordfisk}}\)/\(\mbox{\textsuperscript{\textordfisk}}\) lekwe\(\mbox{\textsuperscript{\textordfisk}}\) palm. See [#141] Side.

\(^{215}\) Written Burmese ə\(\mbox{\textsuperscript{\textordfisk}}\)wə woman superficially represents min\(\mbox{\textsuperscript{-s}}\)me\(\mbox{\textsuperscript{-s}}\), but its inscripational form ə\(\mbox{\textsuperscript{\textordfisk}}\)/\(\mbox{\textsuperscript{\textordfisk}}\) mjaŋ\(\mbox{\textsuperscript{-s}}\)me\(\mbox{\textsuperscript{-s}}\), 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 man people, but Sagart’s (1999b:135) connection with ə\(\mbox{\textsuperscript{\textordfisk}}\) mjaŋ people suggests original mjəŋ rather than mjaŋ.


\(^{217}\) 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.

\(^{218}\) 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.

\(^{219}\) The evidence in Matisoff (1988a:1017) shows OB TC-III to be derived from LB TC-I.

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82
[134] **Rodent** (Sinitic)**221**
NC ju²; OC 鼠 lōw-s

[135] **Rot** *saw²*
NC tʰu²; OB さい / さい siw²

[136] **Round** *(h)lwm²*
NC ˧lvm²; OB  יודע lwm²

[137] **Seed** *(tsja²)**222
NC tsi²; OB -tsi / -ʦi -tsi’

[138] **Seven** *(h)njas²**223
NC ṝis; OB -ʦi / -ʦi -ʦi’; OC Bush ʦ-hi

[139] **Sharp** *(h)ram¹**224
NC ˧ram¹; OB ʦem¹; OC 鋸 ʦ-hjam¹

[140] **Shut, Close** (Austroasiatic)**225
NC tsvp; OB ʦɪp, ʦɪp ʦɪp

[141] **Side** (Austroasiatic)**226
NC ʦ(bp) ‘iw’; OB ʦ锦标 / ʦ锦标 pʰ ‘ek, ʦ锦标 pʰ ‘en¹; OC 旁 ‘baŋ

[142] **Silver** -(h)⁰**227
NC ʦun¹; OB ʦ锦标 / ʦ锦标 ʦwij¹; OC 銀 ʦpron

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221 OC *weasel*. Sagart’s (1995a:251) association of OC 代表 with Tibeto-Burman 代表 suggests a Sinitic source. Benedict’s (1972a:32;158, 1972b:30) comparisons of 代表 jwin¹ *hare* and 代表 ts(h)an(-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 inscriptive examples. Sagart’s (2006a:215) comparison of 代表 granary is not supported phonologically.

223 See Matisoff (1997a:85) for the NC liquid initial. OB and OC manifest the same hardening of -j/g937s to -j/g937t which, possibly for purposes of differentiation, happened earlier than in [#173] Two. Benedict (1972a:16;93) suggests that ypsum seven reflects a quinary system of five and two: Matisoff (1985b:432) suggests that  gypsum unit may refer to the five fingers of the hand and tentatively compares NC  gypsum *hand*; Luce (1977) notes inscriptive  gypsum seven curiously reflects  gypsum k’wik six.

224 Following Benedict (1972a:53, 1973b:6-7), a shift of ʦ(bp) ‘iw’ 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 代表 to be of no reconstructive 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.
Six *<i>rwa</i>k<sup>228</sup>
NC ɬok; OB  /<i>k</i>wik; OC ɭ <i>rwa</i>k

Sleep (Austroasiatic)<sup>229</sup>
NC ʔi; OB  ʔip

Slingshot *<i>lj</i>a<sup>2</sup>
NC li²; OB  /<i>lij</i>²; OC <i>lj</i>a²

Small-bird (Austroasiatic)<sup>231</sup>
NC ʔar¹; OC  ?an-s

Smell *<i>nam</i><sup>232</sup>
NC nem¹; OB  nem²/²

Smoke *<i>k</i>hɔw<sup>2</sup><sup>233</sup>
NC <i>U</i> /<i>x</i> <i>k</i>iw²

Snake *<i>rwa</i>l<sup>2</sup><sup>234</sup>
NC <i>U</i>; OB  /<i>x</i> mrwi¹; OC  <i>rwa</i>l²

Snot *<i>nap</i><sup>235</sup>
NC <i>ep</i>; OB  <i>ep</i>

Sojourn *<i>tsam</i><sup>236</sup>
NC <i>tsam</i>¹; OB  <i>tsam</i>¹

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<sup>228</sup> OB prefixal ɭ<sup>-</sup> is noted by Benedict (1987:64) elsewhere in TB.

<sup>229</sup> Luce (1985:II.78-9) notes -<i>p</i> 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 <i>sip</i> compress, cram, put to sleep is a causative derivative.

<sup>230</sup> OB ; OC . Matisoff’s (2003:404;422) comparison of Mizo <i>t</i> <i>l</i> arrow and Tedim <i>t</i><i>l</i> bow with OC is criticised by Sagart (2006a:218) with the phonologically tenous comparison of <i>dan</i> shoot pellets at.

<sup>231</sup> See Schuessler (2007:556), supported by the forms in Shorto (2006:415), for the AA association.

<sup>232</sup> 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.

<sup>233</sup> Benedict’s (1972a:159, 1972b:30) comparison of <i>wan</i> smoke, steam is phonologically unlikely.

<sup>234</sup> The OC comparison is from Jacques (2004:222) who reconstructs <i>m</i>-<i></i>. Luce (1962:tableA) shows prefixal <i>m</i>- to be retained in some SC languages; the NC and OB shift to <i>c</i>-<i></i> is likely related to this prefix discussed further in Matisoff (2000a:170-1).

<sup>235</sup> See [#147] Smell for a possible association.

<sup>236</sup> 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).
(Areal)238

NC (h)nVm¯, hn

OB

OC

239

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

240

OB bough; counter of rod-like objects. See Luce (1973:listA) for the TK association. An association of Tedim ke/g446 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 zung/B finger with OB æqæː kʰjwinʔ on the basis that the coda of the first syllable in æqæː kkhjw⁄g551/g446² finger has spread to the initial of the second syllable. However, in spite of Ohno (2005:277-9) not noting it in the inscriptions, Hla Pe (1967b:183-4) treats æqæː kʰjwinʔ 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).

237 Luce (1981:33) treats OB ḷi: nwi² and ḷi: nwi² 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 ḷi: nwi² soften; it possibly represents a back-formation of the Pali loan ḷi: nwi² that refers to minute objects. Gong’s (1980:480) OC comparison, with which Pulleyblank (1973:121) associates the ablaut variant ḷa nwa weak, soft, is tonally problematic; see [#153] Soft₂, Low.

238 OB soft; subside; OC soft. Hla Pe (1960:83) and Stewart & Dunn (1940-81:198;200) identify ḷi: nip subside as a Pali/Sanskrit loanword. It is related to ḷi: nip press and ḷi: nim suppress with derivatives ḷi: nim² low, ḷi: nim¹ suppress and ḷi: nim² lower. See Schuessler (2007:442) for AA influence; see Pulleyblank (1973a:121) and [#152] Soft; for several OC words for soft beginning with n- but with discrepant rhymes.

239 See Luce (1980:37) for OB ni: nwe². See also the AA forms in Shorto (2006:163).
See Benedict (1976c:93) and Shorto (2006:353) for the areal associations. NC tσap lungs may be related, but see Matisoff (1978a:113-9).

See Matisoff (1985a:149) for the Indo-Aryan association.


Matisoff (1972a:47) notes LB alternations with -p.

The source of OB medial -r- is discussed by Benedict (1972a:64) and Matisoff (1985a:31).

There is a possible association with [#75] Flower, Burn.

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.

Sagart (1999b:41) reconstructs OC h-r-, while Norman & Mei (1976:286-8) and Pulleyblank (1983:427-8) favour l-r-. 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 kəj⁴⁴ tiger may ultimately be related to OB, while Benedict (1972a:116) prefers to compare OB əŋk(əd) kʰj(ə) (sec) leopard, but the semantic core is əd leopard; neither is particularly likely.

OB lacks initial aspiration due to it being a bound morpheme. Benedict (1972a:145) compares OB əŋk kjec compact, twist, but Nishi (1974:5;36) reconstructs original -k.
[\#170] **Tongue, Lick** (Areal)\textsuperscript{251}
NC le̞j', ljak; OB ɕɡə̆ ʰljə́j', ɕɡə̆ ʰlje̞k; OC 舌 lat, 舌 lja̞

[\#171] **Tooth** (Austroasiatic)\textsuperscript{252}
NC ha̞; OC 牙 ʰɲra

[\#172] **Tree** *sjoŋ?\textsuperscript{253}
NC tʰɲ̣; OB ʰə̆ sec; OC 薪 sə́ŋ

[\#173] **Two** *(h)njos\textsuperscript{254}
NC ʰnis; OB ʰʃə̆ ʰnec; OC 二 njəs

[\#174] **Vagina** *(h)əw\textsuperscript{255}
NC ʃə̆; OC 魚 tʰəw\textsuperscript{7}

[\#175] **Village** *(h)əw\textsuperscript{256}
NC kə̆a; OC 丘 kʰəw\textsuperscript{4}

[\#176] **Viscous** *(h)naŋ\textsuperscript{257}
NC ʰnaŋ; OB ʃə̆ ʰnəŋ; OC 潰/穢 naŋ\textsuperscript{(7)}

[\#177] **Warm** *(h)əw\textsuperscript{258}
NC ʰlə̆m; OB ɕɡə̆ ʰlə̆mɪ; ɕɡə̆ ʰlə̆mɪ; ɕɡə̆ ʰlə̆mɪ; OC 暧 ɨwə̆m

[\#178] **Wash** *(h)sə̆\textsuperscript{259}
NC sɨ̆; OB ɕə̆ː / ɕɡə̆ ʃə̆ hɪə̆; OC 酒 ˈs-tsʰə̆\textsuperscript{7}

\textsuperscript{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 ɨ.

\textsuperscript{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 oGm; sw to tooth are difficult to reconcile phonologically.


\textsuperscript{254} See [\#138] Seven.

\textsuperscript{255} OC anus. Benedict’s (1972a:53) comparison of ɕɡə̆ ɨwə̆ ə́vula is is kept separate by Matisoff (2008:130-4).

\textsuperscript{256} Benedict (1972a:109) compares ɡə̆ / ɕɡə̆ ɾwĕ́ 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 -ə̆ -h with the earliest example ɕɡə̆ -h in MZ (A.8-9) attesting a curious -awə́ 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 -ə̆ -h with TC-II, discussed in 3.4, but ɡə̆ ɾwa⁴ is in TC-I and Ohno (1967:88) is more sceptical.

\textsuperscript{257} OB dew, fog, mist; OC heavy with dew/grain. See Schuessler (2007:439) for the OC TC-I/II distinction.

\textsuperscript{258} See Bodman (1980:124) for the OC -m coda.

\textsuperscript{259} The NC comparison is from Löffler (1966:134). The OC initial is supported by its phonetic 西 ʰwest which is homophonous with ʰs-tsʰə̆j nest, roost; the merger with 洗 ʰsăj < ʰsar ʰwash occurred later. Pulleyblank (1962:132;215-6, 2001:48) and Sagart (2004:71-2) alternatively reconstruct OC ʰs-n-.
[#179] Wash₂ (Austroasiatic)²⁶⁰
NC su²; OC 滷/糧 səw²

[#180] Water *twaj²²⁶¹
NC tuj²; OB (o).ops; (o) ops (tam¹)h wij²; OC 水 s-twaj², 桿 twaj²

[#181] Weave *təq²⁶²
NC tek; OB qə δ rek; OC 織 tak

[#182] Weep *krap²⁶³
NC krep; OC 泣 k¹rəp

[#183] Wind *ljə
NC klʰi¹; OB ʃə / sə ʃ lij¹

[#184] Wither *raw²⁶⁴
NC raw¹; OB ʃə ʃ rew¹

[#185] You (Areal)²⁶⁵
NC nəʃ²; OB ʃə nəʃ¹; OC 汝 na², 爾 nə², 乃 nə(ŋ)²

²⁶³ Schuessler (2007:423) suggests the OC aspiration may have an onomatopoeic source.
²⁶⁴ Benedict’s (1972a:263) comparison of Mizo raw’ dry is problematic.
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 \( \alpha/a \) 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 \( \alpha/a \) 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 \( \alpha/a \) 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 \( \alpha \) 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 \( \alpha \) 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 \( \alpha \) to \( e \) in accordance with the proposals in

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\(^{266}\) 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.

Crothers (1978:109) that the common vowel system $i$, $u$, $e$, $a$ derived from an original and $i$, $u$, $\vartheta$, $a$.\footnote{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 $i$, $u$, $e$, $a$.}

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 $\vartheta/a$ vowel system attested there may be treated as only having one vowel $a$ if $\vartheta$ 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 $\vartheta$ in the analysis proposed here. Lehmann’s (1952:112) quite valid proposal to treat the solitary Indo-European vowel as a default feature of syllabicicty, 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 $\vartheta/a$ 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’ $\vartheta/a$ analysis, dismisses both the analyses of $\vartheta$ 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 $\vartheta$ are merely notational distinctions;\footnote{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.} 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 $\vartheta$ is predictable in environments that are unequivocally identifiable as stress and juncture then marking an underlying $\vartheta$ 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
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 \( /\text{a}g34/\) 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 \( /\text{a}g34/\) is an apophonic derivative of \( \vartheta \) that cannot be compared with \( /j/ \) and \( /w/ \) due to it being able to function as a syllabic base like \( /\vartheta/ \); this differs from Kuipers’ and Pulleyblank’s synchronic analyses of Kabardian and Mandarin respectively where \( /\text{a}g34/\) is allowed to pattern as a feature of openness in the same way that \( /j/ \) and \( /w/ \) pattern as features of palatibility 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 \( /\vartheta/ \) and \( /\text{a}g34/\), albeit with the former being underlingly 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 \( /\text{a}/ \) 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 \( /\vartheta/\text{a}/ \) alternation, Pulleyblank (1965b:98) himself notes the inherent paradox whereby if \( /\vartheta/ \) is originally zero then the vowel \( /\text{a}/ \) 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 \( /\text{a}/ \) 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 \( /\vartheta/\text{a}/ \) 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 \( /\text{a}/ \), corresponding to \( /\vartheta/ \) 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
vb benefactive verb
vi intransitive verb
vt 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 e in the same way as i to i and u to u.
o Corresponds to o in the same way as i to i and u to u.
A Alternation of v/a
E Alternation of e/e
I Alternation of i/i
O Alternation of o/o
U Alternation of u/u
V Unspecified vowel
K Alternation of k with k/h (or rarely t)
D Alternation of η with k/ʔ (or rarely w)
T Alternation of t with d
TS Alternation of ts with dz
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 ?/h/b
H Alternation of h with ?
C Unspecified consonant
n Possible derivation from -ŋ as opposed to -n.

¹ Tone category I
Ⅱ Tone category II
Ⅲ Tone category III
(l/ll/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: 
- b-, d-, dz-, h-, j-, k-, kʰ-, kl-, kr-, krʰ-, l-, lʰ-, m-, n-, nʰ-, η-, ηʰ-, p-, pʰ-, r-, s-, t-, tʰ-, ʈ-, ʈʰ-, w-

Vowels: 
- a, e, i, o, u

v, a, e, i, o, u
?el¹ — MI/TH/ZO/TE/SI el¹ ~ el³, ZA ?el¹ ~ ?el³ salty (v).

?en² — MI en³, ZA ?en³ — vegetable (n); TH en³, TH/ZO/TE/SI en³ food (n).

?a² — (ST *?a², onomatopoeic).¹ MI a² — at³, ZA ?a³ — ?at³ foolish (v).

?aj² — MI a², ZA ?aj², TH/ZO/TE aj², SI aj³ — crab (n).

?ak — MI —ak³, ZA ?ak³, TH —a?³ / ?a³, ZO —a³, TE —ak³, SI —ak³ crow (n).

?am² — MI am³ ~ am³, ZA —?am³ ~ ?am³, TE/SA am³ ~ am³ greedy (v); TH/ZO am³ ~ am³ emulous (v).

?ar¹ — (Austroasiatic).² MI ar¹, ZA ?ar¹, TH a¹, ZO a¹, TE/si ak¹ fowl (n).

?ar¹ — MI ar¹, ZA ?ar¹, TH a¹, ZO a¹, TE/si ak¹ — star (n).

?at — MI/ZA at³ ~ ?at³, TE at³ ~ at³ cut (v); TH/ZO at³ ~ at³ notch (v); SI at³ ~ at³ a³ cleave (v).

?ej¹ — MI ej¹ ~ ej³, ZA ?ej¹ ~ ?ej³ eat (v).³


?en² — MI en³, ZO/TE/SI en³ ~ et look (v).

?en³ — MI/TH en³ ~ en³, ZA ?en³ ~ ?en³ yellow (v); ZO en³ ~ en³, TE en³ ~ en³ green (v); SI en³ ~ en³ yellow, green, blue (v). cf. ?en²

?e² — (Austroasiatic).⁴ MI e³ ~ ek³, ZA ?ek³, SI e³ ~ ek³ defecate (v). MI ek³, ZA ?ek³, TH/ZO e³, TE ek³, SI ek³ faeces (n).

?el¹ — MI/si el¹, ZA ?el¹ lower back (n); ZO/TE el¹ back (n). cf. ?el⁴

?en² — MI en³ ~ en³, TH/ZO en³ ~ en³, SI en³ ~ en³ envy (v); TE en³ ~ en³ idolise (v). cf. ?en¹

?el⁵ — MI er³ plot against (v); ZA ?el³ ~ ?el³, TH el³ ~ el³ contradict (v); ZO/TE/si el¹ ~ el³ clash in personality (v); ZO el³, TE el³ ~ el³ contemptuous (v). cf. ?el¹

?tc — (Austroasiatic).⁶ ZA ?t ~ ?t, TH t ~ t, TE t sleep (v).

?im¹ — MI im¹ ~ in³ drink (v); ZA ?im¹ ~ ?im³ drink (v), ?im³ drink (v).

?im² — MI in³, ZA ?in³, TH/ZO/TE/SI in³ house (n).

?o² — (onomatopoeic). MI o³, ZA ?o³, TH/ZO/TE/SI o³ voice (n).


¹ See Vol.1, Ch.6, #52. ⁴ See Vol.1, Ch.6, #60. ² See Vol.1, Ch.6, #146. ⁵ MI er¹ from VanBik (2009:154). ³ See Vol.1, Ch.6, #144.
?oŋ¹ — MI oŋ¹ ~ oŋ³, ZA ?oŋ¹ boast (v); TH oŋ³ exaggerate (v); ZO oŋ³ ~ oŋ, TE oŋ³ ~ vat, SI uŋ³ boast, exaggerate (v). TH oŋ³ ~ oŋ / oŋ, ZO oŋ³ ~ oŋ / oŋ, SI oŋ / oŋ shout (v).

?oj² — (areal). 7 MI oj³, ZA ?oj³, TH/TE/SI oj², ZO uj² dog (n).

?ok — ZA ?ok, TH/ZO oŋ³, TE/SI uk govern (v).

?om² — MI om³ ~ om³, ZA ?om³ ~ om³, TH om³ ~ om³, ZO/TE/SI om³ ~ om³ exist (v).

?u¹ — MI/TH/ZO/TE/SI u¹, ZA ?u¹ elder sibling (n).

?vr¹ — MI ir¹ throat (n); ZA ?ir¹ outer throat of human (n). MI ir³, ZA ?ir³, ZO ɾa³, TE ik (~ i³), TH ir³, SI ik ~ i³ burp, hiccup (v). 8 MI ɾr¹ outer throat (n); ZA ɾr¹ outer throat of animal (n). MI ɾr³, ZA ɾr³, ZO ɾɾ³ ~ o³, TH/SI o³, TE ɾk ~ o³ wear around neck (v).

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7 See Vol.1, Ch.6, #48.
8 TE ir³ from Bhaskararao (1996:50).
b

ba¹ — MI/TH/ZO/TE/SI ba¹ ~ bet owe (v).

bal¹ — MI/ZA/TE bal³ ~ bei³, TH bal³, SI bal³ ~ bei³ dirty (v). ZA/ZO bal³ dirt (n).

ban¹ — MI/ZA/TH/ZO/SI ban¹ arm (n); TE ban¹ upper arm (n). TE/SI ben¹ ~ ben³ take shortcut (v). MI ban³ ~ ben³ reach for, arrive (v); TH/ZO/TE ban³ ~ bet reach for (v).

bar¹ — MI/ZA bar¹ ~ bar³, TH bar³ ~ be³?, ZO ba¹ ~ bar³, TE/SI ba¹ ~ bak³ feed (vi); MI be³?, TH be³?, ZO ba³, TE bak³ ~ be³?, SI bak³ feed (vi); ZA bar³ feed child (vi), bet³ feed guest (vi).

bej¹ — TH/TE bej¹ ~ bej³ used up (vi); ZO bej¹ ~ bej³ finished (time) (vi); TE bej³ use up (vi).

bel² — ZO/TE/SI bel² ~ bel³ do thoroughly (v).

ben¹ — MI/TE ben¹ ear (n); ZA bej¹ ear wax (n); TH ~bej³ hare (n).

be² — (Austroasiatic). 9 MI/ZA be², TH/ZO/TE/SI be² bean (n).

bel¹ — MI/ZA/TH/ZO/TE/SI bel¹ pot (n).

beŋ² — MI beŋ¹ ~ ben³ / ben³³, ZA beŋ³ ~ beŋ³³, TH/ZO beŋ² ~ be³?, TE beŋ³ ~ bet, SI beŋ³ ~ bek / bet clap, slap (v). TH/TE beŋ¹ ~ ben³ herd by slapping, scare off (v); SI beŋ³ ~ ben³ scare off (v). MI beŋ³³ press with hands (v).

brial¹ — MI brial¹ ~ brial³ circular (v); ZA brial¹ ~ brial³ rounded (edges) (v); TE ~ brial¹ ~ brial³ sit on floor/cushion (v).

bran¹ — MI/ZA/TE bran¹, TH benj¹, ZO bieñ¹, SI bieñ¹ cheek (n).

bias — MI bia³ ~ bia³, ZA bia³ ~ bia³ converse (v); TH be³³ ~ be³³, ZO bie³³ ~ be³³, TE bia³ ~ bia³³, SI bie³³ ~ biek³ propitiate (v). 10

bil³ — TH bil³ outer ear (n); ZO/TE/SI bil³ ear (n).

bok — MI/ZA/TE bok ~ bo³?, TH bo³?, ZO bo³ ~ bo³³, SI bok ~ bo³ prostrate (v).

bow² — ZA/TH/ZO/TE/SI bow² ~ bow³ swell (v).

boŋ² — (Austroasiatic). 11 MI boŋ³, TH/ZO/TE boŋ³ ox (n).

bfa³ — MI bo³³, ZA boa³³, TH/ZO/TE/SI bo³ sperm (n).

boal¹ — MI/TE boal¹ ~ boal³, TH bool¹ ~ bool³, ZO bool¹ ~ boel³, SI buel¹ ~ buel³ wallow (v); ZA boal¹ ~ boal³ wash body (v). MI/TE boal³ III, TH bool³, ZO bool³, SI buel³ wallow (n).

bga³ — MI bo³³ ~ boak³³, TH booo³ ~ booo³ pour (v); 12 ZO booo³ ~ booo³, TE bo³³ ~ boak³³, SI buë³ ~ buëk³ pour (v); ZO boò³ ~ boò³, TE boak³ ~ boak³ / boa³?, SI buëk³ ~ buë³ pour (v).

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11 See Vol.1, Ch.6, #125.
12 MI boak³ from Hillard (1975:19).

9 See Vol.1, Ch.6, #10.
boj¹ — *(Austroasiatic).*

boj¹, ZA –boj¹, ZO buj¹ *bamboo rat (n).*

bos — MI/ZA/TE bo?, TH/ZO bu³ *cooked rice (n).*

bu² — MI/ZA bu³, TH/ZO/TE/SI bu² *nest (n).*

bu³ — ZO bu¹ ~ bot, TE/SI bu³ ~ bok hide (v).

bvl" — *(Austronesian).*

bvl" MI/ZA bol³¹, TH/ZO/TE/SI bol³ base (n). MI bol³¹ ~ bol³³, ZA bol³³, LA bol³³, ZO bol³ ~ bol³³, SI bol³ ~ blunt (v). MI bu³ ~ bol³ lopped off (v); TE/SI bol³ stunted (v); TE buj³ ~ buj³ maimed (v).

bvl" — MI bon³¹ *put on hand/foot (Vb), affix (v); ZA bon³¹ affix (v); TH/ZO/SI bol³¹, ZO/SI bon³¹ ~ bot, TE bol³ put on hand/foot (v). MI/TE bel³ ~ bel³, TH/ZO bel³ ~ bel³³, SI beal³ ~ bel³³ seek refuge (v); MI be³¹ daub (v). put on (v); ZA be³ patch, add more (v); TH/ZO/SI be³³, TE be³ stick (v).

bvg" — MI boj³¹, ZA buj³¹, TH/ZO/TE/SI boj¹ *container (n); SI boj³¹ counter for containers (n). MI buj³¹ sacrificial container (n).*
d


den — MI/ZA/TH/OE/SI den[i] palate (n).


des — MI/ZA do ?, TH/SA da[i] addle (v); ZA da[ii] sad (v); TE de? addle, sad (v).


dap — MI dap[iii] ~ de?, MI dem[iii], ZA dem[iii], TH dap[iii] ~ dap[iii] (~ dep), ZO dap[iii] (~ dep), TE/SA dep overlay (v). MI/ZA dan[iii], TE dan[iii] ~ dep shaded (v); TH/OE dan[iii] seceded place in forest (n). ZA/TH/SA dep chilly (v); ZO dep deathly silent (v).


des — MI/ZA de? crack a flea (v); TH/OE/SI de? crack a flea, sting (v).

de — ZA/TH/OE/SI de ~ det light a wick (v).


dep — MI dep ~ de? adjacent (v); TH dep[i] ~ dep[iii], ZO/TE dep[iii] ~ dep[iii], SI dep[iii] ~ dep[iii] overshadow (v).


diD — MI/ZA/TE/SI dik, TH/ZO di? correct, true (v); MI/ZA di[iii] straight (v).

dil — MI, TH dil[iii] lake (n); TE ~di[iii], SI ~di[iii] lakeside village name (n).


15 See Vol.1, Ch.6, #157.
**dok** — MI dok ~ do? slip out, stretch (v); MI dokII ~ do? slip off (v); ZA dok ~ do? leak (v); ZO do? ~ doIII, TE dok ~ do?, SI dokII ~ dokIII / dokIII pull out (v); TH/ZO doII ~ doIII, TE dokII ~ dokIII, SI dok / dok' protrude (v); TE dokI jut (v).

**dom²** — MI domII ~ domIII hold, support (v); MI/ZA domIIB, SI domII ~ domIII support below (v); TH domII ~ domIII / dop, TE domII ~ domIII lift (v), ZO domII ~ dop support below, lift (v). TH/ZO/TE/SI domIII ~ dop handle carefully (v).

**dom¹** — MI/ZA domI ~ domIII black (vi), domIIB blacken (vt); TH/TE domI ~ domIII blue, green (v); ZO domI ~ domIII black (v); TH/ZO/TE/SI blacken (v).  

**dos** — MI do? want (v); ZA do? love familially (v); TH/ZO/SI duIII, TE do? crave food (v).

**dum²** — MI dumIIIA stream pool (n); TH dumII nook (n); MI dumIIA ~ dumIII, TH dumII pool (v).

**dum¹** — MI/ZA dumI ~ dumIII black (v), dumIIB blacken (v); TH/TE dumI ~ dumIII blue, green (v); ZO dumI ~ dumIII black (v); TH/ZO/TE/SI blacken (v).

**dus** — MI do? want (v); ZA do? love familially (v); TH/ZO/SI duIII, TE do? crave food (v).

**dum²** — MI dumIIIA stream pool (n); TH dumII nook (n); MI dumIIA ~ dumIII, TH dumII pool (v).

**dvk** — (onomatopoeic). MI dukI ~ dukIII, SI dupI ~ dupIII suck an egg (v); ZA dokI ~ dokIII guzzle (v); ZA dikI ~ dikIII peel with teeth (v); ZO diII ~ diIIII, TE/SI dikI ~ dikIII inhale (v). cf. **dvN¹**

**dvk** — (onomatopoeic). MI dukI ~ dukIII, SI dupI ~ dupIII suck an egg (v); ZA dokI ~ dokIII guzzle (v); ZO dikI ~ dikIII peel with teeth (v); ZO diII ~ diIIII, TE/SI dikI ~ dikIII inhale (v). cf. **dvN¹**

**dvL⁺** — MI/TH/ZO/TE/SI dajI fence, hedge (n). MI dalIIA ~ dalIII, ZA dalIIA, TH/ZO/TE/SI dalII ~ dalIII defend (v). MI/ZA dolIIA ~ dolIII dam (v); MI dolIII succeed (v); SI dolI ~ dolIII layer (v). MI dolIII dam (n); ZO/TE/SI dolIII storey, layer (n). MI delIIA membrane (n); ZO/TE/SI delII sheet (n); TE dalII iron sheet (n); SI dalIII fence (n). MI dajIII, ZA dajIIII, TH/ZO/TE/SI dajI dew (n). MI/ZA dajIII ~ dej?, TH/SI dajIII ~ dejIII quiet, cool (v); ZO dajIII ~ dejIII, TE dajIII ~ dej? quiet (v).

