A Reconstruction of Proto Northern Chin in Old Burmese and Old Chinese Perspective

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Abstract

The phonology, morphology and semantics of six Northern Chin languages are investigated in terms of their relationships with Old Burmese and Old Chinese. Regular correspondences are achieved through a vertical two vowel system and a segmentally derived three tone system. A word list with reconstructed Northern Chin forms, of which several are used in the comparisons with Old Burmese and Old Chinese throughout the work, is included as an appendix.

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Symbols

* Precedes a reconstructed form; the standard practice of not using an asterisk before Middle Chinese forms is adopted here and further extended to Old Burmese due to its similarly strong textual foundation.

** Precedes a speculative reconstructed form.

' Precedes a Type B syllable in Old Chinese.

> 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 1 from its inflected form 2.

/ Separates alternative forms whether in free variation or complementary distribution.

⚭ Signifies 'allofamic' variation as coined by Matisoff (1978a:16-7) and discussed in 7.5; usage is confined to when citing roots reconstructed by Matisoff.

- Denotes a missing initial or rhyme unless preceding or following a whole morpheme in which case it denotes its position in a compound.

___ Underlines an irregular correspondence in the word list.

☐ Encloses the gloss of a suspected loanword or onomatopoeic word in the word list.

Conventions

i. Transcriptions

The proposals of the International Phonetic Association (IPA) are generally followed throughout the work. Excluding the following three cases, exceptional cases are noted with the IPA transcription between square brackets as '[ ]':

e   Treated in the same relationship to ɛ as *i* to *ɪ* and *u* to *ʊ*. Consequently, the modern Burmese open rhyme [e] is not distinguished in the transliteration here from the diphthong *eɪ* such that IPA [e], [eɪ̃], [eɪʔ] are treated as *eɪ, ẽɪ, eɪʔ*.

o   Treated in the same relationship to ɔ as *i* to *ɪ* and *u* to *ʊ*. Consequently, the modern Burmese open rhyme [o] is not distinguished in the transliteration here from the diphthong *oʊ* such that IPA [o], [oʊ̃], [oʊʔ] are treated as *oʊ, õʊ, oʊʔ*.

ɿ   The modern Mandarin vowel corresponding to IPA [ʐ̩] after alveolar affricates and fricatives or [ʐ̩] after retroflex affricates and fricatives.

ii. Spectrograms

s   Seconds (on the horizontal axis)

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

iii. Appendix (Northern Chin Word List)

Generally only one root is reconstructed for cases of vocalic ablaut and this usually favours the most common variant. The distinction of suffixal *-s* on an original obstruent coda and root final *-s* is not always clear with root final *-s* being posited in all cases where suffixal evidence is not forthcoming at present. The following alphabetical arrangement is used:

Consonants: *ʔ-, b-, d-, dz-, h-, j-, k-, kʰ-, kl-, kʰl-, kr-, kʰr-, l-, ʰl-, m-, ʰm-, n-, ʰn-, ŋ-, ʰŋ-, p-, pʰ-, r-, ʰr-, s-, t-, tʰ-, ts-, tsʰ-, w-*

Vowels: *ɐ, a, ɛ, e, ɪ, i, ɔ, o, ʊ, u*

iv. <u>Orthographic Forms</u>:

Burmese and Chinese orthographic forms are generally noted after their modern transcriptions in Standard Burmese, as defined in Nishi (1998:257), or Mandarin Chinese respectively. Distinct Inscriptional Burmese forms are noted, where applicable, directly after the Written Burmese forms from which they are separated by a forward slash '/'. Early Middle Chinese forms, as reconstructed in Pulleyblank (1991b),[1] and Old Burmese forms are noted directly after their respective native orthographic forms. Old Chinese forms are separated from Early Middle Chinese ones with a backwards arrow '<'.

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[1] Pulleyblank's final -*ă* and -*ə̆* glides are both written as -*ɋ*.