**dvN¹** — (onomatopoeic). MI dutI ~ dutIII, dotI ~ dotIII suck up (v); MI donI, TH/ZO/TE/SI donI ~ donIII, TI dutI ~ dutIII drink (v). 16 MI dotI tube (n). cf. **dvk**

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16 MI donI from VanBik (2009:77).
dz

dzan\textsuperscript{2} — MI/ZA fe\textsuperscript{ii}a, TH t\textsuperscript{ii}ej, ZO/TE/SI te\textsuperscript{ii}j axe head (n).

dzh\textsuperscript{1} — MI fer, ZA for drip (n); MI fer\textsuperscript{i} ~ fer\textsuperscript{ii}, ZA for ~ for\textsuperscript{iii}, ZO ta\textsuperscript{i} ~ ta\textsuperscript{ii}, TE tak\textsuperscript{i} ~ tak\textsuperscript{ii} drip (v); SI tak\textsuperscript{i} ~ tak\textsuperscript{ii} drop (v).

dæs — (ST *dæs).\textsuperscript{17} MI/ZA fe\textsuperscript{i} feed regurgitatively (v); ZO ta\textsuperscript{iii} feed elderly/sick (v); TE te? feed via hand (v). cf. tsæ

dza\textsuperscript{2} — (ST *dza\textsuperscript{3}).\textsuperscript{18} MI/ZA fæ\textsuperscript{iii}, TH t\textsuperscript{ii}a, ZO/TE/SI ta\textsuperscript{ii} offspring (n).

dzaj\textsuperscript{1} — MI fa\textsuperscript{ii} ~ fa\textsuperscript{iii} clean (v); ZA fa\textsuperscript{ii} ~ fa\textsuperscript{iii} clean (v), fej\? clean (v); TH t\textsuperscript{ii}aj ~ t\textsuperscript{ii}aj / t\textsuperscript{ii}ej\textsuperscript{iii}, ZO/TE/SI t\textsuperscript{ii}j ~ t\textsuperscript{ii}j husked (v); ZO te\textsuperscript{ii}j wash away (v); TE tej\? wash away, plane (v).

dzan\textsuperscript{1} — (ST *dzan).\textsuperscript{19} MI fan\textsuperscript{i} ~ fan\textsuperscript{iii} stretch (v); ZO/TE/SI tan\textsuperscript{iii}— spacious (v).

dzar\textsuperscript{1} — MI/ZA far, TH t\textsuperscript{ii}a\textsuperscript{ii}, ZO ta\textsuperscript{i}, TE/SI tak\textsuperscript{i} pine (n).

dzaj\textsuperscript{2} — MI fa\textsuperscript{ii}a ~ fa\textsuperscript{iii}a rice grain (n). MI/ZA fæ\textsuperscript{ii}, TH t\textsuperscript{ii}aj, ZO/SI ta\textsuperscript{j} rice (n); TE ta\textsuperscript{j} millet (n).

dzej\textsuperscript{2} — MI/ZA fe\textsuperscript{ii}a; ZO/TE/SI te\textsuperscript{ii}j spear (n).

dzel\textsuperscript{2} — MI/ZA fe\textsuperscript{ii}a ~ fe\textsuperscript{iii} certain, righteous (v); ZO/TE/SI te\textsuperscript{ii} ~ te\textsuperscript{iii} understand (v).

dzem\textsuperscript{1} — MI fep\textsuperscript{i} long feathers near bird’s tail (n); MI/ZA fem\textsuperscript{i}, TH t\textsuperscript{je}\p, ZO/TE tep\textsuperscript{ii}, SI te\textsuperscript{ji} fringe (n); SI team\textsuperscript{iii} underdeveloped (v).

dzenc — MI fe? go to fields (v); ZA fe?, TH t\textsuperscript{je}\p go (v); TE t\textsuperscript{ja?}, SI t\textsuperscript{je}\p return (v).

dzem\textsuperscript{1} — MI fim\textsuperscript{i}, TH t\textsuperscript{iem}\textsuperscript{i} ~ te\textsuperscript{ep play (v); ZO t\textsuperscript{iem}\textsuperscript{i} ~, TE t\textsuperscript{iam}\textsuperscript{i} ~, SI t\textsuperscript{iem}\textsuperscript{i} joke (v).

dzen\textsuperscript{2} — MI fin\textsuperscript{ii} ~ fin\textsuperscript{iii}, TE t\textsuperscript{in}\textsuperscript{ii} ~ t\textsuperscript{it} wise (v); TH t\textsuperscript{in}\textsuperscript{ii} ~ t\textsuperscript{it}, ZO t\textsuperscript{in}\textsuperscript{ii} ~ t\textsuperscript{it} / t\textsuperscript{it} generous (v); SI t\textsuperscript{in}\textsuperscript{ii} ~ t\textsuperscript{it} obedient (v). cf. dzim\textsuperscript{1}

dzim\textsuperscript{1} — MI fim\textsuperscript{i} ~ fim\textsuperscript{iii} clear (v); ZA fim\textsuperscript{i} ~ fim\textsuperscript{iii}, SI t\textsuperscript{im}\textsuperscript{i} ~ t\textsuperscript{im}\textsuperscript{iii} wise (v); TH t\textsuperscript{im}\textsuperscript{i} ~ t\textsuperscript{im}\textsuperscript{iii} clever (v); ZO t\textsuperscript{im}\textsuperscript{i} ~ t\textsuperscript{im}\textsuperscript{iii} clever, clear (v); TE t\textsuperscript{im}\textsuperscript{i} ~ t\textsuperscript{im}\textsuperscript{iii} obedient, intelligent (v). cf. dzin\textsuperscript{1}

dzeal\textsuperscript{2} — MI/ZA foal\textsuperscript{ii} ~ foal\textsuperscript{iii}, TH t\textsuperscript{ool}\textsuperscript{ii} ~ t\textsuperscript{ool}\textsuperscript{iii}, ZO tool\textsuperscript{ii} ~ tool\textsuperscript{iii}, TE taol\textsuperscript{ii} ~ toal\textsuperscript{iii}, SI tuel\textsuperscript{ii} ~ tuel\textsuperscript{iii} overlong (v).

de\textsuperscript{2}k — (ST *d\textsuperscript{2}wak).\textsuperscript{20} MI fok erect (v); MI/ZA fok, TH t\textsuperscript{o?}, TE/SI tok erect (phallus) (v).

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\textsuperscript{17} See Vol.1, Ch.6, #68.
\textsuperscript{18} See Vol.1, Ch.6, #36.
\textsuperscript{19} See Vol.1, Ch.6, #160.
\textsuperscript{20} See Vol.1, Ch.6, #58.
\textbf{dzu} — MI/ZA fu, TH tfu, TE/SI tu sugarcane (n); ZO –tu village name (n).

\textbf{dzun} — MI funIa ~ funII, TH tfunII ~ tfunIII, ZO/TE/SI tunII ~ tunIII wrap (v); ZA funIa ~ funII wrap (vi), funIII wrap (vb).

\textbf{dzur} — MI/ZA furIII, TH tfo?, ZO toaIII, TE/SI tukIII rainy season (n).

\textbf{dzus} — MI fuIII, TE/SI tuIII ~ tok perch (vi).\textsuperscript{21}

\textbf{dzvp} — (areal).\textsuperscript{22} MI/ZA fepIII ~ fe?, TH tfepII ~ tfepIII, ZO/TE tepII ~ tepIII, SI tæpII ~ tæpIII / teIII suck on (v). MI fopIb ~ fo?, TH tfopII ~ tfopIII, ZO/TE topII ~ topIII, SI topII ~ topIII / toIII suck up (v); ZA fopIb ~ fo? suckle (vi); ZA fo? suckle (vi). TH tfipII ~ tfipIII slurp, lap up (v).

\textsuperscript{21} MI fuIII from Chhangte (1993:42).
\textsuperscript{22} See Vol.1, Ch.6, #161.
h

h₁ʰ — TH/ZO h₁ʰ ~ h₁¹ʰ, TH/TE/SI h₁ʰ ~ h₁¹ʰ mix (v).

h₃ — MI hem¹ ~ hem³ claw (v); ZA/TH/ZO/TE/SI hem¹ ~ hem³ scoop into arms (v). ZA hem³ make run into mouth (by mythical human-eating snake) (v).

h₁ — MI/ZA her¹ ~ her¹, TH ha²~ he?, ZO ha¹ ~ ha³, TE/SI h₃k¹ ~ difficult (v).

h₄ — (Austroasiatic). ²³ MI/ZA/TH/ZO/TE/SI ha¹ tooth (n).

h₅ — MI/ZA/TH/ZO/TE/SI haj¹ mango (n).

h₆ — MI haj¹ ~ haj³ / hej?, ZA haj¹ ~ haj³ TH/ZO/SI hej³, TE hej? forget (v). ²⁴

h₇ — MI har² pewter, solder (n); TH he?, ZO ha³, TE/SI h₃k¹ lead (n).

h₈ — MI haw¹ ~ haw³ / hew? reprove (v); TH how¹ ~ how³ reprove, quarrel (v); TI haw¹ ~ haw³, ZO/SI haw¹ ~ haw³ quarrel (v).

h₉ — MI hem¹ ~ hem³ wobble, wag (v); TH/ZO/SI hem¹ ~ hep shift (v); TE hem¹ ~ hem³ squint (v), hem³ ~ hep shift (v).

h₁₀ — MI hig¹ ~ hig³ sour (v); ZA hig³ hig³k³ stink (v); ZO/TE hig³ ~ hit, SI hig³ ~ hig³k³ ferment (v).

h₁¹ — TH/ZO/SI høj³, TE høj? beautiful (v). cf. moj¹²

høj¹ — MI/ZA/TE høj¹ bark (n). cf. K⁰ ok

hōn¹ — MI hon³, TH/ZO/TE/SI hon¹ time (n).

Hvk — (onomatopoeic). MI hōk¹ gasp (v); ZA hōk³, TE hōk¹ ~ hōk³, SI hōk¹ ~ hōk³/ hōk³, ZA ?o¹k, TH o²?, ZO o²? ~ o³¹k, TE/SI o³¹k ~ ok³ choke (v). MI o³¹k ~ o³?, ZA o³¹k ~ o³?, TH/ZO o³¹k ~ o³, TE o³¹k ~ ok³, SI ok³ ~ ok³ / o³¹ halter (v); MI ok³ ~ ok³ retch (v).

HVl — (Austroasiatic). ²⁵ MI e? flame (n/v); ZA e? flame (v); TH/SI e³¹, TE e? red hot (v); ZO e³¹ cinder (n). MI ur³ fumigate (v). ²⁶ TH/ZO/TE/SI o³ — o³š¶ stuffy (v). MI hō³ — hō³, TH/ZO/TE/SI hō³ charcoal (n); MI hō³ — hō³ calscent (v). MI hō³ — hō³ dry, watertight (v); MI hō³ — hō³, ZA hō³, TH/ZO hō³ — hō³ dry to touch (v); TE hō³ — hō³ boil off (v); SI hō³ — hō³ boil off, watertight (v); ZA hō³ — hō³ dry to touch (food) (v); MI/ZA hō³ — hō³ dry food over fire (v); TH hō³ — hō³ dry, steam (v); ZO/TE hō³ — hō³ singe (v), SI hō³ — hō³ wilt (v). cf. Par¹

hŋ² — MI hŋ³, TH hŋ², ZO hŋ² ~, TE/SI hŋ² ~ come (v); ZA hŋ³ come up (v).

hŋ² — (Austroasiatic). ²⁷ MI/TH/SI hŋ¹ ~ hŋ³, ZA ?oŋ¹ ~ ?oŋ³ open (v); ZO/TE hŋ¹ ~ hŋ³ open (v), ZO/TE hŋ³ ~ hoŋ open (v). MI oŋ³ holdy (v), hole (n); ZA ?oŋ³ hole; TH oŋ² —

²³ See Vol.1, Ch.6, #171.
²⁵ See vol.1. ch.6, #75.
²⁶ Mi ur’ from Schuessler (2007:514).
²⁷ See vol.1. ch.6, #94.
on$^\text{III}$ vacant ($v$); ZO/TE/SI on$^\text{II}$ ~ on$^\text{III}$ vacant ($v$), on$^\text{II}$ ~ ot vacate ($v$). MI he$^\text{I}$ ~ hen$^\text{III}$ hollow ($v$); TE he$^\text{I}$ ~ hen$^\text{III}$ perforate, cavited ($v$); SI he$^\text{I}$ cavited ($v$), ho$^\text{I}$ ~ ho$^\text{III}$ hollow, perforate ($v$).
**j**

**jek** — (Austroasiatic).\(^{28}\) MI/ZA zek, TH ודות, TE/SI zek – armpit (n).

**jék** — \(^{29}\) MI/ZA zek ~ ดา, TH داول, ZO ดา ~ ดา, TE zet ~ ดา, SI zek ~ ดา ashamed, humble (v).

**jén** — TH ดา ~ ดา, ZO ดา ~ ดา / zet, TE ดา ~ ดา, SI ดา ~ ดา / zet use (v).

**ja** — TH ดา ~ ดา, ZO ดา ~ ดา, TE/SI ดา ~ zak hear (v).

**jaŋ** — MI ดา upper back (n); ZA/TE/SI ดา dorsum (n); TH ดา crown of head (n). TH ดา ~ ดา, ZO/TE/SI ดา ~ ดา level (v).

**ján** — MI/ZA ดา, TH ดา, ZO/TE/SI ดา lightweight (v).

**jap** — (Austroasiatic).\(^{30}\) MI ดา ~ ดา, ZA ดา ~ ดา, TH ดา ~ ดา, ZO/TE ดา ~ ดา, SI ดา ~ ดา / ดา flap (v). cf. (k)\(^{(b)}\)vp, (b)\(^{(b)}\)vmp.

**jas** — MI/ZA/TE/SI ดา, TH ดา hundred (n).\(^{31}\)

**jaw** — MI ดา ~ ดา vast (v); ZA ดา ~ ดา lie down (v); TH ดา ~ ดา wide (v); ZO ดา fields within region (n); SI ดา ~ ดา sprawl on back (v); TH ดา surroundings (n).

**jep** — TH ดา ~ ดา, ZO ดา ~ ดา, TE ดา ~ ดา wedge (v).

**jin** — MI ดา ~ ดา, TH ดา ~ ดา, ZO/TE ดา ~ ดา, SI ดา travel (v); TH ดา, ZO/TE ดา traveller (n).

**jón** — MI/TE/SI ดา ~ ดา seek (v). cf. jón.

**jow** — MI/ZA/TE/SI ดา, TH ดา ZO.

**jow** — MI ดา ~ ดา, ZA ~ ดา finish (v); TH ดา ~ ดา, ZO/SI ดา ~ ดา finish, win (v).

**jol** — MI ดา ~ ดา, ZA/TE/SI ดา ~ ดา oval (v).

**jom** — TH ดา ~ ดา weak (v) ZO/TE/SI ดา ~ ดา languard (v).

**jón** — TH ดา rod for corncobs (n).

**jón** — TE ดา carry jointly (v).\(^{32}\) ZO/TE ดา ~ ดา summon assistance (v). cf. jón.

**jón** — MI/ZA/TE/SI ดา, TH ดา monkey (n)

**jón** — ZO/TE/SI ดา ~ ดา poor (v); TH ดา ~ ดา ill-natured (v).

**jot** — MI ดา ~ ดา ask (v); ZA ดา follow animal tracks (v); TH ดา ~ ดา walk (v); TE ดา ~ ดา zot, SI ดา ~ ดา ask, grope (v).

**juaŋ** — MI ดา ~ ดา leap (v).\(^{33}\) ZO/TE/SI ดา ~ ดา fly (v).\(^{34}\) TH ดา ~ ดา ~ ดา, TE ดา ~ ดา fly on (v); TE ~zot fly (v).\(^{34}\) TH ดา ~ ดา ~ ดา, ZO ดา ~ ดา zot, TE ดา ~ ดา zot head for pastures new

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\(^{28}\) See Vol.1, Ch.6, #2.

\(^{29}\) See Vol.1, Ch.6 #3.

\(^{30}\) See Vol.1, Ch.6, #72.

\(^{31}\) TH ดา from Luce (1962:tableB).

\(^{32}\) TE ดา ~ ดา from Bhaskaranroo (1996:103).

\(^{33}\) MI ดา ~ ดา from VanBik (2009:207).

\(^{34}\) TE ~zot from Khoi Lam Thang (2001:143).
(v), Sī zuën[iii] ~ zot elope, leave mother to live with father (v).


Jui[2] — (Sinitic).37 MI –zu[iii], ZA zu[iii],–, TH 3u[iii], ZO/TE zu[iii], Sī zv-rodent (n).


Jvj — MI zaj[1], TH zet[iii]–, ZO/TE/SI zei[iii]– song (n); MI zaj[1] ~ zaj[iii] sing (v); MI zei[iii] ~ zet[iii], ZA ze[iii] ~ zet[iii] skilful (v); MI zaj[iii] temperament (n).


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.
**jvm** — MI zam¹ ~ zam³ sprawl, float (v); MI zem³ spread (v); ZA zam¹, TH 3am¹ ~ 3am³, ZO/TE/SI zam¹ ~ zam³ sprawl (v). ZA zem¹ ~ zem³ fly (v); TH 3em¹ ~ 3em³ lie across/on-back (v); TE –zem¹ ~ zem³ swim (v), droop (eyelids) (v); SI zem¹ ~ zem³ go far (projectile) (v); TH 3em¹, ZO/SI zem¹ strand (n); TH 3em³ ~ 3ep, ZO/TE/SI zem³ ~ zep reach for (v). MI zom³, TH 3om³ ~ 3op, ZO/TE/SI zom³ ~ zop join (v).

**jvn** — TH –zen¹, ZO zen¹, SI –zen¹ intestines (n); TE zen¹ intestines, strand (n). MI/ZA zon¹, TH 3in³, ZO/TE/SI zin³ partition (n). cf. **jvy**

**jvy** — MI/ZA zon² hand (n); TH 3on¹, ZO zon² root (n), TE/SI zon² finger, root (n). MI zen¹, SI zon² penis, bee stinger (n); ZA zon¹, TH 3en¹, ZO/TE zon² penis (n). cf. **jvn**

**jvz** — MI/ZA/TH/ZO/TE/SI zin¹ morning (n); MI zin¹ ~ zin³ be early morning, gather (clouds) (v); ZA zin¹ ~ zin³ gather (morning clouds) (v); TH 3in¹ ~ 3in³ dark (v); ZO/TE/SI zin¹ ~ zin³ gloomy (v). MI –zon¹, ZA –zon⁰ dusk (n). MI/ZA/TH/ZO/TE/SI zan³ night (n); TE zan³ ~ zet be night (v). MI zin¹ ~ zin³, TH 3in² ~ 3in³, ZO/TE/SI zin² ~ zin³ dense (v).
k

kém¹ — (Austroasiatic). 41 MI/ZA/TH/ZO/TE/SI këm¹ mouth (n). MI/ZA këm¹, TH/ZO/TE/SI këm¹ ~ këm³ set trap (v).

këp — (Austroasiatic). 42 MI/ZA këp crotch (n). cf. káp

kan² — (Indo-Aryan). 43 MI/ZA/TH/ZO/TE kat¹, SI kën² sulphur (n).

kañ² — MI –kañ¹, TH/ZO/TE/SI –kañ² mosquito (n).

ka(d)³ — (Austroasiatic). 44 MI kañ¹ ~ kan¹ elevated (v); MI kak¹ fork of tree (n), fork (v); ZA kañ¹ ~ kan¹, ZA kak¹ ~ kak¹ apart (v); TH kañ¹ ~ kan¹ rise, convalesce, apart (v); ZO/TE kañ¹ ~ kan¹ convalesce (v); SI kañ¹ ~ kan¹ convalesce, apart (v); TH/ZO/TE/SI kañ¹ ~ kat¹ fork (v). MI/ZA ka¹ mouth (n). TH ka¹ ~ ket / kek¹, TE ka¹ ~ kat¹, SI ka¹ ~ ket open mouth (v). ⇒ k¹añ¹. cf. k¹a²

kap — MI/ZA kap¹ ~ ke³, TH/ZO/TE kap¹ ~ kap¹, SI kap¹ ~ kap¹ / ka³ shoot (v).

káp — MI/ZA/TH/ZO/TE/SI këp couple (n). TH/ZO/TE/SI kap¹ couple of oxen (n). cf. këp

kaw¹ — MI/TH/ZO/SI kaw¹ ~ kaw¹, ZA kaw³ ~ kaw³ divaricate (v).

kañ” — MI/ZA kañ³ ~, TH/ZO/TE/SI kañ³ ~ prawn (n).

këk — MI këk, TH/ZO ke³ ~ ke³, SI këk ~ ke³ crack (v); ZA këk ~ ke³ crack (v), kak crack (v); TE ke³ ~ ke³ tear (v). MI ke³ shatter (v); TH/ZO/SI ke³, TE ke³ leaky (v). MI këkº ~ ke³ pull out/apart (v). cf. kÊvë

kál” — MI kálº, TH kálº ~ ke³, ZO kaº ~ kaº widen, stride (v); ZA kálº stride (v); TE/SI kálº ~ këº widen (v). MI/TE kel¹ ~ kelº walk (v). MI kelº, TH/ZO/TE/SI kelº kidney (n); ZA kelº ~ groin (n); ZA/TH kel¹, LA kæ forkstep (n); TH/SI kel¹ footstep, groin (n). MI kæ¹, TH/ZO/TE/SI kalº interval (n); ZA kerº between (v). MI/ZA kelº, TH/ZO/SI kelº lever, bolt (v); TE kelº ~ kelº lever (v), kelº bolt (v). MI/ZA kanº, TH/ZO/TE/SI kanº ~ kanº traverse (v); TH kæl¹ ~ kelº ascend, traverse (v). MI/ZO/TE/SI kaj¹ ~ kajº, TH kaj¹ ~ kajº / kejº ford (v). cf. klaj¹

kañ” — (Austroasiatic). 45 MI kañ¹ ~ kan¹, MI kñº, ZA kñ¹ ~ ken¹, TH/ZO/TE/SI kñº ~ kenº evaporate (v); MI kñ¹ ~ kanº, MI kñº ~ kenº burn (v); ZA kñº ~ kñº burn (v), kñº burn (v). MI/ZA/TH/ZO/SI kñ¹ ~ kenº fry (v); TE kñº ~ ket / kñº, SI kñº ~ ket scorch (v). 46

kej¹ — (areal). 47 MI/ZA/TH/ZO/TE/SI kej¹ I.

kej¹ — MI/ZA kej¹, SI –kej¹ tiger (n); ZA ~ kej¹ mythical tiger (n); TH kej¹ lion (n); TE ~kej¹ leopard (n).

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 ket from Bhaskararao (1996:51).
47 See Vol.1, Ch.6, #98.
48 ZA has an abbreviated form ki'.

**kej** — MI kej?, ZO kej, TE kej ~ kej? *bite (v).*

**kej** — MI/ZA kej ~ kej* bring (v), kej* bring (v), TH/ZA/TE/SI kej ~ kej* bring (v). cf. (k)* lv  

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

**kel** — MI/TH/ZA/TE kel* II, SI keal* III *goat (n).*

**kew** — MI kew* II, ZA/TE kew?, TH kew ~ kew*, ZO/SI kew* III *hatch (v).*

**ktam** — MI/TH/ZA/TE ktam* II, TH keim* II ~ keim*, ZO kii* II ~ kii* III, SI kii* ~ kii* III *decrease (v). cf. *kh*  

**kil** — MI/TH/ZA/TE kii* II, ZA kii* III *guard (v).*

**kIm** — MI kii* III *complete (v); TH kii* III, TE kii* III ~ kii* III, SI kii* (kii* III) *equal (v). ZA/TH/ZA/TE/SI kii* III ~ kii* III *entire (v). MI kip every (v); TH/ZA/TE/SI kip stable (v).*

**ki** — MI/ZA kii, ZA/TH/ZA/TE/SI ki* II *horn (n).*

**ki** — (ST *gjo*).  

**kir** — MI/ZA kir* II, ZO kir* II ~ kir?, TH kir* II ~ kir?, ZO kia* II ~ kia* III, TE kik* II ~ kik* III *return (v); SI kik* II ~ kik* III / kik* III *discolour (v). cf. *kv*  

**kis** — MI kik, ZA kij* III ~ kij* III, SI kij* III *knock (v).*

**ktw** — MI/ZA/TE kij* III, TH kij* III *elbow (n).*

**kak** — (Austroasiatic).  

**kOl** — MI koi* II, TH/ZA/SI koi* yoke, hand-cuffs (n).  

**kot** — (Indo-Aryan).  

**kon** — MI kon* path, doorway (n); ZA kon* path (n); TE kon* door (n); SI kon* entrance, road home (n). cf. *kot*  

**kot** — MI kon* path, doorway (n); ZA kon* gate (n); TH/ZA kon* door (n). cf. *kon*  

**kow** — MI koi* III, TH/TE/SI koi* shoulder (n).  

**kol** — MI/ZA/TH/ZA/TE/SI kol* Burman (n).  

**kom** — MI kom* III *pod, shell (n); ZA kom* husk (n); TH kom* cob (n); ZO/TE kom* wall (n). TH/ZA kom* ~ kom* III *visit person (v); TE kom* ~ kom* III *gather (relatives) (v), SI kom* ~ kom* III in touch (v). cf. *kom*  

**kon** — MI kon* II loins (n); ZA kom* II *upper leg (n); TH/ZA/SI kon* II *waist (n). cf. *kv*  

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49 See Vol.1, Ch.6, #127.

50 See VanBik (2009:324) for the possible association with *kv*.


52 See Matisoff (2003:400).


**koá²** — (ST *kʷaw*).\(^{53}\) MI koá¹ ~ koá³, ZA koá¹ ~ koá³, TH koá¹, ZO koá², TE koá¹, SI kue¹ *nine* (v).

**koaj¹** — MI/ZA/TE koaj¹, TH koaj¹, ZO koaj¹, SI kuej¹ *coffin* (n).

**koar¹** — ZO koar¹ ~ koar³, TE koar¹ ~ koar³ *hollow* (v). ZA koar¹ *hollow* (n). ⇒ k³oar¹

**koas** — MI/ZA/TE koas¹, TH koas¹, ZO koas¹, SI kuej³ *burrow* (n).

**kol¹** — (*Austroasiatic*).\(^{54}\) ZA/SI kol¹ *twenty* (n).

**kos** — MI/ZA/TE –ko?, TH/ZO –ku³, SI –ku³³ *porcupine* (n).\(^{55}\)

**ku³** — MI/ZA kol³ *stockade* (v); MI/TE kol³, TH/ZO/SI kol³ *city wall* (n).

**kv³** — (*Austroasiatic*).\(^{56}\) MI koal¹ ~ koal³, ZA koal¹ ~ koal³, TH koal¹ ~ koal³, ZO koal¹ ~ koal³, TE koal¹ ~ koal³, SI kuel³ *coil* (v). MI koal¹, TH koal¹, TE koal¹, SI kuel³ *coil* (n). MI/ZA koaj³ ~ koaj³ bend (v) TH koaj³, ZO koaj¹ ~ koaj³ *ready for harvesting (rice)* (v); TE koaj¹ ~ koaj³, SI kuej¹ ~ kuej³ *sag* (v). MI koj³ ~ koj³, ZA koj³ ~ koj³, TH koj³ ~ koj³ / koj³, ZO/TE koj³ ~ koj³, SI koaj³ ~ koaj³ *bend* (v). MI ku³ ~ ku³ / ku³, ZA ku³, TE ko³ ~ ko³, SI ku³ ~ ko³ *bend* (v). MI kí¹ angled (v); TH/TE/SI kí³ ~ kí³ *curl* (hair) (v). MI kí¹, TE kí¹ *edge, corner* (n); ZA kí³ *corner* (n); ZO/SI kí³ *edge* (n).

\(^{53}\) 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.
~ kəw\textsuperscript{III} disparage (v); TE kəw\textsuperscript{III} ~ kəw\textsuperscript{i}, ZO/SI kəw\textsuperscript{III} inform (v). MI aw\textsuperscript{i} ~ aw\textsuperscript{III} shout (v\textsubscript{vb}); MI ew\textsuperscript{i} shout (v\textsubscript{vb}); ZA ?aw\textsuperscript{i} ~ ?aw\textsuperscript{III} shout (v\textsubscript{vb}); ?ew\textsuperscript{i} shout (v\textsubscript{vb}); SI aw\textsuperscript{i} ~ aw\textsuperscript{III} shout (v); TH ew\textsuperscript{i} ~ ew\textsuperscript{III}; TH/ZO aw\textsuperscript{i} ~ aw\textsuperscript{III} vociferous (v). TH/TE/SI ku\textsuperscript{ii} ~ kut\textsuperscript{ii} exclaim (v).
The text appears to be a page from a book or document, possibly discussing various terms and their meanings. Due to the nature of the content, it is difficult to provide a meaningful interpretation without a clearer context or translation. The page contains terms that seem to be part of a language study, possibly focusing on etymology or lexical analysis. The page includes various terms, each followed by a description or context in parentheses, indicating their usage or definition. The terms are presented in a structured format, with each term followed by details of its usage or meaning in different contexts. The page is primarily in the same language, with occasional references to specific volumes or sources. The page number 24 indicates it is part of a larger document or book. The text is dense and requires careful reading to understand the full context and implications of the terms presented.
prune (v). ZO hew² ~ hew³ shave, cut hair (v). TH/ZO/TE tʰew² ~ tʰew³, SI tʰew² ~ tʰew³ diminish (rain) (v); ZA tʰew², TH tʰew² ~ tʰew³, ZO tʰew³ graze (v).

kh²tam² — ZO xiem³ ~ xięp, TE xiam³ ~ xiap, SI kʰiəm³ ~ kʰep decrease (v). ⇒ kʰam²

kh¹im¹ — M/ZA/TH tʰim¹ ~ tʰim³, ZO/TE –sim¹ soul (n); SI tʰim¹ ~ tʰim³ dark (sky), quiet (people) (v). ZA tʰim³ black (inside of fruit) (v); TH tʰip, ZO/TE sip quiet (v); SI tʰip quieten (v). TE xim³i ~ pitch black (v); ZO xim³i, SI kʰim³i ~ dark (v). 63 cf. tʰum²

kh²it — (ST *kʰjat). 64 ZA kʰit ~ kʰi? bind (v); TH xit ~ xi³i, TE xi³i, SI kʰit ~ kʰi³i tie (v); ZO xi³i tie, bind (v).

kh¹i — (ST *kʰi). 65 M/ZA/SI –kʰi, TH/ZO/TE –xi³i barking deer (n). cf. kʰi²

kh²i² — ZA kʰi²b ~ kʰik³b gore (v). cf. kʰi¹

kh¹iŋ — MI kʰiŋ³ surprisingly heavy (v); MI kʰiŋ³ ~ kʰiŋ³m weigh (v); ZA kʰiŋ³ heavy (human) (v).

kh²ir² — M/ZA kʰir³ return (v). ⇒ kir²

kh²ol — M/SI kʰon³ ~ kʰon³m, TH/ZO/TE xon³ ~ xon³m collect (v). TH/ZO/TE xol³ ~ xol³m, SI kʰol³ ~ kʰol³m store (v). ZA kʰon³m lumber (n).

kʰom² — MI kʰep, ZO xom³ ~ xom³m sufficient (v); ZA kʰep satiated (v); TH xom³ ~ xep, TE xom³ ~ xom³m, SI kʰom³ ~ kʰom³m sufficient (consumables) (v).

kʰom¹ — M/ZA kʰom³m, TH/ZO/TE xom³m ~ xep, SI kʰom³ ~ kʰep gather (v). ⇒ kom¹. cf. kʰVM⁻

kh¹oa¹ — (ST *kʰwa). 66 M/ZA kʰoa¹, TH xoø¹, ZO xoø¹, TE xoa¹, SI kʰue¹ village (n).

kh²oaj¹ — (areal). 67 M/ZA kʰoaj¹, TH xoø¹j, ZO xoø¹j, SI kʰue¹j bee (n).

kh¹oal — M/ZA kʰoal³m, TH xoø³l, ZO xoø³l, TE xoal³, SI kʰue³l stranger (n).

kh¹oaj¹ — M/ZA kʰoaj¹, TH xoø¹j, ZO xoø¹j, TE xoa¹j, SI kʰue¹j drum (n). 68

kh³oaj — M/ZA kʰoaj¹ ~ kʰoaj³m, TH xoø¹j ~ xoø³j, ZO xoø¹j ~ xoø³j, TE xoaj¹ ~ xoan³, SI kʰue¹j ~ kʰue³n crow (v).

kh³oar¹ — MI kʰoar¹ ~ kʰoar³, ZA kʰoar¹ hollow (v); TH xoø³, ZO xoø³ ~ xoø³m, TE kʰoc¹ ~ kʰoc³m hollow (v). MI kʰoar¹, TH xoø³ hollow (n). ⇒ kʰar¹. cf. kʰUL¹

kh¹oat — TH xoø³ ~ xoø³m, ZO xoø³ ~ xoø³m, TE xoø³ ~ xoat³, SI kʰue³ ~ kʰue³m scratch, itch (v). 69

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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.
$k^{h}\text{on}^{-}$ — (Austroasiatic). 70 MI $k^{h}\text{om}^{m}$, ZA $k^{h}\text{on}^{m}$, SI $k^{h}\text{on}^{m}$, TH/ZE/TE $x^{m}$ bed (n).

$k^{h}\text{up}$ — MI $k^{h}\text{op}$ (~ kho?), ZA/SI $k^{h}\text{op}$, TH/ZE/TE xop upturn, close book (v).

$k^{h}\text{os}$ — MI/ZA $k^{h}\text{o}$?, ZO xu?, TE xo?, SI $k^{h}\text{o}$? ~ $k^{h}\text{ok}$ cough (v). cf. $k^{h}\text{u}$

$k^{h}\text{ot}$ — MI/ZA kOt, TH/ZE/TE xOt, SI $k^{h}\text{ot}$ hand (n).

$k^{h}\text{u}^{2}$ — (ST *$k^{h}\text{aw}$, onomatopoeic). 71 MI $k^{h}\text{u}$? ~ $k^{h}\text{uk}$, ZA $k^{h}\text{u}$?, ZO/TE xu? ~ xut, SI $k^{h}\text{u}$? ~ $k^{h}\text{ut}$ smoke (v); TH xu? ~ xut? smoke, cough (v). MI $k^{h}\text{u}$?, ZA $k^{h}\text{u}$?, TH/ZE/TE xu?, SI $k^{h}\text{u}$? smoke (n). MI hu? ~ huk? steam (v); ZA hu? ~ hut? steam food (v). MI hu?, TH/ZE/TE/si hu? steam (n). cf. $k^{h}\text{os}$

$k^{h}\text{uk}$ — (Austronesian). 72 MI $k^{h}\text{up}$, ZA $k^{h}\text{uk}$, TH/ZE xup, TE xuk, SI $k^{h}\text{up}$ knee (n).

$k^{h}\text{us}$ — TH xo?, ZO xu? ~ xo?, TE xu? ~ xo?, SI $k^{h}\text{u}$? ~ $k^{h}\text{ok}$ cover head (v). MI/ZA $k^{h}\text{o}$?, TH/ZE/xu? TE xo? cover (v).

$k^{h}\text{UL}^{1}$ — MI/ZA $k^{h}\text{or}$, TH/ZE xu?, TE xuk, SI $k^{h}\text{uk}$ man-made hole (n). TH/TE xu? cave (n). cf $k^{h}\text{uar}^{1}$

$k^{h}\text{V}^{1}$ — MI hoj?, / hoj? rake, skim off (v); ZA hoj? carry debris (wind) (v); TH haj? ~ haj? / hej?, ZO haj? ~ haj?, TE haj? ~ haj? skim off (v). MI hej?


70 See Vol.1, Ch.6, #14.
71 See Vol.1, Ch.6, #148.
72 See Vol.1, Ch.6, #18.
76 See Vol.1, Ch.6, #40.
77 MI $k^{h}\text{im}$? from Chhangets (1993:99).
rice on stove (v). MI/ZO/TE/SI om³ ~ om³ cover to ferment (v). MI om³ ~ om³, ZA Σom³ ~ Σom³ cover fruit (v). MI Σap³, ZA Σap³ swaddle (v); TH oop³ ~ oop³ nurse, attend funeral (v); ZO oop³ ~ oop³ attend, console (v); TE oap³ ~ oap³ attend (v); SI uep³ ~ uep³ attend funeral/wedding, console (v). MI om³ ~ om³ babysit (v); ZA Σom³, TH/ZO om³ ~ om³, TE om³ ~ ēp serve tea (v); SI om³ ~ ēp babysit, serve tea (v). MI ip³ ~ ip³, TH ip³ ~ ip³ ZO/TE/IP ip³ ~ ip³ retain urine/laughter (v); TH im³ ~ im³ / ip, ZO/TE/NI im³ ~ ip keep secret (v). MI/ZO/TE/NI ip, ZA/TH dik bag (n). MI/ZA hom³ ~ hom³ protect (v), MI/ZA hop ~ ho? conceal (v); TH/ZO hum³ ~ hum³, TE/NI hom³ ~ hom³ conceal with hands (v). MI/ZA/TH/ZO/TE/NI hum³ husk (n). TH hoom³, ZO hoom³ bud (n); ZO hoom³ ~ hoom³ inclusive (v). cf. k⁹om³

k⁹vŋ⁷ — MI/ZA k⁹vŋ⁷, TH/ZO xan³ ~ xan³

k⁹vŋ⁷ — MI k⁹vŋ⁷ ~ k⁹vŋ⁷ / k⁹vŋ³, ZA k⁹vŋ¹ ~ k⁹vŋ³, TH/ZO/TE xen³ ~ xen³ hammer (v); TH xen³ ~ xen³ forge (v); MI/ZA t⁹en³ ~ t⁹en³, ZO/TE xen³ ~ xen³, TE xoŋ³ ~ xoŋ³ resound (v); TH/NI t⁹on³ ~ t⁹on³, ZO/TE t⁹on³ ~ t⁹ot echo (v); TE t⁹on³ ~ t⁹on³ hear an echo (v). ⁷⁸

⁷⁸ TE t⁹on³ ~ t⁹on³ from Bhaskarao (1996:98).
kl

klaj¹ — MI t'ej¹ ~ t'ej³, TH b'lej¹ ~ b'lej³, ZO tej¹ ~ tej³ satiate (v).

kl(l)aj¹ — MI kaj¹ ~ kaj³ rise (v); ZA t'aj¹ ~ t'aj¹ hang (v); ZO/TE/SI kaj¹ ~ kaj³, TH kaj¹ ~ kaj³ / kej³ rise, hang (v). MI/TE kaj³ ~ kej?, TH/ZO/SI kaj³ ~ kej³ pull (v); ZA kaj³ ~ kej? hold (v). ⇒ k(l)b¹aj¹, cf. kAL¯

klaj² — MI/ZA t¹aj⁴ ~ t¹aj³, SI ~taj² ~ taj³ late (v).

klan¹ — MI –t¹an¹, ZA t¹an¹, TH b¹an¹ ZO/TE tan¹ ~, SI tan¹ public (n).

klan¹ — MI/ZA t¹an¹ mountain (n); TH b¹an¹ mountain range (n); ZO/TE tan¹ hill (n).

kAL¯ — MI/ZA t¹an⁴ ~ t³an³, TH b¹ej¹ ~ b¹ej³, ZO/TE/SI taj¹ ~ taj³ run (v).

klej² — MI t¹ej⁴ ~ t³ej³, TH/ZO tej³ ~ tej³ obedient (v); ZA t¹ej⁴ ~ t¹ej³ rearable by foster mother (v); SI tej³ ~ tej³ capable (v).

kl¹ep — MI t'ep turned (edge of knife) (v); ZA t'ep shrink when cooked (v).

kde² — MI/ZA t¹e² ~ t⁴et², TH te² ~ tet² bright (v); MI de² ~ det², TE/SI te² ~ tet² twinkle (v).

klej¯ — MI t¹en³ ~ (t³en³), LA t³en³, TH b¹ej³ ~ b¹ej³ rinse (v); ZA t¹en³ transfer from pot to pot (v).

k(l)¹ak — MI t¹ak⁴ ~ t¹ai?, ZA kiak⁴ ~ kia?, TI ðᵗëk³ ~ ðᵗëk³ snap (v). ⇒ k(l)b¹ak

kl(i)¹an⁴ — MI t¹an⁴ ~ t³an³ glossy (v); ZO/SI tan⁴ ~ tan³ radiate (v); TE tan⁴ ~ tan³ radiate (v), tan³ ~ tet irradiate, flash at (v). ²⁷

kl¹n¹ — MI t¹n¹ ~ t¹n³, TH b¹n¹ ~ b¹n³, ZO t¹n¹ ~ t³n³ complete (v). ZA t¹n¹ ~ t³n³, TE/SI t¹n¹ ~ t³n³ complete (v); ZA t³n³, TE/SI t³n³ complete (v).

klor¹ — MI t¹or¹, ZO to³ ~ to³, TE/SI tok¹ ~ tok³ greasy (v). ²⁸

klow¹ — MI t¹ow³ ~ t³ow³, TH b¹low³ ~ b³low³, ZO/TE tow³ ~ tow³ durable (v).

klom¹ — MI t¹om³ ~ t³om³, TH b³om³ ~ b³om³ sink (v); ZO/TE/SI tom¹ ~ tom³ sink, enter (v).

klv² — (Austroasiatic). ²⁹ MI t¹a³ ~ t¹ak³b prowl (v), ZA t¹a³ ~ leopard (n); TH b³lo³ mythical tiger (n); ZO to³ tiger (n); TE/SI to ~ mythical man-tiger (n).

klv² — (Austroasiatic). ³⁰ MI t¹a³ ~ t¹ak³b, ZA t¹a⁴ ~ t¹ak⁴ drop (v). ZO –ta³ ~ tat³, TE –ta³ ~ tak³, SI –ta³ ~ tak³ / tat³ free (v). MI t¹a³ ~ t¹uk³b, ZA t¹uk³, TH b³uk³ ~ b³uk³, TE tuk³ fall (v). ³¹ ZO kre² ~ kre³ / krel³, TE kra³ ~ kiat³, SI kie³ ~ kiet³ drop (v). ³² MI t¹ak³b ~ tia?, ZA t¹ak³b disperse (v). ⇒ kl³v².

klvm¹ — MI t¹em³ ~ t³em³, TH b³om³ ~ b³om³, ZO/TE/SI tom³ ~ tom³ few (v).

²⁸ MI t¹or² from VanBik (2009:295).
²⁹ See Vol.1, Ch.6, #168.
³⁰ See Vol.1, Ch.6, #64.
³¹ TE tuk³ from Bhaskararao (1996:96).
klh

klhәŋ¹ — MI thәŋ¹ west (n); ZA thәŋ¹, TH hәŋ¹, ZO hәŋ¹, TE xәŋ¹, SI tʰәŋ¹ south (n).

klhәŋ³ — MI/ZA tʰәŋ¹ ~ tʰәŋ³, TH hәŋ³ ~ hәŋ³, ZO/TE/SI tʰәŋ¹ ~ tʰәŋ³ choose (v). cf. klhәD²

klhәŋ¹ — MI/ZA tʰәŋ¹, TH/ZO hәŋ¹, TE xa¹, SI tʰa¹ spirit (n).

klhaj — MI/ZA tʰaj³ vegetable (n); TE xaj³, SI tʰaj³ seed (n).

k(l)haj — MI kʰaj³ ~ kʰaj³, TH xaj³ ~ xaj³ / xej³ carry, hoist, hang (v); ZA kʰaj³ ~ kʰaj³ carry (v), kʰej³ carry (v); ZA tʰaj³ ~ tʰaj³ hang (v), tʰej³ hang (v); ZO/TE xaj³ ~ xaj³, SI kʰaj³ ~ kʰaj³ hang (v). ZO xej³, TE xej³ siphon (v). TE xaj³, SI kʰaj³ unspecified mass (n). ⇒ k(l)haj¹.

k(l)haj² — ZA kʰaj³, TH haj³ ~ haj³, ZO haj³ ~ haj³, SA xaj³ ~ xaj³, SI tʰaj ~ tʰaj³ chew (v).

klhәm¹ — MI/ZA tʰәm¹, TH/ZO hәm¹ jhoom hut (n); TE xәm¹ bachelor's bed, temporary hut (n); SI tʰәm² sleeping platform (n), tʰәm² bachelor's quarters (n).

klhәŋ¹ — TH/ZO hәŋ¹ jaw (n).

klhәs — (ST *k-las).⁸⁵ MI/ZA tʰәs³, TH/ZO hәs³, TE xa³, SI tʰa³ moon (n).

klhәj² — MI/ZA tʰәj³, TH hәj³ ~ hәj³ sift (v); ZO hәj³ ~ hәj³ remove temporarily from container (v); xej³ ~ xej³ slit belly open (v), SI tʰej³ ~ tʰej³ choose (v). cf. klhәk

klhәk — MI tʰәk, ZO hәʔ, xeʔ, SI kʰәk stunted (v).

klhәm² — MI/ZA tʰәm², ZO hәm² ~ hәm³, TH hәm² ~ hәm³, ZO hәm² ~ hәm³, TE xәm³ ~ xәm³, SI tʰem³ ~ tʰem³ deceive (v).

klhәŋ³ — MI tʰәŋ³, TH hәŋ³ dish (n).

klhәD² — MI/ZA tʰәŋ³, ZO hәŋ³ ~ hәŋ³, TH hәʔ³ ~ hәʔ³, TE xeŋ³ ~ xeŋ³ xek³ ~ xe³, SI tʰek³ ~ tʰek³ / tʰe³ exchange (v); TH hәŋ³ ~ hәŋ³ substitute (v). cf. klhәD¹

k(l)hәk — MI tʰak³ ~ tʰaʔ, ZA kʰak³ ~ kʰaʔ, TH hәʔ³ ~ hәʔ³, ZO hәʔ³ ~ hәʔ³, TE xәk³ ~ xiak³ / xiaʔ, SI tʰek³ ~ tʰek³ / tʰe³ snap (v). ⇒ k(l)hәk

klhәm¹ — MI tʰim³ ~ tʰim³ stealthy (v); MI tʰim³, TH/ZO hlim³ ~ hlim³ put to sleep (v).

klh¹ — (ST *k-ljo).⁸⁶ MI/ZA tʰ¹, TE –xi¹ wind (n); TH hli¹ breeze (n).

klh¹ — MI/ZA tʰ¹, TH/ZO hli¹, TE xi¹, SI gʰj¹ tears (n). MI tʰ¹ ~ tʰit, TH/ZO hli¹ ~ hli³, TE (xi¹ ~ xit, SI gʰj¹ ~ gʰj³ strain (v).

klhәD² — MI tʰәD³, ZA tʰәk, TH hli³ marrow (n).

klhәŋ³ — MI tʰәŋ³ ~ tʰәŋ³, ZA tʰәŋ³, TH/ZO hәŋ³ ~ hәŋ³, TE xәŋ³ ~ xoʔ, TE xәŋ³ ~ xoʔ, SI tʰәŋ³ ~ tʰәk dislocate (v).

⁸⁵ See Vol.1, Ch.6, #112.
⁸⁶ See Vol.1, Ch.6, #183.
(k)\textsuperscript{2}l\textsuperscript{ow} — MI/ZA \textsuperscript{th}l\textsuperscript{ow}\textsuperscript{th} ~ \textsuperscript{th}lo, TH/ZA \textsuperscript{h}low\textsuperscript{h} ~ \textsuperscript{h}lo, TE xow\textsuperscript{h} ~ x\textsuperscript{h}o, SI \textsuperscript{th}l\textsuperscript{ow}\textsuperscript{th} ~ \textsuperscript{h}t\textsuperscript{h}o weed (v). MI/ZA \textsuperscript{th}l\textsuperscript{ow}\textsuperscript{th} ~ \textsuperscript{h}lo, TH/ZA/SI \textsuperscript{h}low\textsuperscript{h} ~ \textsuperscript{h}lo, TE \textsuperscript{h}low\textsuperscript{h} ~ \textsuperscript{h}lo pluck (v). cf. \textsuperscript{h}low\textsuperscript{h}, \textsuperscript{h}low\textsuperscript{\textdagger}

\textsuperscript{h}l\textsuperscript{oa}k — MI/ZA \textsuperscript{th}l\textsuperscript{oa}k\textsuperscript{th}, TH \textsuperscript{h}loq\textsuperscript{h}, ZO \textsuperscript{h}loq\textsuperscript{h}, TE xoak\textsuperscript{th}, SI \textsuperscript{th}t\textsuperscript{uek}\textsuperscript{th} brain (n).

\textsuperscript{h}l\textsuperscript{om} — MI \textsuperscript{th}om\textsuperscript{th} ~ \textsuperscript{th}om\textsuperscript{th}, TH/ZA \textsuperscript{h}lom\textsuperscript{h} ~ \textsuperscript{h}lom\textsuperscript{h}, TE xom\textsuperscript{h} ~ xom\textsuperscript{h}, SI \textsuperscript{th}om\textsuperscript{th} ~ \textsuperscript{h}om\textsuperscript{th} sweet (v); ZA \textsuperscript{th}om\textsuperscript{th} ~ \textsuperscript{th}om\textsuperscript{th} sweet (v), \textsuperscript{th}om\textsuperscript{th} sweeten (v).

\textsuperscript{h}l\textsuperscript{v} — \textit{(Austroasiatic)}. MI \textsuperscript{th}a\textsuperscript{th} ~ \textsuperscript{th}ak\textsuperscript{th}, ZA \textsuperscript{th}a\textsuperscript{th} ~ \textsuperscript{th}ak\textsuperscript{th} drop (v); TH \textsuperscript{h}la\textsuperscript{h} ~ \textsuperscript{h}la\textsuperscript{h} drop, free (v); TH \textsuperscript{h}la\textsuperscript{h}, ZO \textsuperscript{h}la\textsuperscript{h}, \textsuperscript{h}la\textsuperscript{h}, TE \textsuperscript{h}a\textsuperscript{h} ~ \textsuperscript{h}a\textsuperscript{h}, SI \textsuperscript{th}a\textsuperscript{th} ~ \textsuperscript{h}ak\textsuperscript{th} send (v). TH \textsuperscript{h}la\textsuperscript{h}, ZO \textsuperscript{h}la\textsuperscript{h} descendant (n). MI/ZA \textsuperscript{th}e\textsuperscript{th} free (v), descendant (n); ZO \textsuperscript{h}la\textsuperscript{h}, TE \textsuperscript{th}e\textsuperscript{th}, SI \textsuperscript{th}a\textsuperscript{th} free (v). MI \textsuperscript{th}u\textsuperscript{th}, ZA \textsuperscript{th}u\textsuperscript{th} fell (v). ZO \textsuperscript{h}xe\textsuperscript{h} ~ \textsuperscript{h}xe\textsuperscript{h} / \textsuperscript{h}xet\textsuperscript{h}, TE \textsuperscript{h}xat\textsuperscript{th} ~ \textsuperscript{h}xat\textsuperscript{th}, SI \textsuperscript{h}xe\textsuperscript{h} ~ \textsuperscript{h}xet\textsuperscript{th} drop (v).\textsuperscript{88}

MI \textsuperscript{th}iat\textsuperscript{th} ~ \textsuperscript{th}ia\textsuperscript{th} demolish, fell (v); ZA \textsuperscript{th}iat\textsuperscript{th} demolish (v); MI \textsuperscript{th}ia\textsuperscript{th}, TE xia\textsuperscript{th} pound rice again (v). ⇒ \textsuperscript{h}l\textsuperscript{v}

(k)\textsuperscript{th}v\textsuperscript{th}i\textsuperscript{th} — \textit{(Austroasiatic)}. MI/ZA \textsuperscript{th}ei\textsuperscript{th} ~ \textsuperscript{th}en\textsuperscript{th}, SI \textsuperscript{th}ei\textsuperscript{th} ~ \textsuperscript{th}en\textsuperscript{th} / \textsuperscript{h}et, TH \textsuperscript{h}lo\textsuperscript{h} ~ \textsuperscript{h}l\textsuperscript{on}\textsuperscript{h}, ZO/TE ton\textsuperscript{h} ~ ton\textsuperscript{h} arrive (v); ZO \textsuperscript{h}lo\textsuperscript{h} ~ \textsuperscript{h}len\textsuperscript{h} arrive (time) (v); SI ton\textsuperscript{h} ~ ton\textsuperscript{h} attain (v); ZA ton\textsuperscript{h} ~ ton\textsuperscript{h} return (v), ZA ton\textsuperscript{h} return (v); MI/ZA \textsuperscript{th}en\textsuperscript{th}, TH \textsuperscript{h}lon\textsuperscript{h} ~ \textsuperscript{h}lot, SI \textsuperscript{th}en\textsuperscript{th} arrive, bring (v). ZO/TE/SI ton\textsuperscript{h} ~ tot reach (symptom time) (v). TE \textsuperscript{th}en\textsuperscript{th} ~ \textsuperscript{th}en\textsuperscript{th} overtake, overshoot (v). ZA ton\textsuperscript{h} ~ ton\textsuperscript{h} travel (v). MI \textsuperscript{th}en\textsuperscript{th} ~ \textsuperscript{h}ton\textsuperscript{h}, TH/ZA \textsuperscript{h}lo\textsuperscript{h} ~

\textsuperscript{h}lon\textsuperscript{h}, TE \textsuperscript{th}on\textsuperscript{h} ~ \textsuperscript{th}on\textsuperscript{h}

\textsuperscript{87} See Vol.1, Ch.6, #64.
\textsuperscript{88} TE xiat\textsuperscript{th} from Bhaskararao (1994:336;347).
\textsuperscript{89} See Shorto (2006:222).
\textsuperscript{90} See Vol.1, Ch.6, #72.
kr

krəŋ—(Austroasiatic).  91 MI ตนเอง ~ ตนเอง exert, dry (v); ZA ตนเอง ~ ตนเอง exert (v); TH/TE/SI ตนเอง ~ ตนเอง distend (v); ZO ตนเอง ~ ตนเอง steadfast (v). MI ตนเอง ~ ตนเอง distend (breasts) (v); ZA ตนเอง ~ ตนเอง dry (v). cf. krəŋ¹, kraŋ¹

krəŋ — (ST *krəŋ).  92 MI/ZA ตนเอง ~ ตนเอง, TH/ZO ตนเอง ~ ตนเอง, TE ตนเอง ~ ตนเอง, SI ตนเอง ~ ตนเอง weep (v).

(k)raŋ¹ — MI ตนเอง ~ ตนเอง piebald (v); ZA ตนเอง ~ ตนเอง white (v), ren² white (v); 93 TH/ZO/TE/SI ตนเอง ~ ตนเอง white (v).

kraŋ¹ — (ST *raŋ).  94 MI/ZA ตนเอง, TH/ZO/TE ตนเอง, SI ตนเอง bosom (n). MI ตนเอง chest (n). cf. krəŋ

kraw — MI ตนเอง, TH/ZO/TE/SI ตนเอง evil spirit (n).

kret — MI ตนเอง ~ ตนเอง tear (v); ZA ตนเอง ~ ตนเอง tatter (v). ⇒ krəŋ't

krek — MI/ZA ตนเอง, ZO ตนเอง, TE ตนเอง, lightning (n); TH ตนเอง, SI ตนเอง lightning concretion (n).

kren — MI ตนเอง ~ ตนเอง, TH/ZO/TE/SI ตนเอง ~ ตนเอง steep (v).

(k)rəŋ¹ — MI/ZA ตนเอง ~ ตนเอง, TH ตนเอง ~ ตนเอง stripe (v); ZO ตนเอง ~ ตนเอง, TE ตนเอง ~ ตนเอง, SI ตนเอง ~ ตนเอง stripe (v); ZO ตนเอง, TE ตนเอง ~ ตนเอง, SI เอง stripe (v).

kri¹ — MI ตนเอง ~ ตนเอง scared (v); ตนเอง scared of (v); ZA ตนเอง ~ ตนเอง scared (v); TH/TE ตนเอง ~ ตนเอง disgusted (v). ⇒ krəŋ¹

krin² — ZO/TE/SI ตนเอง ~ ตนเอง move (v). ⇒ krəŋ²

kril² — MI ตนเอง ~ ตนเอง, ZA ตนเอง drop (v). ⇒ krəŋ²

kriŋ¹ — TH ตนเอง ~ ตนเอง sooty (v); ZO ตนเอง, TE ตนเอง, SI ตนเอง soot (n). 95

krom¹ — TH/ZO ตนเอง ~ ตนเอง borrow, lend (v); TE/SI ตนเอง ~ ตนเอง borrow (v), ตนเอง ~ ตนเอง lend (v). 96

krom² — MI ตนเอง ~ ตนเอง, TH/ZO/TE ตนเอง ~ ตนเอง descend, decrease (v), ZA ตนเอง ~ ตนเอง decrease (v). ⇒ krəŋ²

krəŋ¹ — MI/ZA ตนเอง ~ ตนเอง, TH ตนเอง ~ ตนเอง bind (v); ZO/TE ตนเอง ~ ตนเอง weave basket/net (v).

91 See Vol.1, Ch.6, #47.
92 See Vol.1, Ch.6, #182.
93 ZA ตนเอง from Osburne (1975:112).
94 See Vol.1, Ch.6, #35.
95 VanBik (2009:307) has Lai ตา.
96 See Lorrain (1940:434) for possible MI ตา.
kr\textsuperscript{h}
lem² — (ST *lem²). 98 Mi/za lem², th/zo/te/si lem² road (n).

lem³ — mi lem³ ~ lem³ retrieve, articulate (v); th/si lem³ ~ lem³ seek out (v); zO lem³ ~ lem³ earn, build (house) (v); te lem³ ~ lem³ earn (v), lem³ ~ lep earn (v).

lem⁴ — mi lej⁴, za lej⁴ ~ lej⁴, th/zo lej⁴ ~ le?, te lej⁴ ~ let, si lej⁴ ~ lek / let appear (v).

lep — mi/si–lep, th ~ lep twinkle (v); zo ~ lep dart (v); te ~ lep flash (v).

la¹ — mi/za/th la¹ female animal (n); zo/te/si la¹ female animal suffix (n). mi/za la¹ ~ lat¹ nubile (v).

la² — mi/za la², th/zo la² spleen (n); te/si la² diaphragm (n).

la³ — mi la³ ~ lak³, za la³ ~ lak³, th/zo la³ ~ la³?, te/si la³ ~ lak³ take (v).

laj¹ — (st *laj¹). 99 Mi/za/th/zo/te/si laj¹ middle, navel (n).

laj² — za/zo/te/si laj² writing (n).

laj³ — mi laj³ ~ lej³? harrow (v); za laj³ ~ lej³? dig (v); th/zo/si laj³ ~ lej³?, te laj³ ~ lej³? harrow, dig (v).

p-lak — (austroasiatic). 100 Mi bak¹, kh ~ lak¹, th/zo ba³, te/si bak¹ bat (n). 101 cf. (b) vs.

lem¹ — mi/za/th/zo lam¹ ~ lam³, si lam¹ ~ lam³ / lep dance (v); zo lam¹ ~ lep float (v); te lam¹ ~ lam³ dance, float (v); mi lem³ spin a top (v); th/zo/te/si lam³ ~ lep lift (v).

lej¹ — (areal). 102 Mi/za/th/zo/te/si lej¹ tongue (n).

lej² — mi/za lej¹ ~ lej³ slant (v).

lej³ — mi/si lej¹, za/th/zo/te lej¹ ~ debt (n). cf. lej².

lej⁴ — (areal). 103 Mi lej⁴, za/te/si lej³ buy (v); za lej⁴ ~ lej³ buy (v), lej³ buy (v). cf. lej³.

lej⁵ — (austroasiatic). 104 Mi/za lej⁵, th/zo/si lej⁵ ground (n).

lek — mi/te lek ~ le?, si lep ~ le³ brandish (v); za lek ~ le? play (v); th/zo le? ~ le³ toss (v).

lem¹ — th/zo/si lem¹ ~ lem³ peaceful (v); th lem³, zo lem³ ~ lep, te/si lem³ ~ lep pacify (v).

lem² — mi lem² swallow (v); za lem² swallow saliva (v).

leq¹ — (austroasiatic). 105 Mi/za leq¹, th/zo/te leq¹, si leq² cart (n). cf. leq².

leq² — (austroasiatic).

leq³ — (austroasiatic).

let — mi/za let ~ le?, mi lep ~ le?, te ~ let ~ le?, th let ~ le?, zo/si ~ let ~ le³ invert (v). mi let³ (~ le?) 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 pelak⁴ from Luce (1962:table9).
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.
See Vol. 1, Ch. 6, #54.

See Vol. 1, Ch. 6, #170.