Abbreviations

i. Inscriptional Sources

BB　　　　*Xiaotun Dierben: Yinxu Wenzi: Bingbian* 小屯第二本: 殷虛文字: 丙編
　　　　　　– Zhang Bingquan (1957-72)

BD　　　　*Inscriptions Collected by King Bodawpaya* ဘိုးတော်ဘုရား *in Upper Burma*
　　　　　　– Taw Sein Ko (1913)

HJ　　　　*Jiaguwen Heji* 甲骨文合集
　　　　　　– Guo Moruo & Hu Houxuan (1978-82)

IB　　　　*Inscriptions of Burma* မြန်မာတိုင်းရင်းကျောက်စာများ
　　　　　　– Luce & Pe Maung Tin (1933-56)

LK　　　　*The Lokahteikpan* လောကထိပ်ပန်း
　　　　　　– Ba Shin (1962)

MZ　　　　*The Burmese Face of the Myazedi* မြစေတီ *Inscription at Pagan*
　　　　　　– Duroiselle (1919)

OBEP　　*Old Burma – Early Pagán (volume 3)*
　　　　　　– Luce (1969-70)

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

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

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

YZ　　　　*Yinqi Yizhu* 殷契遺珠
　　　　　　– Jin Zutong (1939)

ii. Lexical Categories

n　　　　　noun

v　　　　　verb

vb　　　　benefactive verb

vi　　　　intransitive verb

vt　　　　transitive verb (regardless of any additional intransitive function)

iii. Burmese Grammatical Forms

Adopted from Watkins (2005:xv-xvi) accordingly:

ATTR   Attributive

EMPH   Emphatic

OBJ   Object

PL   Plural

REAL   Realis

REM   Remote (temporal/spatial)

SUBJ   Subject

iv. Languages and Proto-languages

IB   Inscriptional Burmese

NC   Northern Chin

OB   Old Burmese

OC   Old Chinese

SB   Standard Burmese

ST   Sino-Tibetan

WB   Written Burmese

Mi   Mizo

Si   Sizang

Te   Tedim

Th   Thado

Za   Zahau

Zo   Zo

v. Individuals

M   James A. Matisoff

P&S   Ilia Peiros & Sergej A. Starostin

Preface

The Northern Chin, Old Burmese and Old Chinese comparisons presented here are generally from the works of Matisoff with supplementary insights afforded predominantly by Peiros & Starostin (1996). An attempt has been made to discuss all of the Northern Chin forms presented in the works of Matisoff which should allay any concerns regarding cherry-picking of the data.[2] Although new comparative forms are rarely introduced, it is hoped that the establishment of regular phonological correspondences in this work will greatly facilitate such a task in the future.

Matisoff's and Peiros & Starostin's reconstructed Tibeto-Burman and Sino-Tibetan roots are noted at the top of every proposed comparative set.[3] 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* seems to have been first used by Kroeber in his editorial forward to Shafer (1938), although the first meaningful discussion appears in Shafer's response (1940:302) to Maspero's queries (1938:206) regarding its validity. The term Sino-Tibetan is used here in accordance with the generally accepted notion[4] of a genetic relationship between the Chinese and Tibeto-Burman languages; no position is adopted here regarding the various approaches towards the exact nature of this association.[5]

The terms *Burma* and *Burmese* will be used in preference to *Myanmar* with the term *Burman* being applied exclusively to the majority ethno-linguistic group of Burma unless occurring in the compound *Tibeto-Burman*. In a work such as this on historical linguistics, it seems appropriate to note that the terms Burma (bəma¹ ဗမာ) and Myanmar (mjã¹ma¹ မြန်မာ) are variant derivatives from the same Old Burmese word. In his study of Tavoyan Burmese, Okell (1995:105-6) notes a common interchange of Standard Burmese *mj-*, when derived from Old Burmese *mr-*, with Tavoyan *bj-*; he

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[2] Matisoff (2003) includes a large majority of these forms which are mostly restricted to Mizo.
[3] These have been standardised in notation according to the principles discussed above. Variant forms not relevant to this work are omitted for simplicity.
[4] See Miller (1988) and Beckwith (2002a) for dissenting views.
[5] See Handel (2008) for further discussion.

cites one inverse example of Standard Burmese *bj-* and Tavoyan *mr-* to further suggest that a similar shift may perhaps be reflected in the names Burma and Myanmar. The Written Burmese form for bəma[I] ဗမာ supports such a proposal with the voiced initial not belonging to the Old Burmese phonological system,[6] yet an account is still required for the *-n* coda in the first syllable of mjã[I]ma[I] မြန်မာ for which the orthography suggests mran[I]ma[I]. The solution is provided by Luce's observation (1959b:53) that the *-n* coda is not always present in Inscriptional Burmese where it also occurs as မြမာ mram[I]ma[I].