See Vol. 1, Ch. 6, #30.

See Vol. 1, Ch. 6, #22.
(v). 113 MI/ZA loak\textsuperscript{II}, TH loo\textsuperscript{II}, ZO loo\textsuperscript{II}, SI luuk\textsuperscript{II} vomit (n).

\textbf{lok} — (ST *rwak). 114 MI/ZA rok, TH gup\textsuperscript{III}, ZO go?, TE gok, SI lok six (v).

\textbf{lom} — MI lom\textsuperscript{III} ~ lom\textsuperscript{II}, ZA lom\textsuperscript{III} (~ lom\textsuperscript{II}) lie (v). TH/ZO/TE/SI lom\textsuperscript{III} ~ lop lie (v). \Rightarrow \textsuperscript{h}lom\textsuperscript{II}

\textbf{loŋ}\textsuperscript{1} — MI/ZA/TH/ZO/TE/SI loŋ' heart (n).

\textbf{loŋ}\textsuperscript{2} — (ST *lwŋ?). 115 MI/ZA loŋ\textsuperscript{IIA}, TH/ZO/TE/SI loŋ — stone (n).\textsuperscript{116}

\textbf{loŋ}\textsuperscript{2} — (ST *lwŋ?). 117 MI/ZA loŋ\textsuperscript{IIA}, TH loŋ\textsuperscript{II} maggot (n); ZO/TE/SI loŋ\textsuperscript{II} insect (n). MI loŋ\textsuperscript{IIA} ~ lom\textsuperscript{III} maggoty (v).

\textbf{lōs} — MI lo? eat from pot (v); ZA lo? bring in (v); TH/ZO/SI lu\textsuperscript{III}, TE lo? rob (v).

\textbf{lu}\textsuperscript{1} — (Austronesian). 118 MI/ZA/TH/ZO/TE/SI lu\textsuperscript{I} head (n).

\textbf{lu}\textsuperscript{2} — MI lu\textsuperscript{III} ~ luk\textsuperscript{IB}, ZA lu\textsuperscript{IB} ~ luk\textsuperscript{IB}, TH/ZO lu\textsuperscript{II} ~ lu?\textsuperscript{II}, TE lu\textsuperscript{II} ~ luk\textsuperscript{II} copulate (v).

\textbf{luj} — MI/SI loj\textsuperscript{III}, TH/ZO/TE luj\textsuperscript{II} stream (n).

\textbf{lut} — MI lut\textsuperscript{IB} ~ lo?, ZA lut\textsuperscript{IB} (~ lo?), TH/ZO/TE lut\textsuperscript{II} ~ lut\textsuperscript{II}, SI lut\textsuperscript{II} ~ lut\textsuperscript{III} / lu\textsuperscript{II} enter (v).

\textsuperscript{113} TE loak\textsuperscript{III} from Bhaskararao (1994:336;349).
\textsuperscript{114} See Vol.1, Ch.6, #143.
\textsuperscript{115} See Vol.1, Ch.6, #159.
\textsuperscript{116} TE loŋ\textsuperscript{I} — from Vul Za Thang & J. Gin Za Twang (1975:74).
\textsuperscript{117} See Vol.1, Ch.6, #109.
\textsuperscript{118} See Vol.1, Ch.6, #92.
**hl**

**hl** | TH/ZO/TE lem | membrane (n).  
MI/ZA **hl** | TH/ZO/TE/SI lem | placenta (n).

**hla** | MI/ZA **hla**, TH/ZO/TE/SI la | song (n).

**hla** | MI **hla**, ZA **hla** | ~ lat, TH/ZO/TE/SI la | ~ lat far (v).

**hlan** | MI **hlan**, ZA la | bier, machan (n); TH/ZO/TE/SI la | bier (n); TH/ZO/TE/SI la | machan (n).

**hlem** | (ST *hlem).  
MI **hlem**, ZA lem, TH/ZO/TE/SI lam | fathom (n); MI **hlem** | ~ lem | fathom (v).

**hlej** | (Austroasiatic).  
MI/ZA **hlej** | TH/ZO/TE/SI lej | squirrel (n).

**hlej** | (Austronesian).  
MI lej, ZA **hlej**, TH/ZO/TE/SI lej | bridge (n).

**hlew** | MI **hlew**, TH/ZO **hlew** | leech (n).

**hlam** | MI **hlam**, ZO lem, TH lem | ~ lem | zo lem, TE liam, SI liem | ~ leim | wound (v).

**hlaw** | MI **hlaw** | ~ hlaw | TH lew, ZO liew, TE liaw, SI liew | ~ liew | lick (flame) (v).

**hlik** | (Sinitic).  
MI **hlik**, ZA **hlik**, TH/ZO/TE/ST gti, TE ~ gik, SI ~ lik | pheasant (n).

**hlim** | MI/ZA **hlim**, TH/ZO/TE/SI lim | ~ lim | joyful (v); TH/ZO/TE/SI lim | ~ lim | delicious (v).

**hli** | (ST *hli).  
MI/ZA **hli**, TH/ZO/TE/SI li | fleas (n).

**hlit** | MI **hlit**, ZA **hlit**, TH/ZO **hlit**, TE/SI lit | leech (n).

**hlon** | MI **hlon**, ZA **hlon**, TH/ZO/TE/SI lon | thorn (n).

**hlos** | MI **hlos**, TH/SI lo, TE la | wage (n). ZA **hlos**, ZO lo | earn (v).

**hlow** | MI **hlow**, TH/ZO/TE/SI low | weed (n). cf. **klow**, low

**hlon** | MI **hlon**, ZO lon | launch (v); ZA **hlon** | throw (v); TH/TE/SI lon, TH/SI lot throw (v);

**hlim** | MI/ZA **hlim**, TH/ZO **hlim**, TH/ZO/TE/SI hom, SI hom | distribute (v).

**hlok** | (Austronesian).  
MI/ZA **hlok**, TH lup, ZO lo, TE/SI lok | colugo (n).

**hlon** | MI **hlon**, ZA **hlon**, TH/ZO/TE/SI lam, SI hom | ~ hom | distribute (v).

**hlim** | MI/ZA **hlim**, TH/ZO/TE/SI lim, ZA **hlim** | ~ lim | warm

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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.
125 See Vol.1, Ch.6, #111.
See Vol.1, Ch.6, #136.

(hlu) — MI $^b_{\text{luj}}$, TH luj$^\text{ii}$ luj$^\text{iii}$ / luj$^\text{iii}$, ZO/TE luj$^\text{ii}$ luj$^\text{iii}$, SI luj$^\text{ii}$ luj$^\text{iii}$ old (v).

(hlu) — MI $^b_{\text{loj}}$, KH $^h_{\text{li}}$, ZO/TE –luj$, SI – luj$^\text{ii}$ cock (n).

(lv) — MI/ZA $^b_{\text{ral}}$, TH hoq$^\text{ii}$ hoq$^\text{iii}$, ZO hoq$^\text{ii}$ hoq$^\text{iii}$, TE hoq$^\text{ii}$ hoq$^\text{iii}$, SI huq$^\text{ii}$ huq$^\text{iii}$ twine (v). MI/TE zia$^\text{ii}$ zia$^\text{iii}$, TH ziel$^\text{ii}$ ziel$^\text{iii}$, ZO ziel$^\text{ii}$ ziel$^\text{iii}$, TE ziel$^\text{ii}$ ziel$^\text{iii}$ /SI ziel$^\text{ii}$ ziel$^\text{iii}$ roll (v); ZA zoil$^\text{ii}$ zoil$^\text{iii}$ roll (v); ZA zol? roll (vb). MI ziel$^\text{ii}$, TH ziel$^\text{iii}$, SI ziel$^\text{ii}$ roll (n). ZA $^h_{\text{ril}}$ $^h_{\text{ril}}$ roll along (v). ⇒ lv. cf. wvl.

(lm) — ST $^b_{\text{wom}}$. MI $^h_{\text{lum}}$ $^h_{\text{lum}}$ /$^h_{\text{lum}}$, SI lin$^\text{ii}$ lin$^\text{iii}$ coil (v). ZA $^h_{\text{lum}}$ $^h_{\text{lum}}$ coil (vb), $^h_{\text{lum}}$ coil (vb). TH/ZO/TE lum$^\text{ii}$ lum$^\text{iii}$, SI lum$^\text{ii}$ sphericalise (v). MI $^h_{\text{lom}}$ $^h_{\text{lom}}$ knead into lump (v); TH/ZO/TE/SI lom$^\text{ii}$ lom$^\text{iii}$ sphericalise (v). MI $^h_{\text{lum}}$ ball (n), TH lom$^\text{ii}$, ZO/TE lim$^\text{ii}$ string ball (n).

(lm) — MI $^b_{\text{lim}}$ $^b_{\text{lim}}$, TH/TE lom$^\text{ii}$ lom$^\text{iii}$, ZO lem$^\text{ii}$ lem$^\text{iii}$, SI leam$^\text{ii}$ leam$^\text{iii}$ strip (v); TE lem$^\text{ii}$ lem$^\text{iii}$ flip (v).

(lm) — MI/ZA lem$^\text{ii}$, TH/ZO/TE/SI lim$^\text{ii}$ image (n); TH/ZO/TE/SI lim$^\text{ii}$ lom$^\text{ii}$ lom$^\text{iii}$ lep reheart (v). MI $^b_{\text{lim}}$, ZA $^b_{\text{lom}}$, TH lim$^\text{ii}$, ZO $^h_{\text{lim}}$, TE lim$^\text{iii}$, SI lim$^\text{ii}$ shade (n); ZO $^h_{\text{lim}}$ $^h_{\text{lim}}$ lom$^\text{ii}$ shadow (v). ZO liep$^\text{ii}$ liep$^\text{iii}$, TE liep$^\text{ii}$ liep$^\text{iii}$, SI liep$^\text{ii}$ liep$^\text{iii}$ shade (v). MI/ZA liam$^\text{ii}$ liam$^\text{iii}$ overflow (v); TH lem$^\text{ii}$ lem$^\text{iii}$ pass away (v); ZO lem$^\text{ii}$ liep, TE liam$^\text{ii}$ liam$^\text{iii}$, SI liem$^\text{ii}$ liem$^\text{iii}$ disappear over horizon (v).


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126 See Vol.1, Ch.6, #177.
127 MI and KH from Luce (1962:tableB).
128 See Vol.1, Ch.6, #136.
m

\textit{mél}¹ — Mi \textit{mél}² \textit{nz}³ \textit{blurry} (eyesight) (v); za \textit{mél}³ \textit{dim} (v).

\textit{mén}¹ — Mi \textit{mén}¹ \textit{mén}², za \textit{mén}³ \textit{catch} (v); za \textit{mén}¹ \textit{mén}² \textit{stick} (v); th/zo/te/si \textit{mén}¹ \textit{mét} \textit{catch}, \textit{stick} (v), met \textit{stick} (v). TE met \textit{prisoner} (n).

\textit{mén}² — (ST *\textit{mén}²). ¹³⁰ Mi/za \textit{mén}², th/zo/te/si \textit{mén}³ \textit{dream} (n); mi \textit{mén}² \textit{mén}² \textit{mén}³ \textit{mét} \textit{dream} (v). cf. \textit{mén}¹

\textit{ma}² — Mi \textit{ma}² \textit{mak}², za \textit{mak}², te \textit{ma}³ \textit{mak}² \textit{leave wife} (v); th/zo \textit{ma}² \textit{ma}³ \textit{disapprove} (v).

\textit{maj}¹ — Mi/za/th/zo/te/si \textit{maj}¹ \textit{pumpkin} (n).

\textit{mak} — (ST *\textit{mak}²). ¹³¹ Mi \textit{mak}², zo \textit{ma}², te/si \textit{mak}² \textit{brother-in-law}, son-in-law (n); za \textit{mak}² \textit{son-in-law} (n).

\textit{mēj}¹ — Mi \textit{mēj}¹ \textit{mēj}² \textit{haze} (n); th/zo/te/si \textit{mēj}² \textit{cloud} (n).

\textit{mēj}² — (ST *\textit{mēj}²). ¹³² Mi/za \textit{mēj}², th/zo/te/si \textit{mēj}³ \textit{fire} (n).

\textit{mēj}² — (ST *\textit{mēj}²). ¹³³ Mi/za \textit{mēj}², th/zo/te/si \textit{mēj}³ \textit{tail} (n).

\textit{mēj}¹ — Mi \textit{mēj}¹ \textit{open eyes} (v), \textit{mēj}² \textit{suffer} \textit{insomnia} (v); za \textit{mēj}¹ \textit{mēj}² \textit{open eyes} (v), \textit{suffer} \textit{insomnia} (v). TE \textit{mēj}¹ \textit{mēj}³ \textit{suffer} \textit{night} \textit{seizure} (v). TE \textit{mēj}¹, si \textit{mēj}¹ \textit{mēj}³ \textit{nap} (v). cf. \textit{mēj}²

\textit{met} — Mi/za \textit{met}² \textit{mēt}, th/zo/te \textit{met}³ \textit{mēt}, si \textit{met}³ \textit{mēt}³ / \textit{me}³ \textit{shave} (v).

\textit{mēt} — (Austroasiatic). ¹³⁴ Mi/za/th/zo/te/si mēt eye (n).

\textit{mēt} — (ST *\textit{mēt}²). ¹³⁵ Mi/za, mēt \textit{mēt}, th/zo/si mēt \textit{mēt}³ \textit{extinguish} (v).

\textit{mēt}² — (ST *\textit{mēt}²). ¹³⁶ Mi/za \textit{mēt}², th/zo/te/si \textit{mēt}³ \textit{person} (n).

\textit{mōn}² — Mi \textit{mōn}² \textit{river} \textit{mouth}, posterior (n); zo/si \textit{mōn}² \textit{river} \textit{mouth}, edge, top (n); th \textit{mōn}² \textit{edge} (n); te \textit{mōn}² \textit{end}, top, extremity (n). si \textit{mōn}³ \textit{mōn}³ \textit{die} (v).

\textit{mōs} — Mi/za \textit{mōs}³ \textit{misdeed} (n). th/zo/si \textit{mōs}³, te \textit{mōs}³ \textit{err} (v).

\textit{mōw}¹ — Mi/th \textit{mōw}¹ \textit{daughter/sister-in-law} (n); za/te/si \textit{mōw}¹ \textit{daughter-in-law} (n); zo \textit{mōw}¹ \textit{sister-in-law} (n).

\textit{mol}² — Mi \textit{mol}² \textit{mōl}, za \textit{mōl}, th \textit{mol}¹ (\textit{mōl}²), zo/te \textit{mol}¹ \textit{mol}³ \textit{stupid} (v). si \textit{mol}¹ \textit{mol}³ \textit{muddle} (v). th \textit{mol}³, te/si \textit{mol}³ \textit{mol}³ \textit{blunt} (v), zo \textit{mol}³ \textit{mol}³ \textit{dull} (colour) (v). mi \textit{mol}³, la \textit{mol}³ \textit{forget} (v).

\textit{moj}¹ — (Sinitic). ¹³⁷ Mi/za \textit{moj}¹ \textit{moj}² \textit{beautiful} (v). zo/te/si \textit{moj}¹ \textit{moj}² \textit{young} (v). cf. \textit{haj}²

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.
**moal** — MI moal⁴ hill (n); ZA/TE moal⁴, TH mool⁴, ZO moo⁴, SI mue⁴ mountain (n).

**moat** — MI moat⁴b, ZA moat², TH moot⁴, ZO moot⁴, TE moat¹, SI muet⁴ rot (v).

**mu** — MI/ZA/TH/ZO/TE/SI mu¹ vulture (n).

**mu**² — MI/ZA/TH/ZO/SI mu² kernel (n). TE mu² seed pit (n).

**mut** — MI mut⁴b, ZA mut¹, smoulder (v); TH/ZO mut¹, blow (v); TE/SI mut¹, smoulder, blow (v).

**mvn** — (Austroasiatic).¹³⁸ MI mom⁴, mom³, TH/ZO mom⁴, sprout (v); TE mom¹, mom³, SI mom³ (mom³) very young (v). MI/ZA mum², mum³ closed (flower) (v). MI mim¹ nut (n); SI mom⁴ / mom³ bud (n). ⇒ (b)mother

**mvn**² — MI/TH/ZO/TE/SI mon³, TH/ZO/TE men³ clitoris (n)

**mvn**³ — (areal).¹³⁹ MI men², ZA –men², TH men², ZO/TE/SI –men² black (pot) (v). MI mok² dull (colour), sit obediently (v); ZO mo², TE mok, SI mok fog (n).

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¹³⁸ See Vol.1, Ch.6, #29.
¹³⁹ See Vol.1, Ch.6, #20.
h\text{m} \text{e}\text{j}^2 - \text{MI} \ h\text{mej}^? \ overlook \ (v). \text{TH/ZO/TE/SI} \ h\text{mej}^? - h\text{mej}^? \ fumble \ (v). \text{ZO} \ h\text{mej}^?, \text{TE} \ h\text{mej}? \ smear \ (v).

(h)\text{men}^2 - \text{MI} \ h\text{men}^?, \text{ZA} \ h\text{men}^? \ footloose \ (v); \text{TH/ZO/TE/SI} \ h\text{men}^? \ ~ h\text{men}^? \ footloose, \text{finish} \ (v).

(h)\text{me}\text{y}^1 - \text{MI} \ h\text{me}\text{y}^1 \ ~ h\text{men}^? / h\text{men}^?, \text{ZA} \ h\text{me}\text{y}^1 \ ~ h\text{men}^?, \text{TH/ZO/TE/SI} \ h\text{me}\text{y}^1 \ ~ h\text{men}^? \ utilise \ (v).

(h)m\text{a}^1 - \text{MI/ZA} \ h\text{ma}^1, \text{TH/ZO/TE/SI} \ h\text{ma}^1 \ wound \ (n). \text{ZA} \ h\text{ma}^1 \ ~ h\text{ma}-\text{s} \ wound \ (v).

(h)m\text{es} - \text{MI/ZA} \ h\text{me}^?, \text{TH/ZO/SI} \ h\text{me}^?, \text{TE} \ h\text{me}^? \ curry \ (n), \text{eat curry} \ (v); \text{LA} \ h\text{me}^? \ curry \ (n).

(h)m\text{ec} - \text{MI/ZA} \ h\text{met} \ ~ h\text{me}^?, \text{TH} \ ~ h\text{me}^? \ ~ h\text{me}^?, \text{ZO/SI} \ h\text{met} \ ~ h\text{me}^?, \text{ZAO} \ h\text{me}^? \ ~ h\text{me}^?, \text{TE} \ h\text{mek}^1 \ ~ h\text{mek}^? \ massage \ (v).

(h)m\text{in}^1 - \text{(ST} \ h\text{m\text{in}o}). \text{MI/ZA/TH/ZO/TE/SI} \ h\text{min}^? \ ~ h\text{min}^? \ \text{ripe} \ (v); \text{MI} \ h\text{min}^? \ \text{subdue} \ (v); \text{ZA} \ h\text{min}^? \ \text{prepare} \ (v).

(h)m\text{ij}^1 - \text{(ST} \ h\text{m\text{ij}o}). \text{MI} \ h\text{m\text{ij}1}, \text{ZA} \ h\text{min}^1, \text{TH/ZO/TE/SI} \ h\text{min}^? \ \text{name} \ (n).

(h)m\text{am}^1 - \text{(Austroasiatic)}. \text{MI} \ h\text{moam}^1 \ ~ h\text{moam}^?, \text{h\text{moam}1} \ ~ h\text{moam}^?, \text{TH} \ h\text{moam}^1 \ ~ h\text{moam}^?, \text{ZO} \ h\text{moam}^1 \ ~ h\text{moam}^?, \text{TE} \ h\text{moam}^1 \ ~ h\text{moam}^?, \text{SI} \ h\text{muem}^1 \ ~ h\text{muem}^? \ \text{hold in mouth} \ (v). \text{MI} \ h\text{moam}^? \ \text{put in mouth} \ (v). \text{ZA} \ h\text{moam}^? \ \text{devour} \ (v). \text{TH/SI} \ h\text{mop}, \text{ZO} \ h\text{mop} \ ~ h\text{mop} \ \text{feed regurgitatively} \ (v). \Rightarrow \text{m\text{vm}m^-}

(h)m\text{ej}^2 - \text{(ST} *h\text{m\text{ej}o}). \text{MI/ZA} \ h\text{mej}^? \ \text{spindle} \ (n).

(h)m\text{ol}^2 - \text{(ST} *h\text{m\text{ol}o}). \text{MI/ZA} \ h\text{mol}^? \ \text{body hair} \ (n).

(h)m\text{ou}^- - \text{MI/ZA} \ h\text{mon}^?, \text{TH/ZO/TE/SI} \ h\text{mon}^? \ \text{place} \ (n).

(h)m\text{u}^- - \text{MI/ZA} \ h\text{mu}^? \ ~ h\text{mu}^? \ \text{see} \ (v).

(h)m\text{u}^1 - \text{MI} \ h\text{mu}^1 \ ~ \text{mot} \ \text{lie, sleep} \ (v), \text{mot put to sleep} \ (v); \text{ZA} \ h\text{mu}^1 \ ~ h\text{mu}^1 \ ~ \text{mot} \ \text{sleep} \ (v); \text{ZO/TE/SI} \ h\text{mu}^1 \ ~ \text{mot fall asleep} \ (v).

(h)m\text{vl}^- - \text{(Austroasiatic)}. \text{MI} \ h\text{mur}^? \ \text{point, tip, teat} \ (n); \text{ZA} \ h\text{mur}^?, \text{TH} \ h\text{mu}?, \text{ZO} \ h\text{mu}^?, \text{TE/SI} \ h\text{mu}^?, \text{ZAO} \ h\text{mu}^? \ \text{lip} \ (n). \text{MI} \ h\text{mu}^? \ \text{muzzle} \ (n). \text{MI/ZA} \ h\text{mel}^?, \text{ZA} \ h\text{mu}^? \ \text{muzzle} \ (n). \text{MI/ZA} \ h\text{maj}^? \ \text{muzzle} \ (n). \text{TH/ZO/TE/SI} \ h\text{maj}^? \ \text{visage} \ (n). \text{MI/ZA} \ h\text{maj}^? \ \text{muzzle} \ (n). \text{TH/ZO/TE/SI} \ h\text{maj}^? \ \text{face} \ \text{front} \ (n).

\begin{footnotesize}
\begin{itemize}
  \item See Vol.1, Ch.6, #132.
  \item See Vol.1, Ch.6, #117.
  \item See the data in Shorto (2006:376-7).
  \item See Vol.1, Ch.6, #156.
  \item See Vol.1, Ch.6, #90.
  \item MI FORM-I mot from Chhangte (1996:87).
  \item See Vol.1, Ch.6, #63.
\end{itemize}
\end{footnotesize}
nem¹ — (ST *nam). 147 MI/ZA/TH/ZO/TE/SI nem¹ ~ nem² smell (v). ⇒ nvm¹

ney¹ — MI ney¹ ~ nen² catch in time (v). TH/ZO/TE/SI ney¹ ~ nen² prop up (v).

ney² — (areal). 148 MI/ZA ney², TH/ZO/TE/SI ney² you (n).

na¹ — (ST *na). 149 MI/TH/ZO/TE/SI na¹ ~ net hurt, ill (v). ZA na¹ ~ net hurt, ill (v), net hurt (v).

naw¹ — MI/ZA/TH/ZO/TE naw¹ child (n), SI naw¹ infant (n). ZO ~naw² undercooked (v).

nej² — MI/ZA/TE nej³ ~ nej², TH/ZO/SI nej³ have (v).

nej³ — ZO nen³ net, TE/SI nej³ nen³ press (v). cf. ney¹

ni¹ — (ST *nja). 150 MI/ZA/TH/ZO/TE/SI ni¹ sun (n).

ni² — MI/ZA/TH/ZO/TE/SI ni² paternal aunt (n).

now² — (ST *now³). 151 MI/ZA now³, TH/ZO now² ~ now³ young (v); TE now² ~ now³ young, small (v); SI now² ~ now³ small (v). 152

not — MI not³ ~ no?, TH/ZO/TE not³ ~ not³, SI not³ ~ not³ / no³ rub (v). cf. nvl¹, nvk

nog² — MI nog² ~ non³, TH/SI nog² ~ non³, ZO/TE non³ ~ non³ alive (v); ZA nog² ~ non³ alive (v), non³ survive (v). 153

nu¹ — MI/SI nu¹ ~ not murky (v); TH/ZO nu³, TE no? smear (v).

nu³ — MI/ZA nu³, TH/ZO/TE/SI nu² mother (n). MI/ZA/TH/ZO/TE/SI nu³ female (n).

nvk — (onomatopoetic). MI/TE/SI nok¹ ~ nok³, MI nek¹ ~ nek³, MI nok³ ~ no?, TH ne? ~ ne?, ZO no? ~ no?³ jostle (v); TH no? ~ no? wade (v); TH ne?, TE nek³ ~ ne?, SI neak³ approach (v). cf. nvl¹, not

nvl¹ — MI/ZA nal³ ~ nai³, TH/ZO/TE/SI nal³ ~ nai³ smooth, slippery (v); MI nel¹ ~ nel³ pliant (v); ZA/TE/SI nel¹ ~ nel³ damp (v); ZO nel¹ ~ nel³ greasy (v). MI nel¹ ~ nel³ soft (texture), intimate (v); ZA nel¹ ~ nel³ intimate (v); TH/ZO nel¹ ~ nel³, TE nel¹ ~ nel³, SI neal¹ ~ neal³ soft (texture) (v). ZA nel³, TH/TE –nel³, ZO nel³, SI –neal³ sand (n). cf. nvl¹

nvm² — MI nem³ ~ nem³, ZO/TE/SI nem³ ~ nem³ push (v); ZA nem³ ~ nem³ compress (v); TH nem³ ~ nem³ barge (v); TH/ZO nom³ ~ nom³ cram (v); MI nem³ press (v).

nvm³ — (areal). 154 MI/ZA/TH/ZO nem¹ ~ nem³ soft (v); TE/SI nem¹ ~ nem³

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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 non³ from Osburne (1975:112).
154 See Vol.1, Ch.6, #153.
flexible (v). TH noom\textsuperscript{ii} \sim noom\textsuperscript{iii} / nər, zo noom\textsuperscript{ii} \sim noom\textsuperscript{iii} / nər, TE noam\textsuperscript{ii} \sim noam\textsuperscript{iii}, SI nuem\textsuperscript{ii} \sim nuem\textsuperscript{iii} / nər

happy (v). Mi/ZA noam\textsuperscript{iii} \sim nəm\textsuperscript{iii}, TH noam\textsuperscript{iii} \sim nər, zo noon\textsuperscript{iii} \sim nər, TE noam\textsuperscript{iii} \sim nər, SI nuem\textsuperscript{iii} \sim nər

comfortable (v). \Rightarrow ^{h} nvm\textsuperscript{\textsuperscript{-}}. cf. ^{h} niam\textsuperscript{2}
hn

hnem² — MI hne²⁴⁴, TH/ZO/TE/SI nem³'
clan (n).

hnep — (ST hnep). 155 MI/ZA hnep, TH/ZO/TE/SI nep snot (n). cf. hnvm¹

hnes — MI/ZA hne⁴, TH/ZO na⁴, TE ne⁴, SI na⁴ leaf (n).

hna¹ — (ST *hna). 156 ZA hna¹' ear (n); TH na⁴ inner ear (n).

hnaj¹ — MI/ZA hnaï⁴, TH/ZO/TE/SI naj¹ pus, sap (n). MI naj¹ ~ hnj¹ tap (v). cf. hnoj²

(h)naj² — (ST *(h)naï). 157 MI hnaï⁴ ~ hnj¹³, ZA naj¹³ ~ hnj¹³, TH naj¹ ~ naj¹³ / nej¹³, ZO/TE/SI naj¹ ~ naj¹³ near (v). MI/ZA hnej⁴, TH naj¹ ~ nej¹³, ZO (naj¹³ ~) nej¹³, TE (naj¹³ ~) nej¹³, SI nej¹³ near, approach (v).

hnañ² — (ST *(h)naï). 158 MI hnaï⁴ ~ hnan³, ZO nan³ ~ nan³ viscus (v); ZA hnaï⁴ ~ hnan³, TH naj¹ ~ nan³ sticky (v); SI naj¹ ~ nan³ / naj³ trinkle (v).

hnar¹ — (ST *(h)nar). 159 MI hnar¹ ~ hnar³, SI nak¹ ~ nak³' smell (v); TH ne? smell (v); ZO na¹ ~ na³, TE nak¹ ~ nak³ breathe (v). MI hnar¹³, ZA hnar¹, TH na?, ZO na₂, TE/SI nak³ nose (n). 160

hnes — MI hne³ lower lip (n); TH/ZO/SI ne³, TE ne³ lip (n).

hne² — MI hne³ ~ hnek³ suckle (v), TH/ZO ne³ ~ ne³, TE ne³ ~ nek³, SI ne³ ~ nek³ eat (v).

hnal² — MI hnal³ ~ hnal³, SI niel³ ~ niel³ contradict (v); TH neli³ ~ neli³ deny (v); ZO niel³ ~ niel³, TE nial³ ~ nial³ contradict, deny (v).

(h)nam² — (areal). 161 MI hnam³ ~ hnam³, ZA niam³ ~ niam³, TH nemi³ ~ nemi³, ZO nien³ ~ nien³, TE niam³ ~ niam³, SI niem³ ~ niem³ low (v). cf. hnvm²

hnis — (ST *(h)njos). 162 MI/ZA hni?, TH/ZO/TE ni³, SI ni³ two (v).

(h)ni² — MI hni³³, ZA -ni³³, TH ni³³, TE/SI -ni³ gums (n).

hnim¹ — MI hnim³ ~ hnim³, TH nim³ ~ nim³ overcast, immerse (v); ZA hnim³ ~ hnim³ immerse (v); ZO/TE/SI nim³ ~ nim³ overcast (v).

hnit — (onomatopoeic). MI/ZA hnit³ ~ hnit¹, TH/ZO/TE nitt³ ~ nitt³, SI nitt³ ~ nitt³ / nitt³ blow nose (v).

hnom¹ — MI hnom³ ~ hnom³, TH/ZO/TE nom³ ~ nom³ damp (v).

hnøj² — ZA hnoj³, TH/ZO/TE noj³, SI noaj³ breast, milk (n). cf. hnej¹

hnøj¹ — (ST *hnoj). 163 MI hnoj¹, TH/TE/SI noj¹ back (n). MI hnoj¹ ~

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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 hnar¹ nose (n) and hnar³ elephant trunk (n).
161 See Vol.1, Ch.6, #153.
162 See Vol.1, Ch.6, #173.
163 See Vol.1, Ch.6, #4.
**h νυ**—(areal).\(^{164}\) MI \(^{h}\)νυ\(^{III}\) breast (n).\(^{165}\)

- **(h)νυ**—MI νυ\(^{I}\) ~ νυ\(^{III}\) / νυ? laugh (v), νυ? laughed at (v); ZA \(^{h}\)νυ\(^{I}\) ~ \(^{h}\)νυ?, TH νυ\(^{I}\) ~ νυ\(^{III}\) / νυ\(^{III}\), ZO νυ\(^{I}\) ~ νυ\(^{III}\), TE νυ\(^{I}\) ~ νυ?; SI νυ? ~ νυ\(^{III}\) laugh (v).

**nυλ\(^{I}\)**—MI nυλ\(^{I}\) ~ nυλ\(^{III}\) brush past, rub against (v); ZA \(^{h}\)nυλ\(^{I}\) ~ \(^{h}\)nυλ\(^{III}\), TE nυλ\(^{I}\) ~ nυλ\(^{I}\) wipe (v). MI nυλ\(^{I}\) ~ nυλ\(^{III}\) graze (v), ZA nυλ\(^{I}\) ~ nυλ\(^{III}\) relocate (v). TH/ZO/TE/SI nυλ\(^{I}\) ~ nυλ\(^{III}\) brush (v). MI/ZA/TE νοην\(^{I}\) ~ νοην, TH νοην ~ νοην\(^{III}\), ZO νοην ~ νοην, SI νυλ\(^{I}\) ~ νυλ\(^{III}\) rub between hands (v). ZA \(^{h}\)νυλ\(^{I}\) ~ \(^{h}\)νυλ\(^{III}\), TH/ZO/TE νυλ\(^{I}\) ~ νυλ\(^{III}\) murky (v); MI νυλ?; SI νυλ\(^{III}\) ~ νυλ\(^{III}\) smear (v). cf. nυλ\(^{I}\), nυλ, not

\(^{164}\) See Vol.1, Ch.6, #27.

\(^{165}\) Mi from Löffler (1985:284) and Luce (1985:II.86).

\(^{166}\) See Vol.1, Ch.6, #153.

**h νυς\(^{I}\)**—Mi/ZA \(^{h}\)νυς\(^{III}\) ~ \(^{h}\)νυς\(^{III}\) sniff affectionately (v); MI \(^{h}\)νυς\(^{III}\) ~ \(^{h}\)νυς\(^{III}\), ZA \(^{h}\)νυς\(^{III}\) ~ \(^{h}\)νυς\(^{III}\), ZO/TE/SI νυς\(^{III}\) ~ νυς\(^{III}\) smell (v). ⇒ νυς\(^{I}\). cf. \(^{h}\)νυς

**h νυς**—(areal).\(^{166}\) Mi/ZA \(^{h}\)νυς\(^{III}\) ~ \(^{h}\)νυς\(^{III}\), ZO/TE νυς\(^{III}\) ~ νυς, SI νυς\(^{III}\) ~ νυς comfort (v). MI/ZA \(^{h}\)νυς, TH/ZO νυς malleable (v); TE/SI νυς soft (v).

⇒ νυς\(^{I}\). cf. \(^{h}\)μυς\(^{2}\)

**h νυς\(^{I}\)**—MI \(^{h}\)νυς\(^{III}\) ~ \(^{h}\)νυς\(^{III}\), ZA \(^{h}\)νυς\(^{II}\), TH/ZO νυς ~ νυς\(^{III}\), SI νυς\(^{III}\) ~ νυς sluggish (v); TH νυς\(^{III}\) ~ νυς?; TE νυς\(^{III}\) ~ net exhausted (v); SI νυς\(^{III}\) ~ net ill (v). TE νυς\(^{I}\) ~ νυς\(^{III}\) disdain (v). MI/ZA

\(^{167}\) TE νυς ~ νυς from VanBik (2009:209).
ŋel¹ — MI/ZA/TH/ZO/TE/SI ŋel¹ shin (n).

ŋem¹ — MI/ZA ŋem¹ ~ ŋem²³ tame (v); TH/ZO/TE/SI ŋem²³ ~ ŋem lean on (v).

ŋes — MI/ZA/TE ŋeʔ, TH/ZO/SI ŋa² receive (v).

ŋa¹ — (ST *ŋa²).¹⁶⁸ MI/TH ŋa¹ ~ ŋa³, ZA ŋa¹ ~ ŋa³, ZO/TE/SI ŋa¹ five (v).

ŋa¹ — TH/ZO/TE/SI ŋa¹ ~ ŋet face (v).

ŋaj¹ — MI ŋaj¹ ~ ŋaj²³ / ŋeq̥ʔ love (v); MI ŋaj¹ ~ ŋeq̥ʔ listen (v); ZA ŋaj¹ ~ ŋaj²³ love, pine (v); TH/ZO ŋaj¹ ~ ŋeq̥³, TE ŋaj¹ ~ ŋeq̥³, TH/ZO ŋeq̥³, ZA/TE ŋeq̥ʔ, TH/ZO ŋeq̥³ palatable, pleasing (v).

ŋaw¹ — MI/ZA/TH/ZO/TE/SI ŋaw¹ monkey (n).

DAM –¹⁶⁹ MI ŋem/haam²³ / haam²³, ZA ŋem²³ dare (v);¹⁷⁰ TH/ZO/TE/SI ŋem¹ ~ ŋem²³ dare (v); TH/ZO/TE ŋap²³ ~ ŋap³, SI ŋap²³ ~ ŋap³ / na³ dare (v).

ŋon¹ — MI/TH/TE/SI ŋon¹ ~ ŋon³ deaf (v); ZA ŋon²³ deaf and stupid (v).

ŋow¹ — MI/ZA/TH/ZO/TE/SI ŋow¹ ~ ŋow¹ pale (v).

Du(a)j — MI ŋoj²³ ~ ŋoj³, MI ŋoj²³ miserable (v); TH ŋoj²³ / nooj²³ sad, sleepy (v); ZO ŋoj²³, TE ŋoj²³ ~ ŋoj³, TE ŋoj³ ~ ŋoj³ tired out (v); SI ŋoj³ nauseated (v). MI ŋoj¹ ~ ŋoj³ / ŋeq̥ʔ quiet (v). MI voaj¹ ~ voaj³, MI oaj¹, ZA voaj¹ ~ voaj³, ZA ŋoaj¹ ~ ŋoaj³, TH vooaj¹ ~ vooj³, ZO oej¹ ~ oej³, TE voaj¹ ~ voaj³, TE goaj¹ ~ goaj³, SI hej¹ ~ hej³ wither (v).¹⁷¹ cf. kvl.⁷

ŋum¹ — MI ŋum³, TH/ZO ŋum¹ spine (n).

ŋun¹ — (external).¹⁷² MI/ZA ŋun¹, ZO/TE/SI ŋun³ silver (n).

ŋug¹ — MI ŋug¹ ~ ŋug³ dawdle (v); TH ŋug¹ ~ slow (v). MI/ZA ŋug³ ~ ŋug³, ZO/TE/SI ŋug³ ~ ŋet request (v).¹⁷³

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¹⁶⁸ See Vol.1, Ch.6, #71.
¹⁶⁹ See Vol.1, Ch.6, #42.
¹⁷⁰ Mi haam from Weidert (1975:61). See Vol.1, Ch.6, #42.
¹⁷² See Vol.1, Ch.6, #142.
¹⁷³ Compare the senses of harass for the semantics.


**hŋel**

**hŋel** — Mi/ZA **hŋel** ~ **hŋel** III, TE **ŋel** — *rude* (v); TE **ŋel** III *scowl* (v); TH **ŋel** ~ **ŋel** III, SI **ŋel** ~ **ŋel** III *unabashed* (v); ZO **ŋel** ~ **ŋel** III *barren* (v).

**hŋel** — Mi **ŋel** III, ZA **ŋel** III, TH/ZO/TE/SI **ŋel** III *wild boar* (n).

**ŋa** — (ST *(b)* ŋa).174 Mi **ŋa** II, ZA **ŋa** II, TH/ZO/TE ŋa II, SI ŋe—*fish* (n).

**ŋak** — Mi/ZA **ŋak** III ~ **ŋe**?, TH/ZO ŋa?? III ~ ŋa III, TE **ŋak** II ~ **ŋak** III, SI **ŋak** II ~ **ŋak** III ŋa III *wait* (v).

**ŋow** — Mi **ŋow** III, ZA ŋow III, TE ŋow III— *tusk* (n).

**ŋok** — *(onomatopoeic).* Mi **ŋok** I ~ **ŋok** III, ZA **ŋok** IIIA ~ **ŋok** III *snore* (v).

**ŋop** — *(Austroasiatic).*175 Mi/ZA **ŋop** I, TH/ZO/TE/SI **ŋop** I *neck* (n). cf. *(b)* **rVDr**

**ŋod** — Mi **ŋod** *elbow* (v), **ŋod** III *elbow, recoil* (v); ZA **ŋod** III *butt* (v); TE **ŋok** II ~ **ŋok** III, SI **ŋok** II ~ **ŋok** III / **ŋo** III *shake* (v).

**ŋvr** — Mi **ŋor** III, ZA **ŋir** III, TH ŋi?, ZO ŋi III, TE **ŋik** III *growl* (v).

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174 See Vol.1, Ch.6, #70.
175 See Benedict (1994:5).
p

\textit{paj} - MI/ZA pej\textsuperscript{ii} \sim pej\textsuperscript{iii} \textit{stagger} (v); ZO pej\textsuperscript{ii} \sim pej\textsuperscript{ii}, TE/Sl pej\textsuperscript{ii} \sim pej\textsuperscript{iii} go (v). TH/ZO/TE/Sl pej\textsuperscript{ii} \sim pej\textsuperscript{iii} \textit{revolve} (v). TH/ZO pej\textsuperscript{ii} \textit{wheel} (n).

\textit{pel} - MI/TH/ZO pel\textsuperscript{i} \textit{palisade} (n).

\textit{pa} - MI/ZA pa\textsuperscript{ii}, TH/ZO/TE pa\textsuperscript{ii}, SI -pa\textsuperscript{ii} \textit{mushroom} (n).

\textit{pa\textsuperscript{2}} - (ST *pa\textsuperscript{2}). \textsuperscript{176} MI/ZA pa\textsuperscript{ii}, TH/ZO/TE/Sl pa\textsuperscript{ii} \textit{father} (n). MI/ZA pa\textsuperscript{iii}, TH/ZO/TE/Sl pa\textsuperscript{iii} \textit{male} (n).

\textit{paj} - MI paj\textsuperscript{i}, TH/ZO/TE/Sl paj\textsuperscript{i} \textit{sheath} (n). cf. paj\textsuperscript{2}

\textit{paj\textsuperscript{2}} - MI/ZA paj\textsuperscript{ii} \sim paj\textsuperscript{iii}, ZO/TE/Sl paj\textsuperscript{ii} \sim paj\textsuperscript{iii} \textit{carry on self} (v). cf. paj\textsuperscript{1}

\textit{paj\textsuperscript{2}} - (ST *paj). \textsuperscript{177} MI pej\textsuperscript{ii}, TH/ZO paj\textsuperscript{ii} \sim pej\textsuperscript{ii}, TE paj\textsuperscript{iii} \sim pej\textsuperscript{ii} \textit{discard} (v); ZO pej\textsuperscript{ii} \textit{discard on fire} (v); SI paj\textsuperscript{iii} \sim pej\textsuperscript{iii} \textit{misplace} (v).

\textit{pa(r)}\textsuperscript{2} - \textsuperscript{178} ZA pa\textsuperscript{ii} \sim pat\textsuperscript{ii}, TH/ZO/TE/Sl pa\textsuperscript{ii} \sim pat\textsuperscript{ii} \textit{thin} (v). MI pen\textsuperscript{i} \sim pen\textsuperscript{iii} \textit{thin} (v); TH/SA pen\textsuperscript{i} / pen\textsuperscript{ii}, TE pen\textsuperscript{i} \sim pen\textsuperscript{iii}, SI pen\textsuperscript{i} \sim pen\textsuperscript{iii} \textit{very thin} (v).

\textit{paw} - MI paw\textsuperscript{i} \textit{speech, word} (n), TH/TE/Sl paw\textsuperscript{i} \sim paw\textsuperscript{iii} \textit{speak} (v).

\textit{p\textsuperscript{5}tl} - MI/ZA par\textsuperscript{i}, TH pe\textsuperscript{?}, ZO pa\textsuperscript{i}, TE/Sl pak\textsuperscript{i} \textit{flower} (n). MI/ZA par\textsuperscript{i} \sim pak\textsuperscript{ii} \textit{flower} (v); TH pak\textsuperscript{ii} \sim pe\textsuperscript{?} \textit{flower} (v); ZO pak\textsuperscript{ii} \sim pak\textsuperscript{iii}, TE/Sl pak\textsuperscript{i} \sim pak\textsuperscript{iii} \textit{flower} (v); MI par\textsuperscript{i} \textit{unfurl} (flower) (v). TH pak\textsuperscript{iii} \textit{fully bloom} (v); ZO pak\textsuperscript{i} \textit{in prime of life} (v), TE pak\textsuperscript{i} \sim pak\textsuperscript{iii} \textit{blossom, bloom} (v); ZO pak\textsuperscript{iii} \textit{over bloom} (v); TE pak\textsuperscript{i} \textit{flower} (v). MI per\textsuperscript{ii} \sim pe\textsuperscript{?}, ZA per\textsuperscript{iii}, SI peak\textsuperscript{iii} \textit{flatten} (v). TH pe\textsuperscript{?} \sim pe\textsuperscript{?}, TE pek\textsuperscript{ii} \sim pek\textsuperscript{iii}, flat (v). ZO pe\textsuperscript{iii} \textit{plank} (n). SI - pak\textsuperscript{ii} \textit{foot} (n). \(\Rightarrow p\textsuperscript{5}tl^{-} \text{ cf. } \textit{par}^{-}, p\textsuperscript{6}d^{-}\)

\textbf{Par\textsuperscript{1}} - (Austroasiatic). \textsuperscript{179} MI var\textsuperscript{i} \sim var\textsuperscript{iii} \textit{illuminate, white} (v); ZA var\textsuperscript{i} \sim var\textsuperscript{iii} \textit{white} (v); TH va\textsuperscript{?} \sim ve\textsuperscript{?}, ZO va\textsuperscript{ii} \sim va\textsuperscript{iii}, TE/Sl vak\textsuperscript{i} \sim vak\textsuperscript{iii} \textit{illuminate} (v). TH pa\textsuperscript{ii} \sim pe\textsuperscript{?} \textit{white spotted} (v); ZO pa\textsuperscript{i} \sim pa\textsuperscript{iii}, TE/Sl pak\textsuperscript{i} \sim pak\textsuperscript{iii} \textit{white} (v). \textit{cf. p\textsuperscript{5}l\textsuperscript{-}}, HVL\textsuperscript{7}

\textit{p\textsuperscript{5}et} - MI/TE p\textsuperscript{5}et \sim pe\textsuperscript{?}, TH/ZO/Sl p\textsuperscript{5}et \sim pe\textsuperscript{iii} \textit{bite} (v); ZA p\textsuperscript{5}et \sim pe\textsuperscript{?} \textit{hop} (v).

\textit{p\textsuperscript{5}a\textsuperscript{2}} - (ST *pja\textsuperscript{2}). \textsuperscript{180} MI pe\textsuperscript{ii} \sim pek\textsuperscript{ii}, ZA pe\textsuperscript{iii} \sim pek\textsuperscript{iii}, TH per\textsuperscript{i} \sim per\textsuperscript{ii}, ZO pie\textsuperscript{i} \sim pie\textsuperscript{ii}, TE pia\textsuperscript{ii} \sim pia\textsuperscript{ii}, SI pie\textsuperscript{ii} \sim piek\textsuperscript{ii} \textit{give} (v).

\textit{p\textsuperscript{i}} - (ST *pj\textsubscript{o}). \textsuperscript{181} MI/ZA/TH/ZO/TE/Sl pi\textsuperscript{i} \textit{grandmother} (n). cf. pi\textsuperscript{2}

\textit{p\textsuperscript{2}} - MI pi\textsuperscript{ii} \sim poj\textsuperscript{ii}, ZA pi\textsuperscript{iii} \sim pi\textsuperscript{iii}, TH/TE/Sl pi\textsuperscript{ii} \sim pi\textsuperscript{ii}, ZO -pi\textsuperscript{ii} \textit{big (female animal)} (v). cf. pi\textsuperscript{1}

\textit{pop} - MI pop \sim po\textsuperscript{?}, ZA/TH pop \textit{perforate} (v). MI/ZA/TH pop \textit{perforation} (n).

\footnotesize

\textsuperscript{176} See Vol.1, Ch.6, #66.
\textsuperscript{177} See Vol.1, Ch.6, #46.
\textsuperscript{178} See Vol.1, Ch.6, #166.
\textsuperscript{179} See Vol.1, Ch.6, #75.
\textsuperscript{180} See Vol.1, Ch.6, #84.
\textsuperscript{181} See Vol.1, Ch.6, #87.
pod — Mi pot ~ poʔ, Za/Te bot ~ boʔ, TH/ZO bot ~ boʔ, Si bot ~ boʔ pluck (v). TH/ZO/SI pot ~ poʔ comb (v).

pol¹ — M/ZA/ZO/TE/SI pol¹ group (n). M/ZA/TH/ZO/SI pol¹ ~ pol³, TE pol³ associate (v). M/ZA polʔ, TH pol³ mix (v); SI pol³ dilute (v).

pol² — Mi pol¹a ~ pol¹i blue, bloomy, dusty (v); Za pol¹a off-colour (v); TH/ZO/TE/SI pol¹ ~ pol¹i piebald (v).

pod² — M/ZA pok ~ poʔ stand (v). ⇒ p³od². cf. p⁴od⁵

poan² — M/ZA poan¹a, TH poon¹, Zo poon¹, TE poan¹, Si puen¹ garment (n).

poan⁴ — Mi boan¹ ~ boan³, TH boon¹ ~ boon³, Zo poon¹ ~ poon³, TE poan¹ ~ poan³, Si puen¹ ~ puen³ grey (v).

pu¹ — (ST *paw).¹²⁸ M/ZA/TH/ZO/TE/SI pu¹ grandfather (n).

pat — Mi put¹b ~ poʔ, Za put¹b, TH put¹ ~ put¹b trickle out (v); TH/ZO/TE pot¹ ~ pot¹i leave (v); Si pot¹ ~ pot¹i / po¹i pop (burning firewood) (v). cf. p⁴bít

pok — (Austroasiatic).¹²⁹ M/ZA bok¹b, TH/ZO buʔ¹, TE/SI bok¹ hut (n); Mi bok¹b shack (n). M/ZA puk¹b concave (v). Mi puk¹b cave (n).

pvl¹ — M/ZA pil¹ ~ pil³i sink (v); Mi/TE pil¹? peel off (v); Mi pil¹?, Za pil¹? peel (n). M/ZA/TE pil¹ ~ pilʔ, TH pil¹ ~ pil³i ~ pil³i die out (v); TH pil³i ~ pil³i, TE pil?, Si pil³i drop off (v); Zo pil³i ~ pil³i die out, drop off (v). Zo p⁴oa³ ~ p⁴oa³, TE puk³ ~ puk³, SI puk³ ~ puk³ / puk³ fall (v). Mi pial¹a ~ pial¹i slip, deviate (v); Za pial¹i, TH pial¹, Zo pial¹ ~ pial¹i, TE pial¹ ~ pial¹i, SI pial¹i ~ pial¹i avoid (v). Mi/ZA pial¹, TH pial¹i ~ pial¹i, Zo pial¹ ~ pial¹i, SI pial¹i ~ pial¹i detach (v). ⇒ p⁴vl¹

pvd¹ — M/ZA/TE piaŋ¹ ~ piaŋ³, TH peŋ¹ ~ pem³, Zo peŋ¹ ~ pem³, Si peŋ¹ ~ pem³ come into being (v). Mi/ZA poŋ¹a ~ pem³i bulge (v). TE/SI poŋ¹a bulge (navel) (v). M/ZA/TH/ZO/SI poŋ¹ ~ pem³i multiply (v); Za peŋ¹ ~ pem³i pile up (v). Mi poŋ¹ ~ poan¹i diluge (v). Mi poak¹ ~ poaʔ, TH poʔi ~ poʔ, Zo poʔi ~ poʔi, TE poak¹ ~ poak¹i / poaʔi, SI puek¹ ~ puek¹ / pue³i burst (v); Za poak¹i burst (v). ⇒ poaʔ burst (v). ⇒ p⁴vd¹. cf. pod².

pvm¹ — ¹³⁴ M/ZA/TH/ZO/TE/SI pom¹ ~ pom³i hug (v). TH pom³ ~ pom³, Zo pom³i ~ pom³i swell from impact (v); TE pom³ ~ pom³i, SI pom³ ~ pom³i bloat (v); Zo pom³i ~ pop exaggerate (v); TE pom³i ~ pop participate (v); SI pom³ ~ pop exaggerate, participate (v). Mi/TE/SI poam¹ ~ poam³i unripe but swollen (v); Za swell in water (v); TH/ZO poam¹ ~ poam³i unripe (v). Mi/ZA pom¹ counter for spherical objects (n); Mi pum¹a; TH/SI pom¹ forge pot (n). Mi pom¹i plump (fruit) (v); Za pum¹a, TH/ZO/TE/SI pom¹ ~ pom³i spherical (v). Mi/ZA pom³i belly (n); TH/ZO/SI pom³i body (n); TE pom³i upper body (n). Mi/TH/TE pem¹ ~ pem³, SI pem¹ ~ pem³i migrate (v); TE pem³i ~ pep, SI pem³i ~ pep

¹²⁸ See Vol.1, Ch.6, #86.
¹²⁹ See Vol.1, Ch.6, #16.
¹³⁴ See Vol.1, Ch.6, #164.
extend house (v). TH pem<sup>III</sup> extension (n). TH/ZO/TE bem<sup>II</sup> ~ bem<sup>III</sup>, SI beam<sup>II</sup> ~ beam<sup>III</sup> circular (v). MI bem<sup>III</sup> small seed basket (n); TH/ZO/TE bem<sup>III</sup>, SI beam<sup>III</sup> large cylindrical rice basket (n). MI/ZO bom<sup>I</sup> coop (n); ZA/TE/bom<sup>I</sup>, ZO bom<sup>II</sup> back basket (n); TE bom<sup>II</sup> small shoulder basket (n); SI bom<sup>II</sup> small waist basket (n). TE bom<sup>II</sup>, SI bom<sup>II</sup> bunch (n). MI bom<sup>III</sup> ~ bom<sup>III</sup>, ZA bom<sup>I</sup>, TH/ZO/TE/bom<sup>III</sup> ~ bom<sup>III</sup> swarm (v); ZA bom<sup>III</sup> hold to bosom (v). MI bom<sup>III</sup> upper leg (n); ZA bom<sup>III</sup> occiput (n).

PVr<sup>I</sup> — MI por<sup>I</sup> (~ por?) arrogant (v); MI por? form proud flesh (v); ZA por? praise (v), arrogant (v); TH/ZO po?, SI pok praise (v). ZA por<sup>III</sup> ~ por? widen/thick (rope/river) (v). MI/ZA pear<sup>I</sup> ~ pear<sup>III</sup>, TH poo?<sup>I</sup> ~ poo?<sup>III</sup>, ZO poo?<sup>I</sup> ~ poo?<sup>III</sup>, TE poak<sup>I</sup> ~ poak<sup>III</sup>, SI puek<sup>I</sup> ~ puek<sup>III</sup> bloat (v). MI/ZA bor<sup>I</sup> ~ bor<sup>III</sup> swarm (v); TH bo?<sup>I</sup> ~ bo?, TE/si bok<sup>I</sup> ~ bok<sup>III</sup> bulge (v); MI bor?, ZA bur<sup>II</sup> ~ bur<sup>III</sup>, TE bok<sup>III</sup> swarm (v).
pʰelʰ — TH pʰelʰ, ZO/TE/SI pʰelʰ— winter (n).

pʰen² — MI pʰenʰ, ZO/TE pʰenʰ ~ pʰenʰ weave net (v).

pʰes — (areal). 185 MI/ZA/TE pʰeʔ, TH/ZO/SI pʰa³ splay (v).

pʰēr — MI/ZA pʰérʔ unfurl (v); MI pʰérʔ spread, scatter (v); ZA pʰérʔ, TE pʰek ~ pʰʔ, SI pʰek ~ pʰɛʔ, SI pʰek ~ pʰɛʔ, ZO pʰɛʔ ~ pʰɛʔ, TE pʰek ~ pʰek³, SI pʰek¹ ~ pʰek¹ braid (v). MI/ZA pʰer³, TH pʰer³, TE pʰek¹ mat (n). ⇆ pʰet.

pʰem¹ — MI fem¹ ~ fem¹, TH/ZO/TE/SI pʰem¹ ~ pʰem³ die (v).

pʰeD — (Austroasiatic). 186 MI benj³, TH/ZO benj³, ZO/SI penj¹ wall (n); TE benj² door (n); SI benj² main entrance (n). MI/TH penj³ side of body (n); ZO/TE penj³ side (n); SI penj³ side of body/head (n). MI/ZA panj pelvis (n); TH panj³, ZO ~ panj³ forehead (n); TE panj³ pelvis, forehead (n). MI baŋ¹ ~ ban³ stop, hang up, ZA baŋ ~ ban³ stop; TH/ZO/TE baŋ³ ~ ban³ hang up, stopover, catch on; SI baŋ³ ~ ban³ stopover. TH/SI penj¹ ~ pen³ waylay (v); ZO penj¹ ~ pen³, TE penj³ ~ pen³ waylay, stop (v); SI penj³ ~ pen³ stop (v). MI baŋ³ ~ ban³, TE baŋ³ remain (v); SI ~baŋ³ exempt (v). MI/ZA pʰek palm (n); ZO pʰʔ, SI pʰek mat (n). MI/ZA/TH/ZO/TE pʰen³ ~ pʰen³, SI pʰen³ flat (v); TH/ZO pʰan³ palm, sole (n); SI pʰan³ slice (n); SI pʰek³ flat (v), slice (n). cf. pʰet

pʰej¹ — MI/ZA/ZO/SI pʰej¹ ~ pʰej³, TH/TE pʰej¹ level (road) (v).

pʰej² — (ST *pʰəj). 187 MI pʰej³ lower leg, foot (n), ZA pʰej³ calf (n), TH/ZO/SI pʰej³ upper leg (n).

pʰen² — MI pʰen³ ~ pʰen³, ZO pʰen³ ~ pʰen³, TE/SI pʰen³ ~ pʰen³ divaricate (v); ZA pʰen³ ~ pʰen³ divaricate (v), pʰen³ divaricate (v). 188

pʰec — MI peʔ, ZO pʰer³ ~ pʰer³, TE pʰʔ, SI pʰer³ bore (v). TH pʰer³ ox’s nose piercing (n).

pʰat — MI/ZA pʰat³ ~ pʰat³ flash (v), pʰet³ flash (v), TH pʰet¹ ~ pʰet twinkle (v), pʰet blink (v); ZO pʰet³ ~ pʰet³, TE pʰat³ ~ pʰet³, TE pʰet³ ~ pʰet³, TE pʰat³ ~ pʰet³, TE pʰet³ ~ pʰat³, TE pʰet³ ~ pʰat³, TE pʰet³ ~ pʰat³, TE pʰet³ ~ pʰat³, TE pʰet³. TH/ZO/SI pʰat³ broom (n).

pʰit — MI pʰit³ wash face (v), pʰit³ wash face (v), TH/ZO pʰit³ ~ pʰit³, SI pʰit³ ~ pʰit³ / pʰit³ spew (v); TE pʰit³ ~ pʰit³ blow air between lips in disgust (v); TH/ZO/SI pʰit³ spew (v). cf. pʰit

pʰo² — ZA pʰo³, TH/ZO/TE/SI pʰo³ shell (n).