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[6] See the discussion in 2.2.

Chapter 1: Northern Chin Overview

> *"I was brought up to regard Far Eastern languages generally as (i)
> Monosyllabic (consisting of words of one syllable); (ii) Invariable (not
> modified by any inflexions); and (iii) Isolating (destitute of syntax). Chin is a
> language which disproves all three statements."*
>
> – G. H. Luce (1959a:30)

Broad generalisations Luce's remarks may be, but even in today's more informed linguistic environment, the verbal inflections and surface vocalic length distinctions[7] 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,[8] and Old Chinese.[9] 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.

1.1 *Subgrouping*

Bradley (1997:26-31, 2002:90-1) splits off a Central Chin group from what is classified here as Northern; Peiros (1998:180) treats Bradley's Northern and Central branches as one which represents the approach adopted here. Peterson (2000:79;95), who focuses in particular on the evolution of the *r* phoneme (2000:81-5) and on shared morphosyntactic traits (2000:85-95), retains Bradley's distinction of a Central group but fuses his Northern and Southern groups together. Particularly as regards

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

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

[9] 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.

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 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.

1.2 *Nomenclature*

The term used by Northern Chins to refer to themselves is customarily transliterated as *Zo* which may be reconstructed in Northern Chin as *$*jow^1$*. The name *Chin* is usually treated as a Burmese exonym, ʧʰïⁿ ချင်း kʰjaŋⁿ,[10] comparable in usage to the term *Kuki* on the Indian side of the border which Lehman (1963:5) suggests to be Manipuri in origin.[11] The Chin are unequivocally attested in some of the later Burmese inscriptions:

သက်မြွန်ချင်တို့အစိုရသော…ရခိုင်မင်သည် *(UB 49.21)*
Thet Mrun[12] Chin PL rule ATTR… Arakan king SUBJ
The Arakanese King… who ruled over the Thet, Mrun and Chin.[13]

Luce (1959a:25-6, 1959d:89, 1976:35, 1985:I.80) suggests the homophony shared with the Burmese word for *companion, ally n* is due to a history of relative amicability between the Chins and the Burmans. However, if Luce's association (1959a:25, 1959c:60, 1985:I.86) of the Chin with the Chindwin valley is correct then earlier inscriptional evidence supports the reconstruction of an original medial *-l-* in Chin as ချင် kʰlaŋ:[14]

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[10] Lehman (1979:1-2, 1992b:62) rejects an exonymic source and prefers to derive the name from a Southern Chin word meaning *person n* which he suggests was co-opted into Burmese; the viability of this proposal is beyond the scope of this work.

[11] 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.

[12] See Luce (1985:I.94-5) for a suggestion that this may refer to the Mru ethnic group.

[13] Based on an original translation by Luce (1959a:25).

[14] Inscriptional evidence only supports medial *-j-* in the word for *companion, ally n*; the confusion of *-l-* with *-j-* in Old Burmese does not rule out the possibility of a medial *-l-* but the uniqueness of forms in *-j-* makes this unlikely.

ခွင်တွင်ကပါသောကျွန်... *(BD 38.10)*[15]
Chindwin[16] from include ATTR slaves...
Slaves included from Chindwin...

The number of Chin languages spoken in Burma is difficult to quantify; Luce (1962a: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;[17] reliable figures for individual languages are mostly unavailable. 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 arranged in the following order in the data-set due to it reflecting the most natural layout in terms of phonological linkages between them.

1.2.1 Mizo

Lorrain (1940) terms this language *Lushai* as it is spoken in India. Luce (1959a:22) and Lehman (1963:16) distinguish the Burmese variety as *Hualngo*, although the more general term Mizo (mi^{IIb}zɔw^I), encompassing both the Indian and Burmese varieties, appears to be preferred. Bradley (2007:168) notes that the large numbers of speakers in India make Mizo the most widely spoken of all Chin languages. The comprehensiveness of Lorrain's work, in spite of its lack of tonal distinctions, has bestowed upon it the most attention in Tibeto-Burman studies. The speech recorded is that of a middle-aged man from ^{h}mʊn^{III}laɟ^I village.

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[15] Luce & Pe Maung Tin (1933:4) question the originality of this inscription and Luce (1962a:65) suggests it to be an early copy. Nevertheless, solid evidence for a medial -*l*- is found elsewhere in the inscriptions where reference is made to a *Chindwin garden*ခွင်တွင်ၑုဝန် *(IB 294.24)* in which ၑုဝန် is an Old Burmese rendition of Written Burmese ၑုၐ္ပၚ် *garden n* that is noted by Hla Pe (1960:79) to be a Pali loanword.