185 See Vol.1, Ch.6, #126.
186 See Vol.1, Ch.6, #141.
187 See Vol.1, Ch.6, #78.
pʰo(ph) — MI pʰok ~ pʰɔʔ, ZA pʰɔk ( ~ pʰɔʔ)  
stand (v); MI pʰɔŋ³ ~ pʰon⁴ open up.  
uncover (v); TH pʰɔŋ³ ~ pʰɔʔ, ZO  
pʰɔŋ³ ~ pʰɔʔ / pʰɔt, TE pʰɔŋ³ ~ pʰɔt,  
SI pʰɔŋ³ ~ pʰok / pʰɔt wake, stand (v).  
MI pʰɔk ~ pʰok⁴, TE pʰɔŋ ~ pʰon⁴, SI  
pʰɔŋ ~ pʰon⁴ stand (v); ZO pʰɔŋ ~  
pʰon⁴ inform about death (v). TH/ZO  
pʰɔŋ ~ pʰon⁴, TE pʰok ~ pʰok⁴ /SI  
pʰok⁴ ~ pʰok⁴ / pʰon⁴ recall (v). ⇒  
pʰo(ph)¹. c.f. pʰo⁴d²

pʰo(ph)⁴ — (Austroasiatic).¹⁸⁸ MI pu¹ ~  
pot carry on shoulder/head (v);  
ZA/TH pu¹ ~ pot carry on shoulder (v);  
SI pu¹ ~ pot carry on head (v). MI  
p⁴oa³~ p⁴ok⁴, ZA p⁴on⁴ ~ p⁴ok⁴ carry  
baby on back (v); TH pu⁴ ~ p⁴on⁴,  
ZO p⁴o¹ ~ p⁴on⁴, TE p⁴o¹ ~ p⁴on⁴, SI  
p⁴o¹ ~ p⁴on⁴, TE p⁴o¹ ~ p⁴ok⁴, SI  
p⁴o¹ ~ p⁴ok⁴ carry on back (v). MI  
p⁴or¹ ~ p⁴or¹ carry on back (v); ZA  
p⁴or¹ ~ p⁴or¹ carry on shoulder/head/back (v).

pʰum¹ — MI/ZA/TH/ZO/TE/SI pʰum¹ ~  
pʰum⁴ bury (v).

pʰur¹ — TH pʰu², ZO pʰoa¹, TE pʰuk¹  
paunch (n). c.f. pʰu⁴l²

pʰu⁴l² — MI pʰil¹ ~ pʰil³ assassinate (v).  
ZA pʰil¹ ~ pʰil³ do secretly (v). TH  
pʰil¹ ~ pʰil³ assassinate, rid (v), SI  
pʰil¹ ~ pʰil³ dispel (v). ZO/TE pʰil¹ ~  
pʰil³ shout (v); TE pʰul¹ ~ pʰul³, SI  
pʰol¹ ~ pʰol³ butt (v). MI/ZA pʰul¹ ~  
pʰul³ bubble, froth (v); pʰul¹ ~ pʰul³  
gush out (v). MI pʰol¹ / pʰol³, ZA  
pʰol¹ sprinkle (v); TH/ZO pʰul¹, TE  
pʰul¹ ~ pʰol¹, SI pʰul¹ ~ pʰol³ boil  
over (v). TH pʰu³ ~ pʰu³, ZO pʰoa³ ~  
pʰoa³, TE pʰuk³ ~ pʰuk³, SI pʰuk³ ~  
pʰuk³ / pʰu³ fell (v). MI pʰel¹ ~ pʰel³  
split (v); ZA pʰel¹ ~ pʰel³ share/split  
(food) (v); SI pʰel¹ ~ pʰel³ split into  
big chunks (v). MI/TH/TE/SI pʰel¹, ZA  
pʰel³, ZO pʰel¹ piece (n). MI pʰel¹ ~  
pʰel³ share out, permit (v); ZA pʰel¹ ~  
pʰel³ pay, consign (v); TH/ZO/TE pʰel¹  
~ pʰel³ permit (v). MI/ZA pʰel¹.  
TH/ZO/SI pʰel³ ~ pʰel³ detach (v).  
TH/ZO/SI pʰel³, TE pʰel³ extinguish  
(v). ⇒ pʰu⁴l². c.f. pʰu⁴r¹

pʰu⁴d² — TH pʰon³ ~ pʰon³, ZO pʰon³ ~  
pʰon³, TE pʰon³, SI pʰon³ ~ pʰun³  
divulge (v). MI pʰon³, TH  
pʰon³, ZO pʰon³, TE pʰon³, SI  
pʰon³ froth, foam (n). MI pʰon³ ~  
pʰon³, TH pʰon³ (~ pʰon³), ZO  
pʰon³ ~ pʰon³, TE pʰon³ ~ pʰoat, SI  
pʰon³ ~ pʰon³ float (v), ZA pʰon³  
froth (v), ZA/SI pʰon³, ZO  
pʰon³, TE pʰon³ ~ pʰon³ /pʰoat, SI  
pʰon³ ~ pʰon³ compose (v).  
⇒ pʰu⁴d². c.f. pʰo⁴d²

¹⁸⁸ See Vol.1, Ch.6, #32.
r

rem¹ — (ST *rem). ¹⁸⁹ MI/ZA rem¹, TH/ZO/TE gem¹, SI ɲem¹ forest, territory (n).

rem² — MI rem²¹ ~ rem³, TH/ZO/TE gem² ~ gem³, SI ɲem³ ~ ɲem³ brittle (v). ZA rem³ decrēpit (v).

ren¹ — MI ren¹, SI ɲen¹ domesticated animal (n); ZA ren³, TH/ZO/TE gen¹ animal (n).

ren¹ — ZA ɲen¹, TH/ZO/TE ɲen¹, SI ɲen¹ paternal aunt’s husband (n).

rep — MI/ZA rep, TH/ZO gēp, SI ɲep mantel (n).

res — (Austronesian). ¹⁹⁰ MI/ZA reʔ, TH/ZO ga³, TE ɲeʔ, SI ɲa³ fruit (n/v).

raj¹ — MI/ZA raj¹ ~ raj³, TH gaj¹ ~ gaj³ / gej³, ZO/TE gaj¹ ~ gaj³, SI ɲaj¹ ~ ɲaj³ pregnant (v). MI/ZA ɲej¹, TH/ZO gaj³ ~ gej³, TE gaj³ ~ gej³, SI ɲaj³ ~ ɲej³ impregnate (v).

rak — MI rek³¹ ~ reʔ, ZA rek³¹ ~ rek³, TH/ZO gai³ ~ gai³ / gai³, TE gak³ ~ gak³, SI ɲak³ ~ ɲak³ tighten (v). SI ɲat³ ~ ɲat³ / ɲat³ tight (v). MI rek³¹ ~ rek³ slender in one place (v).

ral¹ — MI/ZA/TH/ZO/TE/SI ral¹ enemy (n). MI/ZA/TH/ZO/TE/SI ral³ opposite side (n). cf. rol¹, rvl⁻

raŋ¹ — (ST *raŋ). ¹⁹¹ ZA raŋ¹ bones (n).

raŋ² — (areal). ¹⁹² ZA raŋ²¹ horse (n).

raw¹ — (ST *raw). ¹⁹³ MI raw¹ ~ raw³, TH/ZO/TE gaw¹ ~ gaw³, SI ɲaw³ darken (leaf/fruit) (v). ZA raw³ ~ raw³ dry (leaf/laundry) (v).

raw² — MI/ZA raw²¹, TH/ZO/TE gaw², SI ɲaw² spirit (n).

raŋ² — MI/ZA raŋ²¹ ~ raŋ³, TH/ZO/TE ɲen³ ~ gen³, SI ɲen³ ~ ɲen³ fast (v).

rel¹ — MI rel¹ ~ rel³, TH/ZO/TE gēl¹ ~ gēl³, SI ɲeal¹ ~ ɲeal³ plan (v); ZA rel¹ ~ rel³ discuss (v).

råk — (ST *råk). ¹⁹⁴ MI/ZA råk³¹ ~ riaʔ, TH gēʔ ~ gē³, ZO ɲeʔ ~ ɲeʔ, TE giak³ ~ giak³ / giaʔ, SI ɲiek³ ~ ɲiek³ / ɲe³ stay over night (v).

rål¹ — MI ral¹, ZA ral³, TH gēl¹, ZO gēl¹, TE gial¹, SI ɲiel¹ hail (n).

rikk — (ST *råk). ¹⁹⁵ MI/ZA rik³ ~ riaʔ, TH/ZO giʔ, TE gik ~ giʔ, SI ɲit ~ ɲit³ heavy (v).

ril² — TH/ZO/TE gii³, SI ɲi³ birdcoop (n). cf. ril¹

riŋ¹ — MI/ZA riŋ¹ ~ riŋ³ loud (v); TH/ZO/TE ɲiŋ¹ ~ ɲin³, SI ɲiŋ¹ ~ ɲin³ emit sound (v).

rip — TH/ZO/TE gip, SI ɲip lac (n).

ri² — MI/ZA ri²¹, TH/ZO/TE gi², SI ɲi² 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 rin¹ ~ rin³, TH/ZO/TE git¹ ~ git³, SI git¹ ~ ṭi³ delineate (v). MI/ZA rin³ line (n); rit¹ ~ rit³ hoe (v).

rīl¹ — MI rīl¹, ZA rīl¹, TH git¹ intestines (n); ZO/TE git¹, SI ṭi³ belly (n). cf. rīl²

P-row¹ — MI/ZA ṭow¹ ~ ṭow³, TH/ZO/TE/SI pow¹ ~ pow³ sprout (v).

rol¹ — TH/TE gol³, SI ṭot³ fence (n); ZO gol³ lane (n). ZO/TE gol¹ ~ gol³ withhold (v). cf. ral¹, rvl¹

rot — (onomatopoeic). MI/ZA rot¹ ~ rot³, TH/ZO got¹ ~ got³ grind (v); TE got¹ ~ got³, SI ṭot¹ ~ ṭot³ torture (v).

rōm — MI/ZA ṭop deteriorate (v); TH gum¹ ~ gop, TE gum¹ ~ gom³ shrivel (v); TH gop¹ ~ gop³ dry (v); ZO gop¹ ~ gop³ shrink (v); SI ṭom¹ ~ ṭom³ gaunt (v).

rō(w)¹ — MI/ZA rōw¹ ~ rōw³, TH go¹ ~ got, ZO go¹ ~ go³, TE go¹ ~ got / got¹, SI ṭot¹ ~ ṭot dry (v). TH gōw³ ~ go³ roast (v).

roa¹ — (ST *r-wa¹).¹⁹⁶ MI/ZA roa¹, TH gooa¹, ZO gooa¹, TE goa¹, SI ṭuë¹ bamboo (n).

roak — MI roak³ ~ roa?, TH gooa³ ~ goa³, ZO gooa³ empty (v). TH gooa³, ZO gooa³, TE goak², SI ṭuëk³ individual (n). cf. Loād⁷

roam² — TH goom², ZO goom², TE goam² canyon, ravine (n).

rol² — TH/ZO gol³, TE –gol?, SI ṭo³ desire (v).

ros — (ST *rwāṣ).¹⁹⁷ MI/ZA ru? bone (n), firm (v). TH/ZO gu³, TE go³ bone (n); SI ṭu³ stubborn (v).

ru² — MI ru³, TH/ZO/TE gu², SI ṭu² poison (n); ZA ru³ intoxicant (n).

ru² — ru³ ~ ruk³, ZA ru³ ~ ruk³, TH/ZO gu² ~ gu², TE gu² ~ guk², SI ṭu² ~ ṭuk² steal (v).

rul¹ — (ST *rwĀl¹).¹⁹⁸ MI/ZA rul¹, TH/ZO/TE gul¹, SI ṭu¹ snake (n).

run¹ — MI run¹, TH/ZO/TE gun¹, SI ṭu¹ river (n); ZA run¹ Manipur river.

rvl — MI reL?, ZO/TE gel³ ~ gel³, SI ṭel³ ~ ṭel³ sneak off (v); ZA reL? hide (v). MI/ZA rol³ evade (v). ⇒ (b)rvl¹. cf. ral¹, rol¹

rvm — MI/ZA rem¹ ~ rem³ harmonise (v), rem³ harmonise (v); TH gom³ ~ gop, ZO/TE gom³ ~ gom³, SI ṭom³ ~ ṭom³ combine (v).

¹⁹⁶ See Vol.1, Ch.6, #5.
¹⁹⁷ See Vol.1, Ch.6, #24.
¹⁹⁸ See Vol.1, Ch.6, #149.
See Vol.1, Ch.6, #124.

See Vol.1, Ch.6, #139.

See Vol.1, Ch.6, #88.

See Vol.1, Ch.6, #108.

Compare the association between lecture and select for the semantics.
**h**rin**h** — (ST *h*rij). 205 MI h**rin** ~ h**rin** / h**rin** beget, green, fresh, raw (v); 206 ZA h**rin** ~ h**rin** green, fresh, raw (v), beget (v), h**rin** beget (v); TH/ZO/TE/SI h**h** ~ h**hn** beget, green, alive (v).

**h**rol**l** — MI h**rol** ~ h**rol** / h**rol** big (v).

**h**(r)ol**l** — MI h**ol** ~ h**ol** / h**ol** brandish (v). TH/ZO/SI/TE hol ~ h**ol** drive (v). MI hol?, TH/ZO/SI h**ol** ~ h**ol** prod (v). 207

**h**(r)an**l** — (Austroasiatic). 208 MI h**an**l, ZA h**an**l enclosure, fence (n); TH hooj, ZO hooj, TE hooj, SI huenj enclosure (n). MI hooj**, TE hooj**, TH hoon**, ZO hoon**, SI huenj acreage (n).

**h**(r)ej**2** — (ST *h*raj). 209 MI h**raj**a, TH/TE goj, ZO guj, SI noj rope, creeper (n); ZA h**raj**a rope (n). ZO huj**, TE ~h**oj**, SI ~h**oj** vein (n).

**h**ru**l** — MI ~ h**ru**, TH ~hu n**it** (n).

**h**ru**n** — ZA h**ru** ~ h**ru**, TH/ZO hu ~ ho?, TE/SI hu ~ hok block (v). ZA h**ru**, TE hu stopper (n). TE hu ~ hu~h, SI hu ~ hut~ protect (v); TH hu~h rescue (v). TH/ZO hu~h, TE ho~, SI hu ~ hu~h help (v).

**h**(r)**vl** — MI rial, ZA h**rial**, TH heil ~ heil, ZO hiel ~ hiel, TE hial ~ hial, SI hiel ~ hiel** desist temporarily (v). ZA h**rel? leave behind accidentally (v).

**h**(r)**vl** — MI r**v** ~ run help (v). 210 TH/ZO/SI h**v** ~ h**v** prevent (v). ZA run ~ run, ZO/TE/SI h**v** ~ hot, ZO/TE h**v** ~ hot rescue (v).

**h**(r)**vl** — (areal). 211 MI **v**, ZO/TE g**v** bottle neck (n). MI **v** **v** nape (n). MI h**v**, ZA **v**, TH/ZO/TE g**v** throat (n). TH/ZO/SI lon **v** tube (n). TH/ZO/TE g**v** ~ g**v** scrawny (v). cf. h**v**

**h**(r)**vp** — (Austroasiatic, onomatopoeic). 212 ZA hop ~ hop eat with spoon (v). ZA h**rop** ~ hop eat from ladle (v). TH/ZO/TE hop ~ hop, SI hop ~ hop / ho~ drink soup (v). MI/TH/ZO/SI h**p** gobble (v). ZA h**p** ~ he? scoop out (v). MI/ZA hip ~ hip** gasp (v). MI hup ~ hup** drink from hands (v); TH hup ~ hup sip (v), ZO hup ~ hup** suck up (v); TE/SI hup ~ hup** suck/lap up (v).

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205 See Vol.1, Ch.6, #1.
206 MI h**rin** from Chhangte (1993:88) who associates it with beget as opposed to h**rin** 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 ru ~ run from VanBik (2006:244).
211 See Vol.1, Ch.6, #119.
212 See Vol.1, Ch.6, #85.
sek — MI/TE/SI sek, ZA hek ~ he’, ZO se? hard (v).

gel² — MI/ZA seI³a, TH/ZO/TE/SI seI² captive (n).

gem² — (Austronesian), 213 MI/ZA seI³a, TH/ZO/TE/SI seI² head hair (n).

sen¹ — MI/TH seI³ ~ seI³³, TH/ZO/TE/SI seI³ red (v); ZA seI³ ~ seI³³ red (v), seI³³ redden (v).

sa¹ — (ST *tsʰa'). 214 MI/ZA/TH/ZO/TE/SI sa¹ ~ set hot (v).

sa² — (ST *sja'). 215 MI/ZA saI³b, TH/ZO/TE/SI saI² meat (n).

saj¹ — MI/ZA/TH/ZO/TE/SI saI³ elephant (n).

saj¹ — MI/ZA/ ZO/TE/SI saI³ ~ saI³³, TH saI³ ~ saI³³ fire slingshot (v).

san¹ — MI/ZA/TH/ZO/TE/SI saI³ ~ san³ high (v). 216

sas — MI/TE/SI saI³³ ~ sek, ZA sek ~ se?, TH/ZO saI³ ~ se? sing (v).

saw² — MI sawI³a ~ saw³³, TH/ZO/TE/SI saw³ ~ saw³³ long (v); ZA sawI³a ~ saw³³ long (v), saw³ lengthen (v). 217

saw² — MI sawI³a ~ saw³³ appportion (v); ZA sawI³ fillet (n); TH/ZO/TE/SI sawI³ ~ saw³³ dissect (v).

sen¹ — MI/TH/ZO seI³ ~ seI³³ very young (v); ZA seI³³ ~ TE seI³ ~ seI³³, SI seI³ ~ seI³³ young (v).

siak — MI/ZA siakI²b, TH seI³, ZO sietI², TE siakI², SI sietI² cockspur (n).

sial¹ — MI/TE sialI¹, ZA –sialI², TH sialI¹, ZO sialI¹, SI sialI¹ mithun (n).

sial² — MI/ZA sialI³a ~ sialI³³, TH seI³ ~ seI³³, ZO seI³ ~ seI³³, TE sialI³ ~ sialI³³, SI sialI³ ~ sialI³³ clear a road (v).

siam¹ — MI siamI¹ ~ siamI³³ compose, create (v); ZA siamI¹ ~ siamI³³ hew, create (v); TH siemI ~ siemI³³ compose (v); ZO siemI ~ siemI³³ hew, create, decorate (v); TE siamI ~ siamI³³, SI siemI ~ siemI³³ hew, bless (v).


sil² — (ST *tsʰol'). 218 MI/TH/ZO/TE/SI silI² ~ silI³³ wash (v).

sil² — MI sinI³ ~ sinI³³, MI/TE silI?, TH/ZO/si silI³ put on above waist (v); 219 ZA silI? refill (v).

sis — MI si?, TH/ZO/si si³, LA/TE si?— salt water spring (n).

sow¹ — (ST *tsʰwa'). 220 MI/TH/ZO/TE/SI sowI³ ~ sowI³³ boil (v); ZA sowI³ ~ sowI³³ boil (v), sow³ boil (v).

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 sew³ from Osburne (1975:113).
218 See Vol.1, Ch.6, #178.
219 MI sinI³ ~ sinI³³ from Chhangte (1993:86;99).
sow¹ — ZA/TH/ZO/TE/SI sow¹ panji (n). MI/ZA so? prod (v); TH/ZO/SI so³, TE so? season (v).

soj² — MI/TE soj³ ~ soj³, TH soj³ ~ soj³, ZO soj³ ~ soj³ / soj³, SI soaj³ askew (v).

son¹ — MI/ZA son¹ ~ son³ shrivel (v).

sop — MI sop³, ZA sop³ ~ so?, TH/ZO/TE/SI sop³ ~ sop³ launder (v).

soak — MI sok³ ~ so? take a pinch (v); ZA sok³ pick up sticky object (v); TH so?³ ~ so?³, TE sok³ ~ so?, SI sok³ ~ sok³ / so³ take out (v); ZO so?³ ~ so³ take out, take a pinch (v). MI/ZA soak³ ~ so?, TE soak³ ~ soak³ / soa?, SI suek³ ~ suek³/ sue³ ladle (v).

soal— MI soal¹ ~ soal³ rape (v). ZA/TE soal¹ ~ soal³, SI sue¹ ~ sue³ fight (v). MI/ZA soal³ ~ soal³, ZO sool³ ~ sool³ wicked (v).

soam¹ — MI soam¹ ~ soam³, TH soom¹ ~ soom³, TH soom¹ ~ soom³, ZO soom¹ ~ soom³, TE soam¹ ~ soam³, SI suem¹ ~ suem³ assassinate (v). ZA soam¹ ~ soam³ disdain (v).

soan¹ — MI son¹, ZA ~son¹ bastard (n); TH son³, ZO ~son³ new generation (n); TH soon³ great grandchild (n); ZO soon³, SI suen³ descendants (n); TE son¹ grandchild (n).

soan² — MI soan¹ ~ soan³, TH soon¹ ~ soon³, ZO soon² ~ soon³, TE soan² ~ soan³, SI suen² ~ suen³ usurp (v). MI son³ shift (v). ZA soan³ ~ son³ contaminate (v); TH soon³, ZO soon³, TE soan³ ~ soat, SI suen³ ~ sat entrust (v). TH/ZO/TE/SI son² ~ son³ push (v).

soan³ — (Austroasiatic).²²¹ ZA ~soan³, TH ~son², ZO ~soon², TE ~soan³, SI ~ suen² onion, garlic (n).²²²

soan¹ — MI soan¹, TH soon¹, ZO soon¹, TE soan¹, SI suen¹ stone (n).

som² — (Tai-Kadai).²²³ MI/ZA som³, TH/ZO/TE/som³ mortar (n).

su² — (Austroasiatic).²²⁴ MI su³ ~ suk³, SI su³ ~ suk³ launder (v).

sgr¹ — MI sur¹ ~ sur³ rain (v); ZA sur¹ ~ sur³ rain (v), sor³ rain on (v). MI/ZA sor¹ ~ sor³, TE/SI suk¹ ~ suk³ wring (v).

sut — MI sut³ ~ so³, ZA sut³ (~ so³), TH/ZO/TE sut³ ~ sut³, SI sut³ ~ sut³ / sut³ untie (v).

svj² — MI sōj²A ~ soj³, TH sej³ ~ sej³, TI soj³ ~ say (v); ZA sōj²A ~ soj³ criticise (v).

svm— MI/ZA som¹ ~ som³ invite (v); TH/SI som¹ ~ som³ bind together (v); ZO som¹ ~ som³ complain (v); TE som¹ ~ som³ contemplate (v);²²⁵ TH/ZO/TE/SI sim¹ ~ sim³ gather to eat

²²¹ See Vol.1, Ch.6, #123.
²²² TE soan³ from Luce (1962:tableB).
²²³ See Vol.1, Ch.6, #113.
²²⁴ See Vol.1, Ch.6, #179.
²²⁵ TE som¹ ~ som³ from Bhaskararao (1996:88); see VanBik (2009:182) for the semantics.
(v). TH/TE/SI som\textsuperscript{II}, ZO som\textsuperscript{II} \sim som\textsuperscript{III} gather to sleep (v). MI sum\textsuperscript{I} \sim sum\textsuperscript{III}, ZA sup\textsuperscript{III} withhold (v). MI sum\textsuperscript{III}, TH sim\textsuperscript{III} \sim sip, TE som\textsuperscript{I} \sim som\textsuperscript{III}, SI sum\textsuperscript{I} \sim sum\textsuperscript{III} clench (v). MI/ZA sum\textsuperscript{III} fist-measure (n). MI/ZA/TH/ZO/TE/SI som\textsuperscript{III} ten (n).

sv\eta\textsuperscript{2} — MI sa\textsuperscript{I\textdegree}A thousand (n), si\textsuperscript{I\textdegree}A ten thousand (n); TH/TE/SI sa\textsuperscript{II} hundred thousand (n).
tek — MI/ZA tek real (v); TH/ZO teʔ, TE/SI tek real (v), right (n).

tek — MI/ZA tek, ZO teʔ flesh (n); TH teʔ – flesh, muscle (n); TE – tek, SI tek muscle (n).


tel¹ — MI –tel¹, TH tel¹ muscle (n).

tem² — MI/ZA tem⁰ — tem³, TH/ZO/TE/SI tem¹ — tem³ many (v).

ten² — MI/ZA ten⁰ — ten³, TH/ZO/TE/SI ten¹ — ten³ saw, cut (v).

ten¹ — ZA ten¹ winter (n); TE ten¹ dry/hot weather (n).

tep — MI/ZA/TH/ZO/TE/SI tep hearth (n).

ter¹ — MI/ZA ter¹ — ter³, TH teʔ¹ — teʔ³, ZO teʔ¹ — teʔ³, TE tek¹ — tek³, SI teak¹ — teak³ elderly (v). TH taʔ¹ — teʔ³ hard (v); ZO taʾ — taʔ³, TE tak¹ — tak³ firm (v).

taj² — MI/ZA taj⁰ waist (n); TH/ZO/TE/SI taj⁰ underbelly (n).

tar¹ — MI/ZA tar¹ — tar³, TH taʔ¹ — teʔ³, ZO taʾ — taʔ³, SI tak¹ — tak³ display on pole (v). MI/ZA terʔ bait (v). cf. tses

tat — MI tat⁰ — teʔ³, ZA tat⁰, TH/ZO/TE tat⁰ — tat³, SI tat⁰ — tat³ / ta⁰ sharpen (v).

taw² — MI/ZA taw⁰ — taw³ moan (v). TH/ZO/TE/SI taw² — taw³ sulk (v).

te² — MI/ZA te⁰ — te³, TH te³ — te⁰ small (v); SI te² — te³ granular (v).

tel — MI/ZA tel⁰ — tel³ include (v), teʔ³ include (v); MI tel¹ — tel³ bunch (v). MI tel¹, ZA tel³ bunch (n); MI/ZA tel⁰, TH tel³ bundle (n); ZO tel¹ fillet (n).
	tram¹ — MI tiam³, ZA –tiam³, TH teim¹ ~ teim³ / teip, ZO ʧiem¹ ~ ʧiem³, TE ʧiam¹ ~ ʧiam³, SI ʧiem¹ ~ ʧiem³ promise (v). ZO ʧiem³ ~ ʧiep mentally note (v).

tam¹ — MI tem¹ — tem³, MI tep, ZA tep ~ teʔ, TH/SI tep ~ te³, ZO ʧiem¹ ~ ʧiep, TE ʧiam² ~ ʧiap taste (v); TH teim³ ~ teip try (v).

traj² — MI traj⁰, ZO ʧien², TE ʧiaŋ², SI ʧien² stick (n); TH teŋ³ javelin (n).
	tar¹ — ZA tar¹ relocate (v). ⇒ tʰtar¹

til² — MI/ZA til⁰, TH til³, ZO/TE/SI ʧi² testicle (n).

tm² — (ST *sjoŋ).227 MI/ZA tm⁰, TH tm³, ZO/TE/SI ʧim² nail, claw (n).

ti² — MI ti³, TH ti³, ZO/SI ʧi³ — nervous (v).

tis — MI ti³ ~ ti³, ZA/TH ti³, ZO/SI ʧi³, TE ʧi³ ~ ʧi³ say (v).

taw¹ — MI –taw¹ ~ taw³, TH/ZO/SI taw¹ ~ taw³ sit (v); ZA taw¹ ~ taw³ sit (v), taw? sit (v).

226 See Vol.1, Ch.6, #181.

227 See Vol.1, Ch.6, #116.
tok — MI tok ~ toʔ, TH toʔ — *touch with hand* (v); ZA tok ~ toʔ *knock down fruit with stick, point* (v).

toj² — MI/ZA toj²A short (v).

toj³ — MI/TE toj³ — toj³A, TH toj³ ~ toj³B, ZO toj³ ~ toj³, SI tuj³ young (v).

toal¹ — MI/ZA/TE toal¹, TH tooι¹, ZO tooι¹, SI tuel¹ *locality* (n).

tok — MI/TE tok, TH/ZO toʔ *hair bob* (n); ZA tok *crown of head* (n); SI tok *indent at back head* (n).

tom² — MI/ZA tum²A ~ tom³, TH/ZO/TE/SI tom³ ~ tom³ drum (v).

tom² — MI tom³ ~ tom³ *intend, wish* (v); ZA tom³ ~ tom³, tom³ ~ top *intend* (v); TH/TE/SI tom³ ~ top *wish* (v).

toŋ¹ — MI/ZA/TH/ZO/TE/SI toŋ¹ *warp* (n); toŋ¹ ~ tom³ *erect* (v). cf. ŋay¹

Tŋay¹ — (ST *dwŋay*).²²² MI/TH/ZO/TE/SI dŋay³ *length* (n). MI/TH/ZO/TE/SI toŋ³, ZA dŋay³ *cubit* (n). cf. toŋ¹

tor¹ — MI tor³B, ZA tor³ ~ tor³ *pulsate* (v).

tos — MI/ZA/TE toʔ, TH/ZO/SI tu³ *plant seed* (v).

tu¹ — ZA/TH/ZO tu¹, SI –tu¹ *jungle* (n); TE tu¹ ~ *tall grass area* (n).

tu² — MI/ZA tu³B, TH/ZO/TE/SI tu³ *grandchild* (n).

tu³ — ZA tu³A, TH/ZO/TE/SI tu³ *now* (n).

tu⁴ — MI/TH/SI tu⁴, ZA ti⁴, ZO/TE tu⁴ *egg* (n). MI/TH/SI tu⁴ ~ tu⁴B, ZA ti⁴ ~ ti⁴B, ZO/TE tu⁴ ~ tu⁴B *lay egg* (v).

tuj¹ — MI toj³ ~ toj³, TH tuj³ ~ tuj³ / tuj³, ZO tuj³ ~ tuj³, TE –tuj³ ~ tuj³, SI –toj³ ~ toj³ *delicious* (v).

tuj² — (ST *twaj*).²²⁹ MI toj³A, TH/SI toj³, ZA ti³A, ZO/TE tuj³ *water* (n). MI toj³A ~ toj³, ZA ti³A, TH/SI toj³ ~ toj³, ZO/TE tuj³ ~ tuj³ *melt* (v).

tul¹ — MI/TH/ZO/TE tul¹, ZA –tul¹ *skewer* (n).

tul* — ZO/TE/SI tul³ *thousand* (n).

tur* — MI tur³, TH tuʔ, ZO toa³, TE/SI tuk³ *pungent* (v).

tus — MI tu³ ~ *hammer* (n); ZA/TH/ZO/TE tu³, SI tu³ ~ *small hoe* (n). MI/ZA tok *carve* (v); TH/ZO tu³ ~ toʔ, TE tu³ ~ tok *chop* (v).

tvl* — MI/ZA tal³A ~ tal³ *wriggle* (v). MI tel³B, ZO/TE/SI tal³ ~ tal³ *slither* (v). TH/ZO/TE tul³ ~ tul³ *slide out* (v). MI tol³ / tol³, ZA/TE tol³, ZO/SI tol³ *slide* (v). ⇒ tvl*~. cf. tsel*

tvl* — (Austroasiatic).²³⁰ MI dill, TH tal³, ZO tul¹, TE/SI –tul¹ *heel* (n).

tvm* — MI/ZA toam³A ~ toam³, TH toom³ ~ toom³, ZO/TE/SI toom³ ~ toom³, TE toam³ ~ toam³, SI tuem³ ~ tuem³ *wrap* (v). MI tom³ ~ tom³ *crouch, huddle up, tie hair bob* (v); ZA tom³ ~ tom³ *bind up* (v). MI/ZA toam³ *hair bob* (n). MI/ZA toam³, TH/ZO/TE/SI

²²⁸ See Vol.1, Ch.6, #105.
²²⁹ See Vol.1, Ch.6, #180.
tom¹ ~ tom³ clench (v). MI/ZA tom³, fist, block (n); TH/ZO/SI tom¹ fist, hair bob (n); TE tom³ fist, block, hair bob (n).

TVD — MI/ZA tuak³ pair (n). MI tok³ ~ to?, TH to?³ ~ tu³, ZO to³ ~ tu³, TE tuak³ ~ tuak³ / toa?, SI tuak³ ~ tu³ meet (v). MI/ZA to³ ~ to³ meet (v). TH to³ speak (v). MI to³ ~ to³, ZA to³ fight (v); TE/SI to³ ~ to³ provoke (v). MI do³ ~ do³, ZA do³ ~ do³ catch, intercept (v); TH/ZO do³ ~ do³ solicit, intercept (v); TE do³ ~ do³ solicit donation, host party (v); SI do³ ~ do³ solicit donation, catch, intercept (v). TH/ZO/TE do³ ~ do³ reply (v), SI do³ reply in verse (v). MI do³ ~ do³, TH/ZO/TE/SI do³ ~ do³ hinder (v). TH do³ ~ do³ / dot, ZO do³ ~ do³ / dot, SI do³ ~ do³ / dot ask (v). TH/TE/SI do³ ~ do³ unburden, meet (v). MI tso³ on³ ~ tso³ on³, ZA so³ on³ ~ so³ on³ reply (v).
\( t^{h} \)

\( t^{h}e\k \) — (ST *sak).\(^\text{231}\) MI/ZA/TE \( t^{h}\)ek \( \sim \) \( t^{h}e\), TH/ZO \( t^{h}er\), SI \( t^{h}ek \) itch, spicy (v).

\( t^{h}e\l^{1} \) — MI/ZA \( t^{h}e\l^{1} \), ZO/TE/SI \( t^{h}\el^{1} \) oak (n).

\( t^{h}e\l^{2} \) — MI/ZA \( t^{h}\el^{1} \) arrow (n); ZO/TE/SI \( t^{h}\el^{1} \) bow (n).

\( t^{h}em^{2} \) — MI/ZA \( t^{h}em^{1} \) \( \sim \) \( t^{h}\em^{1} \) handle (v); TH/ZO/TE/SI \( t^{h}\em^{1} \) \( \sim \) \( t^{h}\em^{1} \) touch with hand (v).

\( t^{h}eq^{1} \) — MI/ZA/TH/ZO/TE/SI \( t^{h}eq^{1} \) \( \sim \) \( t^{h}\eq^{1} \) famous (v); ZA \( t^{h}\eq^{1} \) broadcast (v).

\( t^{h}eq^{\prime} \) — MI \( t^{h}\eq^{\prime} \), ZA \( t^{h}\eq^{\prime} \) \( \sim \) \( t^{h}\eq^{\prime} \) TH/ZO/TE/SI \( t^{h}an^{\prime} \) \( \sim \) \( t^{h}\eq^{\prime} \) reek (v); \( t^{h}an^{\prime} \) \( \sim \) \( t^{h}\eq^{\prime} \) flavoursome (v).

\( t^{h}er^{1} \) — (ST *sar).\(^\text{232}\) MI/ZA \( t^{h}er^{1} \) \( \sim \) \( t^{h}\em^{1} \), TH \( t^{h}\eq^{\prime} \) \( \sim \) \( t^{h}\eq^{\prime} \), ZO \( t^{h}\eq^{\prime} \) \( \sim \) \( t^{h}\eq^{\prime} \), TE \( t^{h}\ek^{1} \), SI \( t^{h}\eq^{\prime} \) \( \sim \) \( t^{h}\eq^{\prime} \) new (v).

\( t^{h}et \) — (ST *sat).\(^\text{233}\) MI/ZA/TE \( t^{h}et \) \( \sim \) \( t^{h}\eq^{\prime} \), TH/ZO/SI \( t^{h}et \) \( \sim \) \( t^{h}\eq^{\prime} \) kill (v).

\( t^{h}a^{2} \) — MI/ZA \( t^{h}a^{2} \), TH/TE/SI \( t^{h}a^{2} \) sinew (n).

\( t^{h}a^{1} \) — MI \( t^{h}a^{1} \) \( \sim \) \( t^{h}\al^{1} \) bale (v); ZO/TE/SI \( t^{h}al^{1} \) \( \sim \) \( t^{h}\al^{1} \) funnel (v).

\( t^{h}aw^{1} \) — (ST *saw).\(^\text{234}\) MI/ZA/TH/ZO/TE/SI \( t^{h}aw^{1} \) \( \sim \) \( t^{h}aw^{1} \) fat (v), \( t^{h}aw^{1} \) fat (n).

\( t^{h}Aj^{2} \) — MI/ZA \( t^{h}eq^{1} \), TH/ZO/TE/SI \( t^{h}an^{\prime} \) trap (n).

\( t^{h}Ar^{1} \) — MI \( t^{h}ar^{1} \), ZA \( t^{h}er^{1} \), TE/SI \( t^{h}ek^{1} \) serow (n).

\( t^{h}ej^{2} \) — (ST *saj).\(^\text{235}\) MI/ZA \( t^{h}ej^{1} \), TH \( t^{h}ej^{1} \) fruit, fig (n); ZO/TE/SI \( t^{h}ej^{1} \) fig (n).

\( t^{h}\ej^{1} \) — (ST *saj).\(^\text{236}\) MI \( t^{h}\ej^{1} \) \( \sim \) \( t^{h}\ej^{1} \), SI \( t^{h}\ej^{1} \) capable (v); ZA \( t^{h}\ej^{1} \) \( \sim \) \( t^{h}\ej^{1} \), TH/ZO \( t^{h}\ej^{1} \) know (v); TE \( t^{h}\ej^{1} \) \( \sim \) \( t^{h}\ej^{1} \) know, capable (v).

\( t^{h}am^{2} \) — MI \( t^{h}am^{1} \) \( \sim \) \( t^{h}am^{1} \), TH \( t^{h}\em^{1} \) \( \sim \) \( t^{h}\em^{1} \) / \( t^{h}\eq^{1} \), ZO \( si\em^{1} \) \( \sim \) \( si\em^{1} \), TE \( si\em^{1} \) \( \sim \) \( si\em^{1} \), SI \( ti\em^{1} \) \( \sim \) \( ti\em^{1} \). proficient (v); ZA \( t^{h}am^{1} \) \( \sim \) \( t^{h}am^{1} \) understand (v).

\( t^{h}an^{1} \) — MI/ZA \( t^{h}an^{1} \) \( \sim \) \( t^{h}an^{1} \), TH \( t^{h}\eq^{1} \) \( \sim \) \( t^{h}\eq^{1} \), ZO \( si\eq^{1} \) \( \sim \) \( si\eq^{1} \), TE \( si\eq^{1} \) \( \sim \) \( si\eq^{1} \), SI \( ti\eq^{1} \) \( \sim \) \( ti\eq^{1} \) clean (v).

\( t^{h}ar^{1} \) — MI/ZA \( t^{h}ar^{1} \) \( \sim \) \( t^{h}ar^{1} \) relocate (v); TH \( t^{h}\eq^{1} \) \( \sim \) \( t^{h}\eq^{1} \), ZO \( sta^{1} \) \( \sim \) \( sta^{1} \), TE \( siak^{1} \) \( \sim \) \( siak^{1} \), SI \( ti\eq^{1} \) \( \sim \) \( ti\eq^{1} \) wipe (v). \( \Leftrightarrow \) \( tuar^{1} \)

\( t^{h}m^{1} \) — (ST *sjan).\(^\text{237}\) MI/ZA/TH \( t^{h}m^{1} \), ZO/TE \( si\m^{1} \), SI \( ti\m^{1} \) liver (n).

\( t^{h}nj^{1} \) — MI/ZA/TH \( t^{h}nj^{1} \) \( \sim \) \( t^{h}nj^{1} \), ZO \( t^{h}nj^{1} \) \( \sim \) \( t^{h}nj^{1} \), TE \( si\nj^{1} \) \( \sim \) \( si\nj^{1} \), SI \( ti\nj^{1} \) \( \sim \) \( ti\nj^{1} \) shake (v).

\( t^{h}nj^{2} \) — (ST *saj).\(^\text{238}\) MI/ZA \( t^{h}nj^{1} \), TH \( t^{h}nj^{1} \), ZO/TE \( si\nj^{1} \), SI \( ti\nj^{1} \) tree, wood (n).

\( t^{h}Js \) — MI \( t^{h}r^{1} \) oil hair (v). ZA \( t^{h}r^{1} \), TH \( t^{h}r^{1} \), ZO \( si\r^{1} \), TE \( si\r^{1} \), SI \( ti\r^{1} \) comb (n).

\(^{231}\) 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.
thOj¯ — (ST *sjao). 239 MI/ZA thOj¯ ~ thOji, TH thOj¯i ~ thOjIII, ZO siI ~ siII, TE siI ~ siI, SI thOji ~ thOjIII die (v).


tOik — MI/ZA tOikII jealous (v).

tOinI — (areal). 241 MI/ZA/TH tOinI, ZO/TE siIN, SI thOinI ginger (n).

tOip — MI/ZA tOipIII, TH tOipIII ~ tOipIII, ZO/TE sipII ~ sipIII, SI thOipII ~ thOipIII sting (v).

tOir2 — MI/ZA tOirII, TH tOirII, ZO siaII, TE sikIII, SI thOirII iron (n).

tOow2 — MI tOowII ~ tOowI, TH/ZO/SI tOowII ~ tOowI, TE tOowII ~ tOowI arise (v). ZA tOowII ~ tOowI arise (v), tOowI rouse (v).

tOow — MI/ZA/TH/ZO/TE/SI tOowIII fly (n).

tOo2 — MI tOoIII ~ tOokIII ZA tOoIII ~ tOotIII breathe (v). MI tOoIII breath (n).

tOom2 — MI/ZA tOomII, ZO/SI tOomII, TE tOomIII — sound (n).

tOoj — MI/ZA tOojII, TH/ZO/SI tOojIII, TE tOojII appease nats (v).

tOam2 — MI tOamIII ~ tOamIII, ZA tOamIII dress in finest (v). ⇒ tvm

tOap — MI/ZA tOapI, TH tOapII, ZO/TE tOapII ~ tOapIII, SI tOapII ~ tOapIII layer (v). SI tOapII layer (n). ZO tOapIII pair (v); TE tOapI, SI tOapII repeat (v).

tOok — MI/TE/SI tOok, TH/ZO tOok stove (n).

tOomI — (ST *swom). 242 MI/TH tOomI ~ tOomIII, ZA tOomI ~ tOomIII, ZO/TE/SI tOom three (v).

tOonI — MI/ZA/ZO tOonI ~ tOonIII insert lengthwise (v); TH tOonI ~ tOonIII pour into (v); TE/SI tOonI ~ tOonIII insert lengthwise, pour into (v).

tOop — MI/ZA tOop ~ tOopI hide (v).

tOorI — MI tOorI ~ tOorII, TH tOorI ~ tOorII, ZO tOorI ~ tOorII, ZA tOorI ~ tOorII ladle (v); ZA tOorI ~ tOorII ladle (v), tOorII ladle (v).

tOu2 — MI/ZA ~tOuIII, TH/ZO/TE ~tOuIII, SI ~tOuII trivet (n).

tOu2 — (ST *sow). 243 ZA tOuII ~ tOuIII rot (v).

tOu2 — MI/ZA tOuII, TH/ZO/TE/SI tOuII news (n).

tOuk — MI/ZA tOukII ~ tOukIII, TH tOukII tOukI, ZO tOukI ~ tOukII, ZA tOukI ~ tOukII, SI tOukII ~ tOukIII / tOukIII deep (v).

tOum2 — MI/ZA tOumII ~ tOumIII deep (voice) (v). cf. K imI

tOum2 — TH/ZO tOumII ~ tOumIII request (v). TE/SI tOumII ~ tOumIII apologise (v).

tOur — (Austroasiatic). 244 MI/ZA tOurII ~ tOurIII, TH tOurI ~ tOurII, ZO tOurI ~ tOurIII, ZA tOurI ~ tOurII, TE/SI tOukII ~ tOukIII 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.
$t^h_v \Gamma$ — MI $t^h_\Omega^I$ / $t^h_\Omega^II$ slide under/between (v), ZA/TE $t^h_\Omega^I$, TH/ZO/SI $t^h_\Omega^II$ slide (v). MI $t^h_\Omega^I$ ~ $t^h_\Omega^II$, ZA $t^h_\Omega^I$ ~ $t^h_\Omega^II$ loose (v). TH/ZO/TE/SI $t^h_\Omega^I$ ~ $t^h_\Omega^III$ fittable (v).

$\Rightarrow t_v \Gamma$

$\thetavp$ — MI $t^h_\epsilon^III$, ZA $t^h_\epsilon^I$ ~ $t^h_\epsilon^II$, TH $t^h_\epsilon^I$ ~ $t^h_\epsilon^II$, ZO/TE $t^h_\epsilon^II$ ~ $t^h_\epsilon^III$ SI $t^h_\epsilon^II$ ~ $t^h_\epsilon^III$ / $t^h_\epsilon^III$ deflate (v). MI $t^h_\Omega^I$ ~ $t^h_\Omega^III$ spongy (v); TH $t^h_\Omega^I$ ~ $t^h_\Omega^III$ shrivel (v).
ts

$tsek$ — MI/ZA $tsek$ ~ tsəʔ, TH ʔtʃʔ ~ ʔtʃʰ, TE/SI tek sturdy (v).

$tšl¹$ — MI $tšl¹$, TH ʔʃl̓/ʔʃɬ̓, ZO/TE/SI tel¹ male (n). MI $tšl³$, ZA $tšl³$, TH ʔʃl̓, ZO/TE/SI tel³ forehead (n).

$tšəl²$ — MI/ZA $tšəl²$, TH ʔʃɬ̓, SI tʔəl² small bamboo (n).

$tšem¹$ — MI $tšem¹$ ~ tsem³, TH ʔʃem¹ ~ ʔʃem³, ZO/TE/SI tem¹ ~ tem³ level (v).

$tšəm²$ — MI/ZA $tšəm²$ ~ tsem³, TH ʔʃəm² ~ ʔʃəm³, ZO tən² ~ tən³ slice (v); TE tən² ~ tən³ cleave (v). SI tən² ~ tən³ desist (v). MI $tšəm³$ slice (n). TH ʔʃəm³, ZO/TE/SI ten³ portion (n).

$tšən¹$ — TH ʔʃən¹ ~ ʔʃən³, ZO/TE/SI ten¹ ~ ten³ straight (v).

$tšən²$ — MI/ZA $tšən²$ ~ tsem³, TH ʔʃən² ~ ʔʃən³, ZO/TE/SI ten² ~ ten³ obtain (v).

$tšəs$ — MI ʔtʃaʔ, TE teʔ, SI ʔtaʔ³ bait (v). cf. ʔdəs

$tšət$ — (ST *tʃət).²⁴⁵ MI/ZA $tšət$ ~ tsəʔ, ZA ʔtʃət ~ tsəʔ, ZO/SI tet ~ ta³, TE tet ~ teʔ snap (rope) (v); TH ʔʃət ~ ʔʃət² snap (chicken’s neck) (v).

$tʃa²$ — TH ʔʃə² ~ ʔʃə³, TE ta³ ~ tat³ / tak³ scare (v); SI ta³ ~ tat³ / tak³ scare (v).²⁴⁶

$təj²$ — MI $təj²$ ~ $təj³$ play (v); ZA $təj³$ play tug-of-war (v). ↔ $tʃəj²$

$təm¹$ — (ST *təm).²⁴⁷ MI/ZA $təm¹$ ~ təm³, TH ʔʃəm¹ ~ ʔʃəm³, ZO/TE/SI tam¹ ~ tam³ sojourn (v).

$tən¹$ — MI/ZA $tən¹$, TH ʔʃən¹, ZO/TE/SI tan¹ joint (n).

$tən²$ — MI/ZA $tən²$ ~ tən³, TH ʔʃən² ~ ʔʃən³, SA ʔtan² ~ tan³ wait for prey (v). ZO ʔtaʔ³ hunting ground (n).

$təw²$ — MI/ZA $təw²$ təwʔ, TH ʔtaw² tire (v). ZO ~təw³ ~ təw³, ~TE təw³ ~ təwʔ worry (v). SI təw³ ~ təw² grieve (v).

$təm³$ — MI $təm³$, TH ʔʃəm³, ZO tem¹ ~ TE/SI tem¹ knife (n).

$tək$ — MI/ZA $tək²$ ~ ʔtəkʔ axe (v).

$təl²$ — ZA ~təl³, TH ~tel³, ZO/TE ~tel³, SI ~təl³⁰ earthworm (n). TH ʔʃəl¹ ~ ʔʃəl³ slither (v). cf. tvl¹

$tsəp$ — MI ʔtʃəp, ZA ʔtʃəp³ soak (v); ZA $tsəp³$ soak (v), ʔtʃəpʔ soak (v).

$tsər¹$ — MI ~tsər¹ (~ tsər³) chatter (v), $tsər³⁰$ boil (v); ZA ~tsər¹ ~ tsər³ grumble (v); TH ʔʃəʔ¹ ~ ʔʃəʔ³, ZO ʔʃəʔ¹ ~ ʔʃəʔ³, TE ʔʃəʔ¹ ~ ʔʃəʔ³, SI ʔʃəʔ¹ ~ ʔʃəʔ³ grumble, chatter, wheeze, bubble (v).

$tsəl¹$ — MI/ZA $tsəl¹$, TH/ZO/TE/SI ʔʃəl¹ saliva (n).

$tsəm²$ — TH ʔʃəm² ~ ʔʃəm³, ZO/TE/SI ʔʃəm³ ~ ʔʃəm collapse (v).

²⁴⁵ See Vol.1, Ch.6, #26.
²⁴⁶ Stern (1963:245) glosses SI FORM-II tat² as scare (v) and tak² as scare (v).
²⁴⁷ See Vol.1, Ch.6, #151.

-tsi² — (ST *tsjo). 248 MI/ZA tsiʰB, TH/ZO/TE/SI tʃiʰ seed (n).

-tsís — MI/ZA tsiʰI, TH/ZO/TE/SI tʃiʰ salt (n).

-tsok — MI/ZA tsok ~ tsɔʔ, TH tʃoʔ ~ tʃoʰ, ZO/SI tʃoʔ ~ toʰ, TE tʃok ~ tʃoʔ stir (v).

-tsól — MI tsolʰI, ZA tsolʔ, TH tʃolʰ, ZO/TE/SI toʰ yeast (n).

-tsóm² — MI tsomʰA ~ tsomʰI, ZA tsomʰ shrunk (v); ZA tsomʰ ~ tsomʰI curl up (v); TH tʃomʰ ~ tʃomʰI, ZO/TE/SI toᵐ ~ toᵐ short (v).

-tsow² — (ST *tswaʔ). 249 MI tsowʰA ~ tsɔʔ, TH tʃowʰ ~ tʃoʰ, ZO/SI tɔwʰ ~ toʰ, TE tʃowʰ ~ toʔ dig (v).

-tsól² — TH tʃolʰI ~ tʃolʰI, ZO/TE to¹I ~ to³I tired (v). MI tʃolʰI ~ tʃolʔ, TH tʃolʰ, ZO to³I, TE to³I, SI to³I ~ rest, stop (v); ZA tsolʰI ~ tʃolʔ, rest, stop (v), tʃolʔ stop (v).

-tsōj¹ — MI tsoj’ ~ tsoj’I / tsoʔI, ZA tsoj’ ~ tsoj’I, TH tʃoʃ’ ~ tʃoʃ’I / tʃaj’I, ZO/TE toʃ’ ~ toʃ’I, SI tʃoʃ’ ~ tʃaj’I heft (v). ZA tsoaj’ weight (n).

-tsɔⁿ¹ — MI tson’ ~ tsən’I, TH tʃoʃ’ ~ tʃoʃ’I, ZO tson’ ~ toon’I, TE toʃ’ ~ toɔn’I, SI tʃoʃ’ ~ tuʃ’I ride (v). ⇒ tsʰɔn¹

-tsɔp — MI/ZA tspʰB, TH tʃoupʰ, ZO toopʰ, TE toapʰ, SI tʃepʰ lungs (n).

-tsʰum² — SI tumʰ ~ tumʰI increase (water) (v). MI tsumʰI ~ tsumʰB, SI tumʰI ~ top punch (v); ZA tsumʰI ~ tsumʰI thump fist down (v); TH tʃumʰI ~ tʃop, ZO/TE tumʰI ~ top flood, punch (v).

-ts’on² — MI tsonʰA, ZA –tsɔ’nʰA, TH tʃonʰ, ZO/TE/SI to’nʰ top, above (n).

-tsus — MI tsu³I ~ tsok, ZA tsok ~ tsɔʔ, TH tʃu³I ~ tʃoʔ, ZO/SI tu³I ~ toʔ, TE/SI tu³I ~ tok peck (v).

-ts’ʊŋ² — MI tʃenʰA ~ tʃenʰI, ZA tʃenʰI ~ tʃenʰI, TH/ZO/TE tʃiʰ ~ tʃiʰ, SI tʃiʰ ~ tʃiʰ downpour (v).


-ts’vp — MI tʃep adze (v); ZA tʃep adze (n); TH tʃep felled tree (n).

-ts’vr — MI tʃr? mire (n); TH tʃiʔ pond (n); ZA tʃrʔ, LA tʃerʔ, ZO tʃia’h, TE/SI tʃik spring (n).

248 See Vol.1, Ch.6, #137.
249 See Vol.1, Ch.6, #45.
250 See Vol.1, Ch.6, #140.
**tsʰ**

**tsʰek** — MI tsʰek east (n); ZA/TE/SI sek, TH/ZO seʔ north (n).

**tsʰem¹** — MI tsʰem², TH ~sem¹ ~ sem², ZO/TE/SI sem¹ ~ sem² chant (v). cf. **tsʰem¹**

**tsʰem²** — MI tsʰem³ ~ tsʰem⁴, ZA sem³ ~ sem⁴, TH/ZO/TE/SI sem³ ~ sep need (v).

**tsʰes** — MI tsʰeʔ, ZA/TE seʔ, TH/ZO/SA sa² thick (v).

**tsʰaj²** — MI tsʰejʔ tease (v); ZA sejʔ kick in jest (v). ⇒ **tsaj²**

**tsʰaj³** — MI tsʰan¹ ~ tsʰan² require (v); ZA saŋ¹ ~ san² borrow (v), saŋ² lend (v); TH/ZO/TE/SI saŋ¹ ~ san² accept (v).

**tsʰek** — MI tsʰek, ZA sek hatchet (n); TH/ZO seʔ, TE/SE tek hammer (n).

**tsʰer¹** — MI tsʰer¹ ~ tsʰer¹, ZA scr¹ ~ ser¹, TE sek¹ ~ sek¹, SI seak¹ ~ seak² forge (v).

**tsʰem¹** — MI tsʰem¹ ~ tsʰem² / tsʰem³ blow, fan flames (v); ZA sem³ ~ sem⁴, TH/ZO sem¹ ~ sem¹ blow (v); TE sem¹ ~ sem¹, SI scam¹ ~ scam² fan flames (v).

**tsʰet²** — MI tsʰek² ~ tsʰeʔ, ZA sek², LA seŋ², ZO/TE/SI seŋ² ~ sen² store (v).

**tsʰa²** — MI tsʰa³ ~ tsʰat², ZA sia³ ~ sat³, TH ser³ ~ ser³, ZO sie² ~ siet¹, TE sia² ~ stat², SI sie² ~ siet² ruin, bad (v). MI tsʰa³ something bad (n).²⁵¹ ZO siet² deprecate (v); TE siat¹, SI siet² ~ siet³ / sie³ blame (v). MI tsʰaʔ, ZA siaʔ offer food to deceased (v), tax (n); TH ser³, ZO sie³, SI sie² earmark food (v), tax (n); TE siaʔ earmark (v), tax (n).²⁵²

**tsʰim¹** — ZA sim¹ ~ sim² say, tell (v); TH/ZO/TE/SI sim¹ ~ sim² count, read (v). cf. **tsʰem¹**

**tsʰim²** — TH/ZO/SI sim¹ ~ sim² attack (v).²⁵³

**tsʰi¹** — MI tsʰin¹ ~ tsʰin², TH/ZO/TE/SI sin¹ ~ sin² short, shut eyes (v); ZA sin¹ ~ sin² shut eyes (v); ZA tsin² ~ tsin³ short (v), tsin³ shorten (v). MI tsik³ ~ tsik³ disproportionately small (v); ZO ʔti³ ~ ʔti³ narrow (v); TE/SA ʔtik³ concentrated (v); SI ʔtik tiny (v).

**tsʰo⁴** — MI tsʰom², ZA som² make a bonfire (v). MI fom¹ ~ fom², TH ʔfom¹ ~ ʔfom² / ʔfop, ZO/TE/SI tom¹ ~ tom² gather firewood (v). MI fom², TH ʔfom² / ʔfop, TE/SA tom³ ~ top pick up (v).

**tsʰoa** — (ST *thwak).²⁵⁴ MI tsʰoa² ~ tsʰoaʔ, ZA soak² ~ soʔ, TH soak² ~ soak³, ZO soak³ ~ soʔ, TE soak² ~ soak³ / soʔ, SI suék² ~ suék³ / suék³ emerge (v). MI tsʰoaʔ, ZA soʔ, TH soak², TE soʔ produce (v); ZO soak² unload (v); SI suék² produce, unload (v).²⁵⁵

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²⁵¹ MI tsʰa³ from Chhanpte (1993:88).
²⁵² See Lehman (1963:141) for the semantics.
²⁵³ VanBik (2009:171) has Lai tsʰ-.
²⁵⁴ See Vol. 1, Ch. 6, #56.
tsʰɑŋ¹ — MI tsʰɑŋ¹, ZA sɑŋ¹, TH sɔŋ¹, ZO sɔŋ¹, TE sɑŋ¹, SI sɛŋ¹ *cockscomb* (n). MI tsʰɑŋ¹ ~ tsʰɑŋ³, ZA sɑŋ¹ ~ sɔŋ², TH sɔŋ¹ ~ sɔŋ³, ZO sɔŋ¹ ~ sɔŋ³, TE sɑŋ¹ ~ sɑŋ³ *perch* (v); SI sɛŋ¹ ~ sɛŋ³ *perch on stove/head* (v). TE sɑŋ³ *protrude (forehead)* (v); SI sɛŋ³ ~ suet *protrude (occiput)* (v). ⇒ tsɔɑŋ¹. cf. tsʰɑŋ³

tsʰɑŋ² — ZA sɑŋ²A ~ sɑŋ³ *perch on stove* (v), sɔŋ²B *perch on stove* (v). cf. tsʰɑŋ¹

tsʰɔk — MI tsʰɔk ~ tsʰɔʔ, ZA sɔk ~ sɔʔ, TH/ZO soʔ, TE/SI sok *descend* (v).

tsʰɔn³ — MI tsʰɔn³ ~ tsʰɔn³B, ZA sɔn³ ~ sɔn³B, TH/ZO/TE/SI sɔn³ ~ sot *prick* (v).

tsʰɔt — MI tsʰɔʔ, ZO sɔt, TE sɔt ~ sɔʔ, SI sɔt ~ sɔ³ *snatch* (v).

tsʰu² — (ST *tʰoʔ⁴). 255 MI tsʰu³B, ZA su³B, TH/ZO/TE/SI su³ *vagina* (n).

tsʰun³ — MI tsʰun³ *daytime* (n). ZA/TH/ZO/TE/SI sɔn³ *noon* (n).

tsʰul³ — MI tsʰul³, ZA/TE sɔl³, TH/SI sɔl³ *womb* (n).

tsʰuŋ¹ — MI tsʰuŋ¹, ZA/TH/ZO/TE/SI sŋ¹ *inside* (n).

tsʰuŋ² — MI tsʰuŋ²A ~ tsʰun³, ZA sŋ²A ~ sŋ³, TH/ZO/TE/SI sŋ² ~ sŋ³ *pour* (v).

tsʰvil³ — MI/ZA tsil¹ ~ tsil³, TH/ZO/TE/SI tʃil¹ ~ tʃil³ *trample* (v). MI tsilʔ, ZA

tšɛlʔ *squash* (v). ZO sia³, TE sik³ ~ sik³, SI sik³ ~ sik³ / sɔ³ *tread* (v).

255 See Vol.1, Ch.6, #174.
**W**

**wēj** — *(Austroasiatic).*


**wēn** — *(ST *wan).*


**wēt** — *(ST *wat).*

259 MI/ZA ~vet, TH/ZO/TE/SI vot *leech* (n).

**wa** — MI/ZA va[^lb], TH/ZO/TE va[^ii], SI vē - *bird* (n).

**waj** — MI/ZA/TH/ZO/TE/SI vaj[^i] *foreigner* (n).

**waj** — 260 MI/TH/ZO/TE/SI vaj[^i] *chaff* (n); ZA vaj[^i] *parboiled rice* (n). MI pʰoaj[^i] *shavings* (n). 261


**r-wes** — *(ST *r-was).*

262 MI/ZA roaʔ?, TH goo[^iii], ZO goo[^iii], TE goaʔ?, SI n̥ue[^iii] *rain* (n).


**wēt** — MI/ZA vēt ~ viʔ, TH/ZO vot ~ vu[^ii], TE vot ~ voʔ, SI hot ~ hu[^iii] *pierce* (v).

**wok** — *(ST *waq).*

263 MI/ZA/TE/SI vok, TH/ZO vōʔ *pig* (n).

**wom** — *(ST *wom).*

264 MI ~vom[^i], ZA/TH/ZO/TE/SI vom[^i] *bear* (n).


**wōj** — *(Austroasiatic).*

265 MI/ZA vōj[^i], ZO vōj[^i], TE vōj[^i], SI vōj[^i] *elephant* (n).


266 See Vol.1, Ch.6, #11.
267 See Vol.1, Ch.6, #131.
268 See Vol.1, Ch.6, #130.
wot — MI/ZA/TH/ZO/TE vôt, SI vôt ash (n).

wur² — MI/ZA vur¹, TH bu², ZO vo¹, TE vuk¹, SI huk¹ frost, snow (n).

wvj³ — MI/ZA vøj⁴, TH vēj³i fart (n/v); ZO/SI vēj³i, TE vēj³i fart (n).