[16] Luce (1985:I.77) translates this literally as *Hole of the Chins*; Matisoff (1989:600) suggests *Wellspring of the Chins* may be a nicer turn-of-phrase.

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

1.2.2 _Zahau_

Barely distinguishable from Laizo (laj^{i}zɔw^{ii}) with which comparisons are occasionally drawn in the data-set, Zahau (za^{iii}haw^{iii}) is often conflated with this and several other languages spoken in Falam (fɛlam^{iii}) township under the general term _Falam_ Chin.[18] The name _Laizo_, composed of laj^{i} _middle n_ and a sandhi altered zɔw^{i} _Zo_, should be carefully distinguished from Bradley's observation (2007:168) of a more generic usage of the term in reference to the many, often mutually unintelligible, languages within his Central Chin group. The first syllable _Lai_ should also be differentiated from its individual use as the distinct language spoken in Hakha township south of Falam to which reference is occasionally made. The Zahau speech recorded here is that of a young woman from the central Falam area.

1.2.3 _Thado_

Sparsely represented in Burma, Thado (t^{h}a^{iii}dɔw^{i}) 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. The speech recorded is that of a middle-aged man from soʊŋ^{h}pɛʔ village. Reference is also made in 5.2.2 to Luce's observations (1959a:21, 1962c) regarding a northern variety of Thado, known as _Xôngsai_[19] and found in Sagaing division outside the boundaries of Chin state, which provides interesting evidence concerning the evolution of lateral codas in Northern Chin.

1.2.4 _Zo_

Identical in name to that of the Chin people in general, the use of the term Zo (zɔw^{i}) in reference to a specific Chin language should be clearly distinguished in the same manner as the term _Laizo_ above. It is spoken both in Tedim and Tonzang (tɔn^{ii}zaŋ^{i}) townships. The latter is the focus of the study here, although Luce (1962b) notes the Zo to be the original inhabitants of Tedim before being largely ousted by those now referred to as Tedim below. The speech recorded is that of a middle-aged man from ɛn^{ii}lun^{i} village in Tonzang township.

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[18] The language Khualsim, as surveyed by Luce (1959a:22, 1962a), may also be included here. See Lehman (1963:105) for a brief comment on the linguistic situation in and around Falam.

[19] Luce's vowel _ô_ equates with the Thado diphthong _oʊ_ discussed in 1.4.1 below.

1.2.5 Tedim

Often transliterated *Tiddim,* as it is found in Henderson (1965), Tedim (tɛdɪm^{III}) 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 (1962b) more specifically notes this 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. Tedim is the only Chin language that had started to develop an orthography before the arrival of missionaries in the early 20th century.[20] The speech recorded is that of a late middle-aged man from *lɛj^{II}lum^{I}* village. Reference is sometimes made in the data-set to Saizang (saj^{II}zaŋ^{I}) and Teizang (tɛj^{I}zaŋ^{I}) on the basis of knowledge from Tedim speakers; both these languages are treated by Luce (1962a:5) and Henderson (1963:551) respectively as closely related dialects to Tedim.

1.2.6 Sizang

Confined to the Burmese side, Sizang (si^{I}zaŋ^{I}) is spoken in several scattered villages south of Tedim by a very small population. Stern (1963:224-5) notes the occasionally encountered name *Siyin* to be a transliteration of Standard Burmese s^{h}i^{II}ji^{II} သီးယင်း and adds 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. The speech recorded is that of a middle-aged woman from *suɛŋ^{II}do^{II}* village, also known as *tɛm^{III}dɛang^{III}*.

1.3 Data Sources

Reliable descriptions of Northern Chin languages are extremely scarce; the data presented here is from original fieldwork conducted in Burma during 2006-7. The transcriptions are based on recordings from a single individual native speaker for each

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[20] The Pau Chin Hau movement with its related orthography is described in Bennison (1933:194-5;217-8). From personal discussions with a few remaining practitioners of the belief-system, it appears the original logographic script, unavailable to Bennison, is still used in the oral recitation of learned texts but never fully developed an established system of marking all the necessary distinctions. By contrast, the later syllabic variant, discussed in more detail by Bennison, appears to systematically extend down to the marking of non-phonemic surface differences but the unwieldiness that this entails has no doubt led to its ousting by the romanised missionary orthography leaving it to be now preserved more for the sake of tradition than out of any functional purpose.

language made in a sound-proofed room in Rangoon; lexical elicitation, prior to recording, was conducted with several additional speakers who could verify the elicited vocabulary and occasionally provide variant forms. The original wordlist was based on morphemes for which solid Sino-Tibetan roots, replete with semantic and phonological variation, had been established in the literature.[21] In this sense it was essentially a development of the proposals in Matisoff (1978a:133-47;283-96, 2000c) and Wilkins (1996) to find a culturally specific and semantically flexible means of elicitation. Naturally any attempt to rein in the data in this manner was only of limited effect such that the initial surveys of each language ended up being only broadly based on the original wordlist as semantically congruous but phonologically disparate words, or words deemed etymologically related, were gradually introduced by the speakers.

Acknowledging Huffman's (1976:541) cautionary insights regarding the inadequacy of large unfettered wordlists for solid comparative work, the data was collated and patterns of phonological shift were established before then commencing the elicitation process for a second time with the original wordlist being discarded in favour of the prompting of speakers to fill in gaps by identifying cognates according to the now established correspondences; this concomitantly allowed confirmation of any irregularly patterning forms as true exceptions rather than errors in transcription or on the part of the speaker.[22] As a relatively homogeneous group, extensive semantic shifting in Northern Chin is not particularly common; difficulties in identifying cognates were more often based around relative usage with common words in one language being restricted to the older poetic or song-based layer in another. A particularly valuable outcome of this second stage of elicitation was the establishment of lexical variation in verbal inflections which the speakers were asked to provide via prompting through knowledge of syntactic structures based on previous observations in the literature.[23]

An awareness of the possible distorting effects of tone sandhi and speaker multilingualism had to be maintained throughout the elicitation process. Speakers

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[21] In particular Matisoff (2003) and Peiros & Starostin (1996).
[22] See the discussion below.
[23] Syntactic analyses of Northern Chin are naturally much more reliable than phonological descriptions; see footnote 444 for some examples.

sometimes initially cited sandhi alternated inflections based on the conditioning environment in the sentences they concocted to generate the inflections. Nevertheless, when eliciting single morphemes, excluding cases of indivisible binomial forms, tone sandhi was generally not a problem.[24] Speaker multilingualism occasionally caused disagreements amongst speakers with forms being cited; cases no doubt remain and may account for some discrepancies in data-set. It should also be noted that, particularly when citing verbal inflections, speakers were liable to make analogical errors much akin to an English speaker mistakenly saying *catched* for *caught*.

There was a time when it would have seemed that the necessity to carry out such fundamental research on the basic phonology of these fascinating languages would have been completed long before the present day. 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), and the projected combined work based on the tour, *Studies in Chin Linguistics*, never made it to publication:[25] Henderson's reduced contribution appeared separately in 1965; Stern's was partially published in 1963 but the textual data on 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.[26] Other good contributions have been isolated and tend to have lacked any substantial comparative setting.[27]

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[24] Sandhi altered binomial forms are noted in the data-set as such. A thorough analysis of tone sandhi is beyond the scope of this work; a brief discussion may be found in Luce (1962a: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 Zahau by Osburne (1979:183). See also the discussion of the Sizang high tone in 1.6.1.

[25] Henderson's typed introduction (1962), 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.

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

[27] The only published comparative study of several languages is Ohno (1965) but this is limited to written forms and only the first part on initials ever appeared.