WVL⁷ — (Austroasiatic).²⁶⁶ MI vēl¹, TH/ZO/SI vēl³i, TE vēl? ring shaped stand (n). MI vēl¹ noose (n), make a noose (v); vēl³i ~ vēl³i circular, radiate in a circle (v); vēl³i ring (n). ZA vēl³i wrap with string (v). MI vēl³i, ZA vēl³i, TH vēl³i ~ vēl³i, TE vēl³i ~ vēl³i, SI vēl³i ~ vēl³i encircle (v); ZO vēl³i ~ vēl³i look all over (v); TH vēl³i surroundings (n). MI vial³i ~ vial³i coil (v), vial³i coil (v); TH vēl³i ~ vēl³i, ZO vēl³i, TE vial³i ~ vial³i, SI vēl³i coil (v); SI vēl³i ~ vēl³i wander (v). ZO ~ vēl¹, TE vial³i ringlet (n). TH vēl³i, ZO vēl³i, TE vial³i, SI vēl³i times (n). TH vaj³i ~ vaj³i / vēj³i, ZO vēj³i ~ vēj³i, SI vaj³i ~ vaj³i hunt (v); TH/SI vaj³i, ZO vaj³i ~ vaj³i work commute (n). MI vaj³i ~ vaj³i, ZA ~ vaj³i bewildered (v). ZA vaj³i ~ vaj³i migrate (v). MI vēj³, ZA vēj³i ~ vēj³ wave (v). TH/ZO/SI vaj³i ~ vēj³i, TE vaj³i ~ vēj³i? dizzy (v). MI vēj³i, ZA vōj³i complete (yearly cycle), swing (v). MI vōj³i times (n). ZA vēj³³, TH/ZO/TE/SI vēj³ ~ vēj³³ swing (v). TH/ZO/TE/SI vēj³i ~ val³i excessive (v); TE/SI vēj³i ~ val³i bulge (eyes / pregnant belly) (v). MI hōj¹ ~ hōj³i turn to face (v), hōj³i accommodate guest (v); ZA hōj¹ ~ hōj³i face (v), hōj? turn to face (v); TH/ZO/TE/SI hēj¹ ~ hēj³i rotate (v); ZO/TE/SI hōj¹ ~ hōj³i sway (v). MI/ZA hēr¹ ~ her³i revolve (v); TH hēr¹ ~ hēr³i, ZO hēr³i ~ hēr³i, TE hēk¹ ~ hēk³i, SI hēak¹ ~ hēak³i twist (v); MI/ZA hēr³i, MI/ZA hēr³i revolve (v); TH/ZO hēr³i, TE hēk³i ~ hēr³i, SI hēal³i ~ hēal³i court, woo (v); MI/ZA hēl³i go/walk around (v). ZA hōl³i ~ hōl³i seek (v), ZO Seek (v); TE hōl³i ~ hōl³i seek (v). cf. LVl, hLVl.

wvj⁴ — (Austroasiatic).²⁶⁷ MI vānj¹ ~ van³i sparse, extensive (v), ZA vēj⁴i widened (hole) (v), TH vēj⁴i ~ van³i perforated (v), ZO/SI vānj¹ ~ van³i sparse, hollow (v). TE vēj⁴i hole (n). MI vānj¹ width (n); ZA vānj¹ ~ van³i illuminate (v), vēnj¹vēnj¹ illuminate (v); TH vānj¹ ~ van³i illuminate (v). SI vānj¹ twilight (n). MI/ZA/TH/ZO/TE/SI vānj¹ sky (n), TH/ZO/TE/SI vānj¹ glory (n). MI vēj⁴i neighbourhood (n). TH vēj⁴i ward (n); ZO/TE vēj¹, SI vēaj¹ neighbour, ward (n). MI/TH vēj⁴i ~ ven³i guard (v); ZA vēj¹ ~ ven³i gird (v), vēn³i gird (v); ZO/TE vēj¹ ~ ven³i neighbour (v). MI vēj⁴i ~ vēj¹, TH/ZO/SI vēj¹ ~ vēj¹, TE vēj¹ ~ vēj¹ gird (v). MI vānj¹ ~ vānj¹ keep (v).

²⁶⁶ See Vol.1, Ch.6, #37.
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| A | Babysit (kʰvM⁻); bachelor’s bed/quarters (kʰam¹); back (lél¹, jaŋ¹, hŋŋ¹); back kick (pə́¹); bad (tˢʰa²); bag (kʰVm⁻); bait (tə́¹, tses); bale (tʰal¹); ball (boʃ²); bamboo (roa¹, tseⁿ¹); bamboo rat (boʃ¹); barge (nvm¹); bark (hoŋ¹, kʰaw¹); barking deer (kʰi¹); barren (ŋel¹); base (bvl⁻, rAm⁻); basket (kʰvm⁻, Pvm⁻); bastard (soaⁿ¹); bat (p-lak); beak (nvl¹); beam (jvl¹); bean (be²); bear (wom¹); beautiful (hoj¹, moj¹); bed (kʰun⁻); bee (kʰɔaʃ¹); bee stinger (jvŋ³); beget (ŋiŋ¹); belly (pvm⁺, ril¹); bend (kvl⁻, kvm⁻); between (kal⁺); bewildered (wvl⁺); bier (ŋiŋ¹); big (lanr⁻, pi², h rol¹); bile (kʰa²); bind (kʰt, kʳn¹, hŋŋ¹, svM⁻, tvM⁻); birdeep (ril³); bite (kej¹, pet); bitter (kʰa²); black (dom¹, kʰm¹, mvd², wom¹); blame (tˢʰa²); bleed (tʰi²); bless (stam¹); blink (pʰa²); blow (pVm⁺, Pvr¹); block (kʰam⁺, hru⁺, tvM⁻); blood (tʰi²); bloom (p³l⁺); blossom (p³l⁺); blow (mut, tʃem¹); blow air between lips in disgust (pʰit); blow nose (hnit); blue (ʔeŋ¹, dom¹, pol¹); blunt (bvl⁻, mol⁺); boast (ʔeŋ¹); boat (loŋ⁻); bob (per¹, tok, tvM⁺); body (lʊd⁻, Pvm⁺); body hair (hmoʃ³); boil (Hvl⁺, pʰvl⁺, sowⁿ, tʃar¹); bolt (kal⁺); bone (raŋ¹, ros); bonfire (tʃ²om⁺); bore (pʰec); borrow (krom¹, tʃaŋ¹); bosom (kran¹); bottle neck (tʰv}:${}_d⁺; boundary (ri³); bow (kvl⁻, li², tʰel¹); braid (pʰal⁻); brain (ldʰuk⁺); branch (jvl⁻, kvn⁺); brandish (lɛk, h(r)ol¹); brave (raŋ¹); breast (hnoj², hnu⁺); breath (tʰo²); breathe (när¹, tʰo²); breed (kʰ(r)al⁺); breeze (ldʰi³); bridge (hlej¹); bright (k³d²); bring (kέŋ¹, k(l)bŋ⁺, lös); brittle (moat, rem¹); broadcast (tᵉŋ¹); brood (kʰvm⁺); broom (pʰːat); brother-in-law (mak³); brush (kʰv⁻, nvl⁺); bubble (pʰvl⁺, tʃar¹); bud (kʰvm⁺, mvm⁺); buffelo (loj³); build (lẽm¹); bulge (pVd⁺, Pvr⁺, Wvl⁺); bunch (Pvm⁺, tẽl¹); bundle (tẽl¹); Burman (kol¹); burn (Hvl⁺, kaŋ¹); burp (ʔvr¹); burrow (koas); burst (pVd⁺); bury (pʰum⁵); but (hŋOD², pʰvl⁺); butterfly (kʰvM⁺); buy (lej²) |


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h

haggard (hram®); hail (rjak³); hair (hmoη®, sem®); hair bob (tok, tvm*); hairspring (li²); halter (HVk); hammer (kʰvη¹, tus, tsʰek); hand (kʰot); hand-cuffs (κoP); handle (dom², kvη*, tʰεm³); handspan (kʰap); hang (jvl®, k(l)aj¹, k(l)haj¹, p-hd®); happy (nvηm®); hard (sek, tεr*); hare (beγ¹); harmonise (rvm®); harrow (laj*); hatch (kew*); hatchet (tsʰek); haunt ((k)l(h)vη*); have (neγ*); haze (meγ¹); head (lu¹); head for pastures new (joαn¹); head hair (sem²); heal (dem¹); hear (ja², kʰvη¹); heart (loγ¹); hearth (tep); heavy (kʰηξ®, rık); hedge (dvl®); heel (tvl®); heft (tsοaj¹); help (hru−, hrvη®); herd (beη*, hεη®); kʰvm®); hew (siam¹); hiccup (?vr°); hide (bu*, rvl®, tʰop); high (saη¹); hill (kaη¹, moal³); hinder (tvd®); hip (k(h)el²); hoe (rin¹, tus); hoist (k(l)haj¹); hold (dom², k(l)aj¹); hold in mouth ((h)məm¹); hold to bosom (pvm®); hole (HVvη*, kVm®, kʰul¹, wvη); holey (HVη); hollow (HVη, κoar¹, kvm®, kʰoar¹, wvη); hop (pet); horn (kί²); horse (κoL², raη®); host party (tvd®); hot (Hvl®, sa¹, teη*, wηM®); house (?m²); howl ((h)ram²); huddle (tv™); hug (pvm®); humble (jεk); hunchbacked (kvvl®); hundred (jas); hundred thousand (svη²); hunt (wvl®); hunting ground (tsaη¹); hurt (na¹); husk (kom¹, kʰvm®); husked (dzaj²); hut (ld'am¹, pεk)
I (kej’); idolise (?eŋj’); ill (na’, (h)nvŋ’); ill-natured (joŋ’); illuminate (Par¹, wvŋ’); image ((h)IVM’); imitate (JVL’); immerse ((h)nım’); impregnate (raj¹, wën¹); in prime of life (pël’); in touch (kom¹); include (tel’); inclusive (k(h)VM’); increase (kr(h)ŋg’), tsu₃m’); indent at back of head (tok’); indented (kVM’); individual (roak’); infant (naw¹); inform (KV(w)¹, pʰOD’); ril¹); inhale (dip, dvk); inherit (lask); inner ear (h)na’); insect (lunj’); insert (k(h)VM’, t’hon’); inside (ts(h)ŋj’); intelligent (dzim¹); intend (tom”; intercept (TVd’); interval (kal’); intestines (jvŋ’, ril¹); intimate (nvľ’); intoxicant (ru’); invert (let); invite (svm’); iron (t’hir’); irradiate (kl(ı)an¹); itch (jv², kʰət, (r)ət, t’hék)

j

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k

keep (wvŋ’); keep secret (k(h)VM’); kernel (mu²); kick (per¹, bs’haj’); kidney (kal’); kill (t’hët); knead (lIVm²); knee (k’muk); knife (tsεm¹); knock (kID’, t’ok); know (t’hɛj’)

l

lac (rip’); ladle (sazk, ts’or¹); lake (dil², l’li’); lane (wšj’); lane (rol¹); languid (jom²); lap up (dvvp, (h)r vp’); late (klaj²); laugh ((h)nju¹); launch (hlon¹); launder (sop, su²); lay lay (jvl’, k’aj’); h’om’, pʰal’, tuj’); layer (dvl’, t’həap); lead (har’); leaf (hnes); leak (dok, jvl’); leaky (kšk); lean (ŋem¹); leap (juaŋ¹); learn (jvl’); leave (juaŋ¹, ma², pšt, (h)vli’); leech (hlew¹, Lit, wšt); left (wšt’); leg (k’nŋj, kvŋ’, pvm’, p’hj’); lend (krom¹, ts’h-an’); length (tšn’); lengthen (saw’); leopard (kej¹, kv³); level (jan¹, jvl’, p’haj’); tsem’); lever (kal’); lick (hak, hlaw¹); lidded pot (k(h)VM’); lie (jaw¹, jvm¹, lom¹, (h)nu¹); lift (dom², lam¹); light a wick (de¹); lightning (krek); lightning concretion (krek); lightweight (jaŋ’); line (rin¹); lion (kej¹); lip (hnes, hmvl’); liquor (ju’); listen (ŋaj’); liver (t’h’m’); load (wsm¹); locality (twal¹); loins (konj’); long (saw²); long feathers near bird’s tail (dzem’); look (?en², wvl’); loose (l’hvl’); lopped off (bvl’); louse (hrik); love (dos’, ŋaj’); low (kvľ’, (h)nam²); lumber (k’hɔl’); lungs (tsəap)

m

machan ((h)laŋ’); maggot (lön’); maggoty (lön’); maimed (bvl’); main entrance (p(h)šd’); make a bonfire (ts(h)om’); make a noose (wvl’); make run into mouth (by mythical human-eating snake) (hɛm¹); male (pa’, ts’h l¹); malleable (hnm’) mango (haj’);
Manipur river (run¹); man-made hole (kʰuɬ¹); mantel (rəp); many (tem³); narrow (lᵈd³); mass (k(l)ʰaj¹); massage (bMEC); mat (pʰশl, pʰʃD); meat (sa³); meet (TVD³); melt (joŋ¹, tuʃ²); membrane (dVl, b lem¹); mentally note (təm¹); method (dan¹); middle (laj¹); migrate (PVMe, WVL³); milk (noj¹); millet (dənaj¹); mire (tʃv³); miserable (məs); misplace (paj¹); mithun (sial¹); mix (hʃP, pol¹); moan (ta⁵²); mollusc (kəp); monkey (joŋ¹, ʂaw¹); moon (l⁹d₃as); morning (jvŋ³); mortar (som³); mosquito (kaŋ¹); mother (nu²); mountain (daŋ¹, moa¹); mountain range (dəŋ¹); mouth (kəm¹, ka(ʊ)⁵, məŋ³); move (krin², krʰin³); muddle (mol¹); murky (nu¹, hvn³); muscle (tek, ʂ̌l¹); mushroom (pa²); mutually assist (lom¹); muzzle (hvm³); mythical man-tiger (ldv³); mythical tiger (kej¹, ldv³)

Π

nail (tım²); name (bmt⁹); nap (məŋ¹); nape (bRV³); narrow (tʃ²Id⁵); nauseate (kʰAM⁴, ḍə(a)j⁵); navel (laj¹); near (bəj¹); neck (bənaj¹, bRV³); need (tʃ²Em³); needle (p⁹Am³); neighbour (wvŋ⁵); neighbourhood (wvŋ⁵); nervous (ti²); nest (bu²); new (b⁹Gr¹); new generation (sən³); news (t³u²); nibble (sVP); night (jvŋ³); nine (kəa²); nit (b⁹ru¹); nook (dum³); noon (tʃʰun⁷); noose (WVL³); north (tʃ²ek); nose (bnar¹); notch (?at); now (tu²); nibile (la¹); nurse (k₃Vm³, kʰ(r)əaɬ³); nut (mvVm³)

Ο

oak (bél³); obedient (dzəŋ⁴, dzim¹, dej³); obstruct (kʰAM⁵); obtain (tʃŋ³); occiput (PVMe⁵); occupy (ləak); off-colour (pol¹); offer food to deceased (tʃ²lə²); offspring (dza², wən³¹); oil hair (t³s); old (t³lu³); on deathbed (bvnŋ⁵); one (kʰet); onion (sən³); open (hvg⁵, ka(ʊ)⁵, məŋ¹, p⁹OD³); opposite (ral¹); otter (bRG³); oval (jol³); overcast (bnim³); overflow (let, bLV³); overlay (dAM³); overlong (dzoaf³); overlook (bəŋ³); overshadow (drp⁵); overshoot ((k)l(b)vŋ³); overtake (kʰəl⁵, (k)l(b)vŋ³); owe (ba¹); ox (bəŋ³); ox’s nose piercing (p⁹EC)

P

pacify (ləm³); pair (TVD³, bəap³); palatable (ŋaj¹); palate (deŋ¹); pale (noʊw⁴); palisade (pəl¹); palm (p⁹ʃD); parboiled rice (waj¹); pare ((k)l⁹v); parrot (ki²); participate (PVMe⁵); partition (deŋ³); pass (PVl³); pass away (bLV³); patch (bVL³); paternal aunt (ni³); paternal aunt’s husband (ren⁴); path (koŋ³); paunch (p⁹ur³); pay (p⁹vl³); peaceful (ləm³); peck (tʃus); peel (dVk, JVL³, kək, kʰvk, PVl³); pelvis (p⁹ʃD); penis (jvŋ³, bli³); perch (dzus, tʃən³, tʃən³); perforate (hvŋ³, pɔp, wvŋ³); perforation (pɔp); permeate (JVL³); permit (p⁹vl³); person (məf³); pewter (har³); phegim (kʰa(k)); pick (kʰEw⁵); pick up (sək, tʃ³Om³); piebald ((k)raŋ¹, pol³⁵); piece (p⁹vl³); pierce (dot, wɬt); pig (wək); pile (pVD³); pillow (kʰAM⁵); pinch (sək, sək); pine (dzar¹, ʂaj¹); pit trap
(KVm*); place (bmon*); placenta (blem*); plan (rel*); plane (daj*); plank (pul*); plant (tos*); play (dzam*, lek, tsaj*); play tug-of-war (tsaj*); pleasing (naaj*); pliant (nvl*); plot (?el*); pluck (?ek, (k)bowl*, pot); plump (pvm*); pod (kom*); point (?bMvL, tok); poison (ru*); pond (tsvr*); pool (dum*, li*, Jvl*); poor (joj*); pop (puf*); porcupine (kos*); portion (tsn*); posterior (maq*); pot (bel*, khvM, pvm*); pound (klhv, su*); pour (boas, thon*, tsuq*); praise (pvr*); prawn (ka*j); precipice (kham*); precipitous (kham*); pregnant (raj*, wsm*); prepare (hmnn); press (ben*, nge*); prevent (hryn*); prick (tsorn*); prisoner (msn*); prod (hrol*, sow*); produce (hsok*); proficient (thiam*); prohibit (khvM*); proliferate (jvl*); promise (tiam*); prop up (nay*); propitiate (bras); prostrate (bok); protect (khvM*, ru*); protrude (hsaun*); provoke (tvd*); prowl (klv*); prune (khew*, hrat); public (kda*j); pull (dok, k,k, k(iaj*); pulsate (tor*); pumpkin (maj*); punch (tsum*); pungent (tur*); pursue (jvl*); pus (haj*); push (nvm*, ssan*); put in mouth (hmoam*); put on (bvl*, dzen*, khvM, silt*); put to sleep (hvim, mu*).

q

quarrel (hsw*); quiet (dvl*, khim*, do(a)j*)

r

radiate (kl(iaj*, wvl*); raft (lon*); rain (jus, sarr*, r-wes); rainy season (dzur*); raise (k钻研*); rake (khv*); rape (soul*); ravine (roam*); raw (hrj*); reach (ban*, jvm*); (k)bowl*); read (thim*); ready for harvesting (kvl*); real (tek); rear (wpl); reerable (kedj*); recall (jvl*, phod*); receive (ges); recline (jvl*); recoil (hgod*); red (ssn*); red hot (hvl*, wsm*); reek (thien*); refill (silt*); regurgitate (dip); rehearse (hvm*); reject (hnun*); rejoice (lom*); relieve (?ol*); relocate (hvl, tiar*); remain (thod*); remote (kvl*); remove (khedj*); repeat (hcaap*); reply (tvd*); repose (hsak*); reprove (hsw*); request (hvn*, thu*); require (hsan*); rescue (hru*, hryn*); resolute (hvat*); resound (khv*); rest (soll*); retain (khvM*); retch (hvk); retrace (jvl*); retract (hli*); retrieve (lem*); return (dzfu, kir*, khir*, (k)hvn*); reveal (jvl*, hli*); revolve (pflu*, wvl*); rice (bos, dzaj*, waj*); rice grain (dzaj*); rich (hun*); rid (pwl*); ride (tsaun*); right (tek); righteous (dzul*); ring (wvl*); ringlet (wvl*); rinse (kedj*); ripe (hmn*); rise (kaon*); k(iaj*); river (run*); road (kaon*, lem*); roam (wak); roast (ro(w)*, wsm*); rob (los); rod (jon*, kvn*); rodent (ju*); roll (lvi, lvli*); root (jvn*, hrman*); rope (khaw*, hojo*); rot (moat, tfu*); rotate (wvl*); rough (hrman*); rounded (bial*); rouse (thow*); rub (not, hvl*); ruin (thina*); run (klal*).

S

sad (des, do(a)j*, res*); saddle of hill (kvl*); saliva (tsil*); sallow (mvD*); salt (sis*); salt water spring (sis*); salty (?el*); sambar deer (jok*); same (ket*); sand (nvl*); sap (hnaj*);
sate (kʰAM⁴); satiate (ldje¹, kʰɔM²); saw (ten³); say (svj², tis, ʦʰˌm¹); scales ((k)l(h)VP); scar (bEŋ², kʰl¹, lI², ʦa²); scatter (pʰl̩l̩); scoop (həm¹, lɔ̝ak, ɬ(r)VP); scorch (kɐŋ², wɛM⁴); scowl (bŋel¹); scrape (kʰEw⁴, (r)rat); scratch (kʰEw⁴, kʰoat, ɬ(r)at); scrawny (h rVd⁵); search (jvl⁴); season (sow³); secluded place (dAM⁴); see (h mu); seed (k̩d̩aj², ʦɪ²); seed pit (mu³); seek (joŋ¹, ɬem², wVL⁴); seek refuge (bVL⁴); segregate (dej²); sell (joar⁴); send (kI₉v²); sense (b r̩z²); separate (kʰən¹); serow (tʰAr⁴); serve tea (kʰVM⁴); set trap (kem⁴); seven (lIj); sew (kʰuŋj¹); shack (P̩k); shade (dAM⁴, (b)VM⁴); shadow (h hO) ; shake (h ΟO); §; shallow (dej²); shallow depression (kvM⁴); share (pʰlV⁴); sharp (b r̩am¹, tat); shatter (kɪk); shave (dit, kʰEw⁴, met); shavings (Waj¹); sheath (paj⁴); sheet (dvl⁴, kł⁴VP); shell (kom¹, pʰo²); shift (hemi, sən²); shin (ŋel¹); shoot (kap); short (toj², ʦəm², ʦ(h)id⁴); shortcut (ban¹); shoulder (kow², liŋ¹); shout (ʔən³, kTv⁴); shrink (ldeŋ, rO²m⁴, ʦəm²); shrivel (rO²m⁴, ʂon¹, tʰVP); shrug (kvM⁴); shut (kʰal², kʰVM⁴, tsVP, ʦ(h)id⁴); side (p⁴h E̝D⁵); sift (kʰej², kʰəj²); silent (dAM⁴); silver (ŋun¹); sinew (t'ə); sing (jvl⁴, sas, wor⁴); singe (HVL⁴); sink (kəm¹, pVL⁴); sip (h ɬ(r)VP); siphon (k(h)aj²); sister-in-law (mO⁴); sit (bəl¹, kʰu¹, mVD², twO); six (lOK); skewer (tul¹); skilful (jvl⁴); skim (jvl⁴, k(h)vj⁴); skin (kʰv(k), (k)l(h)VP, wən²); slant (lej¹); slap (bEŋ²); sleep (ʨI, jvl⁴, k’d̩m¹, (b)mu); sleeping platform (k’d̩am¹); sleepy (b hmu¹, ɬO(a)j¹); slender (r̩k); slice (p⁴h E̝D⁵, ʦon²); slide (tvl⁴, ɬvl⁴); slingshot (li²); slip (dok, pVL⁴); slippery (nvl⁴); slit (k’d̩f²); slither (təV², ʦeł²); slough (b l̩I²); slow (ŋvŋ⁴); sluggish (b nəŋ); sharp (dZe⁴); small (nəw², te², ʦ(h)ID⁴); smear (b ʃmej², nu¹, (b)VL⁴); smell (nem¹, h ʃar¹, h NM¹); smoke (k’hu²); smooth (jvl⁴, nvl⁴); smouder (mut); snake (rul¹); snap (k(h)ak, k(h)ak, ʦI₂t); snatch (ʦI₂t); sneak (rvl⁴); sniff (nVM¹); snore (h ʃar¹, h ʃok); snort (pʰit); snot (h ʃep); snow (wur¹); soak (ʦIap); soft (nvl⁴, nVM¹, h NM¹); sojourn (ʦam²); solar plexus (dip); solder (har¹); sole (p⁴h E̝D⁵); solict (tvO); solid (kʰal²); song (jvl⁴, hla²); son-in-law (mak²); soot (krIŋ¹); sooty (krIŋ¹); sorcery (doj¹); soul (kʰm¹); sound (tʰəm², rIŋ¹); sour (hin¹, tʰur²); south (k’d̩eŋ¹); sow (wor⁴); spacious (dzan²); span (k’ap); sparse (wvŋ⁴); speak (paw¹, tvO); spear (dZe⁴); speech (paw¹); sperm (bən²); spew (pʰit); spherical (b VM², pVM⁴); spicy (tʰek); spin a top (lam¹); spindle (bmoj²); spine (ŋun⁴); spirit (doj¹, k’d̩h¹, kraw², raw²); splay (p⁴h’es); spleen (la²); split (p⁴l⁴VP); spongy (tʰVP); spotted (par²); sprain (wVL⁴), sprawl (jaw¹, jvm¹); spread (jvl⁴, jvm¹, pʰk̩l̩); spring (sis, tsvr²); sprinkle (pʰvl⁴); sprout (mV⁴, p-rəw¹); squash (t’s(h)vl⁴); squat (hemi); squirrel (lej³); squishy (jvl⁴); stable (kM⁴); stagger (p’ej¹); stalk (kvŋ⁴); stand (d⟩n¹, pod⁵, p’ODˇ, wVL⁴); star (ʔa⁴); startle (p’odi⁵); stay (rjak); steadfast (kren); still (ru); stealthy (k’d̩m¹); steam (HVL⁴, k’hů²); steep (k’ham¹, kren); stick (bVL⁴, mʃn¹, tiŋj⁴); sticky (b naŋj²); sting (des, hǐp); stink (hin¹); stir (tsok); stockade (kUL); stone (loq³, soŋj³); stop (p⁴hE̝D⁵, ʦol²); stopover (pV⁴l⁴, p⁴hE̝D⁵); stopper (b ru); store (k’ol³, ʦʰed³); storey (dvl⁴); store (t’hok); straight (dI², ʦeŋ¹); strain (k’d⁴); strand (jvm¹, jvŋ⁴); stranger (k’həl); stream (luj⁴); stream pool (dum², li²); stretch (dok, dza); stride (kal); strike (deŋ¹, wEL); string ball (b lV⁴); stripe ((k)rIaI⁴); stroke (jut); strong (h rat); stubborn (rUS); stuffy (HVL⁴); stunned (bvl⁴, k’hək); stupid (mol’, noŋj³); sturdy (tsak); subdue (h mŋ¹); submerge (kʰVM⁴); substitute (kłʰED³); succeed (dvl⁴); suck (dvk, dvn¹, dzvP, h(r)VP); suckle (dzvP, h ne²); suffer
tell (79); vacant (unengaged); summer (la'al); summon (jou); sun (ni); support (dom); surround (k'VM); surroundings (jaw, WVL); survive (mon); suspend ((k)l(h)η); swaddle (k'VM); swallow (lem); swarm (PVM, PVR); sway (WVL); sweep (p'iat); sweet (klh); swell (bw, PVM); swing (jvm); swing (WVL)

t


U

unabashed (η); unburden (TV); uncongealed (kr'hIF); uncover (p'hOD); underbelly (taϊ); undercooked (naϊ); underdeveloped (dez); understand (dez, t'ham); unengaged (θol); unfurl (pl, p'hIL); unload (ts'hak); unripe (PVM); unspecified mass (k(l)aj); untie (sut); upturn (k'up); urinate (jou); urine (jou); use (bej, jej); usurp (s'dan); utilise (η)

V

vacant (HVη); vacate (HVη); vagina (ts'h); valley (KVm); vegetable (θen, klh); vein (h'roj); village (k'ca); viscous (η); visit (kom, (k)l(h)η); vociferous (KV(w)); voice (θo); vomit (lus); vulture (mu)
W

wade (nvk); wag (hem¹, per¹); wage (həs); waist (koŋ², taj²); wait (hŋak, ʦaŋ³); wake (kʰeq⁶, pʰod⁸); walk (jot, kal⁷, wak); wall (kom¹, kul¹, pʰiD⁶); wallow (boal¹); wander (WVL⁴); want (dəs); ward (WVL⁴); warm (b³lom¹); warp (boal¹, dzaj², pʰat, pʰit, si²); watch (kʰel); water (tuj²); watertight (HVL⁴); wave (WVL⁴); wax (b¹l); waylay (pʰiD⁶); weak (jom²); wear (wən²); weave (kavl¹, pʰen², tek); wedge (jep); weed ((k)h²w², h²low¹, hram⁴); weedy (hram⁴); weep (krep); weigh (kʰiŋ⁵); weight (tsəj¹); west (kʰeŋ¹); wheel (pəj⁵); wheeze (tsiər¹); white ((k)raj¹, par¹); whittle (JV³); wicked (soal⁴); wide (jaw¹, jvl⁴, kal⁷, prv¹, wvl⁴); width (wvl⁴); wild boar (hŋel¹); wilt (HVL⁴); win (jow²); wind (kʰv⁷, kʰi¹); winter (pʰel¹, teŋ¹); wipe (h⁴nl¹, tʰiər¹); wise (dąŋ², dzim¹); wish (təm⁷); wither (du(a)j⁴); withhold (rol¹, svm⁴); witty (kʰel²); wobble (hem¹); womb (tsʰul⁴); woo (WVL⁴); wood (tʰiŋ⁴); word (paw¹); worry (tsaw⁴); wound (ʰlami¹, ʰma¹); wrap (dzun², tvm⁷, wvl⁴); wriggle (tv³); wring (sər¹); writing (laj⁴)

Y

yam (hra¹); yaw (hrəm²); year (kvær); yeast (tsəl⁴); yellow (ʔeŋ¹); yoke (koł²); you (nəŋ¹); young (moj¹, mv³n⁻, nəw², sən¹, təaj¹)

Z

Zo (jow¹)