1.4 Northern Chin 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.[28] Stern (1963:228-9) differs from all other analyses of Northern Chin languages to suggest in his analysis of Sizang that 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 (1997a:17) on Lai Chin, and helps to account for the longer realisations of sonorant codas after short vowels such that, particularly in rising contour tones, the distinction in syllable length is relatively small whether the vowel surfaces as long or short. Stern's distinction may be more conventionally noted in terms of syllable weight; with weight being unable to fall on an obstruent coda, in purely notational terms it makes more sense to mark the distinction on the vowel, although with sonorant finals it could equally well be marked on the coda instead. For the purposes of exposition, the vowels *e* and *o*, for which a more conventional transcription would call for [ɛː] and [ɔː] will be treated here in the same structural relationship to ɛ and ɔ as *i* and *u* with ɪ and ʊ. This approach essentially follows the structural arrangement of the American phonetic system, as originally outlined by Boas et. al. (1916:2-3;9), while incorporating Halle & Mohanan's (1985:72-6) refinements regarding tense *e* and lax ɛ to then further extend it to *o* and ɔ. The intent here is not to assume any tense/lax distinction in Northern Chin vowels but rather to incorporate Pulleyblank's observation (2003:723) that an association of syllable weight with the traditional tense/lax distinction may sometimes be drawn. Lindau's observations (1978:557-9), noting tense vowels to be relatively more centralised in the vowel space, sits well with the phonetically reasonable transcription of the low vowel as an alternation of ɐ and *a* to give the following vocalic distinctions in Northern Chin:

$$
\begin{array}{ccc}
\text{ɪ/}i & & \text{ʊ/}u \\
\varepsilon/e & & \text{ɔ/}o \\
& \text{ɐ/}a &
\end{array}
$$

---

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

The two spectrograms below of the Sizang words lɪm[ll] *image n* and lim[ll] *ball of string n* show the difference in surface realisation of syllable weight on the coda or on the vowel:
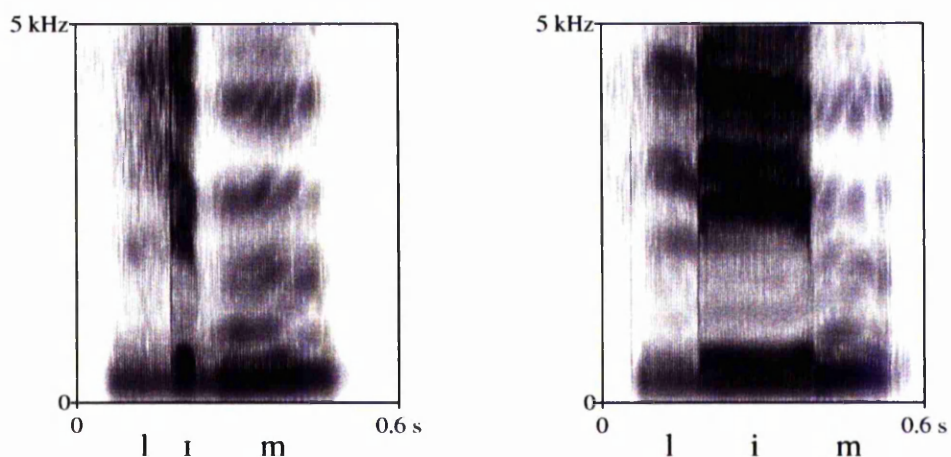
1.4.1 Diphthongs

The analysis here treats *-j* and *-w* as codas that may freely occur after all vowels excluding ɪ/*i* and ʊ/*u* respectively. Alternatively, Luce (1962a:55-60) treats all such cases as rising diphthongs ending in *-i* or *-u*. The situation in Mizo, for which Henderson (1948:716) and Bright (1957b:101) use *-j* and *-w* while Burling (1957:154-5) and Weidert (1975:7) use *-i* and *-u*, rests on little more than, as Bright (1957a:25) notes, a question of priorities regarding phonemic minimalism or syllabic regularity. Phonetically there is of course no real distinction and the discussion is rather inconsequential especially 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, the divorcing of the synchronic from the diachronic entailed in the phonemic analysis, means the syllable will be favoured in this work.

With the exception of the secondary dissimilatory diphthongisations of Sizang *e* to *ɛa* in all environments except before *-t*, *-n* and in open syllables, and Sizang *o* to *ɔa* before *-j*,[29] the establishment of glide codas restricts diphthongs to two contrastive

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[29] The diphthong *ɛa* is not noted by Stern (1963) but is noted in table A of Luce (1962a).

types distinguished by the presence or absence of rounding. Contrary to Stern's suggestion (1963:229) that Sizang diphthongs have contrastive weight, which most likely stems from a confusion with Tedim either on the part of himself or his informant, 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:

Mizo	Zahau	Thado	Zo	Tedim	Sizang
ɪa	ɪa	eɪ	ɪe	ɪa	iɐ
ʋa	ʋa	oʊ	ʋo	ʋa	uɐ

The following surface variations may be noted: Zo ʋo and Sizang uɐ surface as ʋe and uɐ respectively before -j; Mizo, Zahau and Sizang reduce the unrounded diphthong before -n[III] to ɛ in derived forms while all six languages, excepting Tedim, reduce the rounded diphthong to ɔ in the same environment;[30] all six languages reduce the rounded diphthong before -m[III] to ɔ in derived forms. It should also be remarked that the Thado diphthongs -oʊ and -eɪ tend to approximate the pure vowels [o:] and [e:] as noted by Luce (1962a:57-9). In open syllables, they are very similar to the closed rhymes -ɔw [əʊ][31] and -ɛj from which they are nonetheless consistently discernible in words like koʊ[III] *burrow n* and kɔw[III] *call vt* or [h]leɪ[III] *snap vt* and [h]lɛj[III] *sift vt*:[32]

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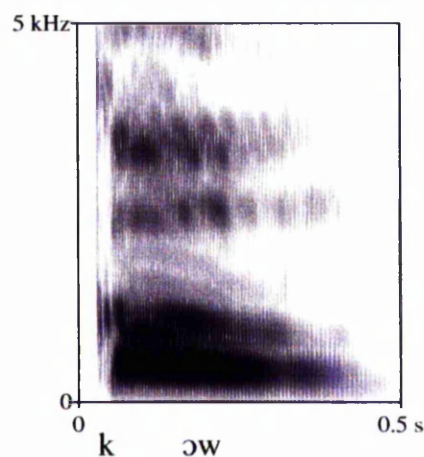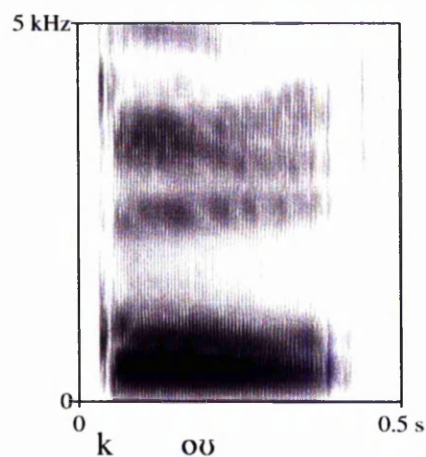
[30] There is an exceptional case in the word for *froth vi* in Thado and Zo where the change does not appear to occur.

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

[32] The words *sift vt* and *snap vt* are both inflected forms.
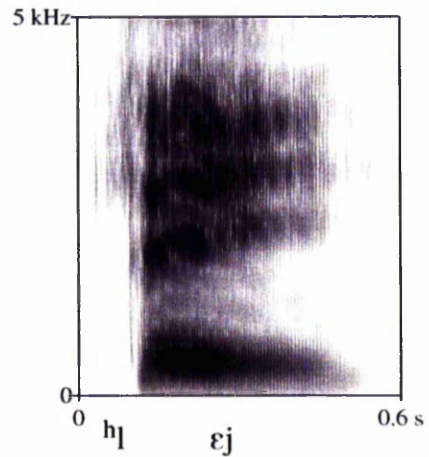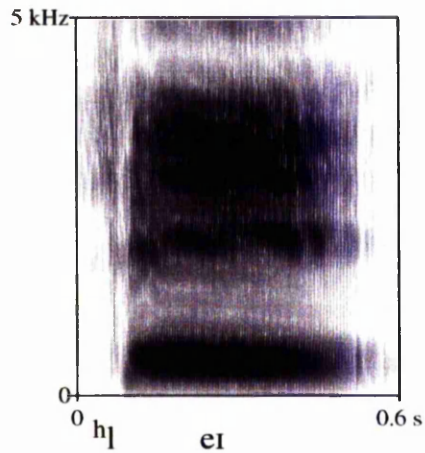
Weidert's rather arbitrary rejection (1981:31-2) of Henderson's proposal (1948:721) to interpret the high vowel components in Mizo *ıa* and *ʋa* as palatal and labial features of the syllable initial is questioned by Matisoff (1982:29) who suggests that in diachronic terms it is of little relevance whether 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 pıaŋ' and Sizang pıɐŋ' *come into being vi* below exemplify the difference in syllable weight between the two languages:

29
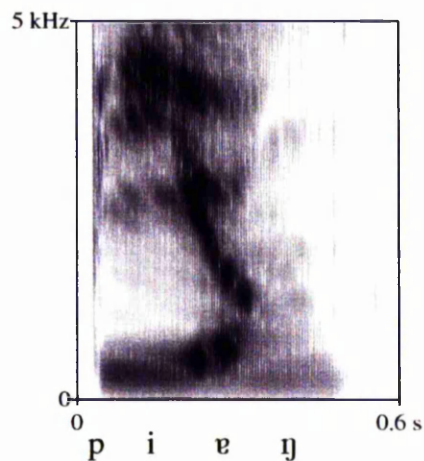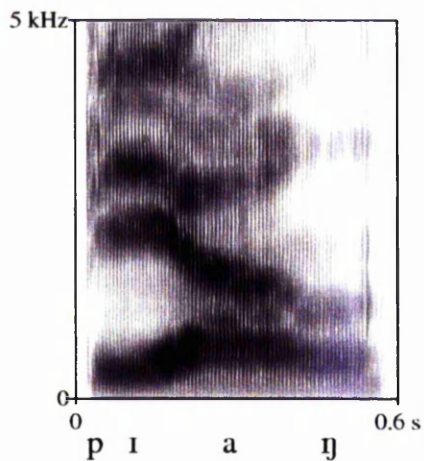
1.4.2 *Codas*

Codas are always unreleased and are voiceless unless sonorant. A discussion of the correspondences of morphological inflections requires a diachronic analysis that will be addressed in Chapter 7. The correspondences of uninflected forms are noted below:

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

1.4.2.1 *Zahau -ɔwʔ / -ɛwʔ*

Zahau -ɔw tends to be pronounced with a more open articulation than in the other five languages where it surfaces as [əʊ]. Consequently words like tɔwʔ *seat vt* are barely distinguishable from the inflected form tɛwʔ of taw[III] *sulk vi*. Luce (1962a:60) notes this also to be the case in some Mizo dialects.
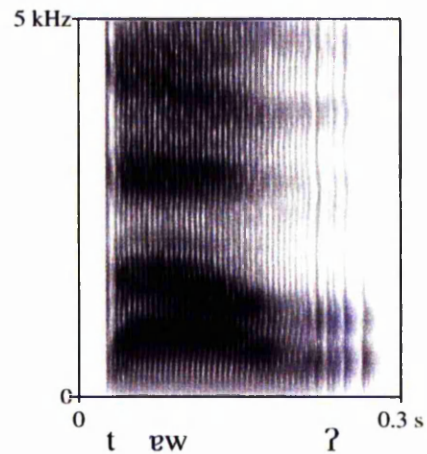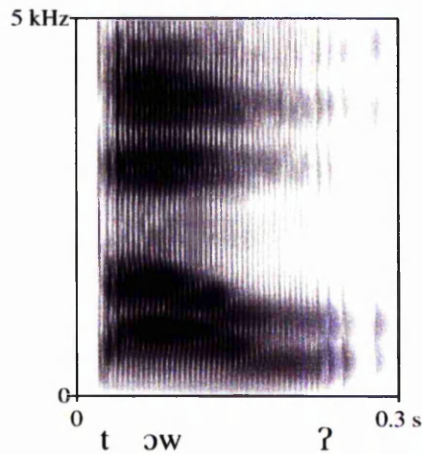
1.4.2.2 *Glide Codas and Syllable Weight*

Henderson (1948:716-7) makes no vocalic length distinctions before glides 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 7.1, the Mizo data here only supports Bright's distinctions (1957a:25-6) of *-ɐj/-aj* and *-ɔj/-oj* such that his other distinctions may be rejected accordingly: the data in Weidert (1975:24) suggests Bright's *-ej*, contrasting with regular *-ɛj*, to be restricted to certain phonological exceptions associated with adverbial and onomatopoeic words which may be safely excluded;[33] Bright's case in point for *-uj* is the word ^{h}muj^{III} *muzzle n* which is the only instance in the data-set without *-ʋj* and for which a proposal for an external source is made in 6.5.4;[34] there are no cases of variation before *-w*, for which *-iw*, *-ew*, *-ɔw* [əʋ],[35] *-aw* are attested, except for ^{h}lɛw^I *leech n* for which an external origin is suggested by the irregular initial correspondences with the other Northern Chin languages.

The Mizo distinctions of *-ɐj/-aj* and *-ɔj/-oj* may be extended to the other five Northern Chin languages, although Thado form 2 derivations with *-aj^{III}*, *-oj^{III}* and *-uj^{III}* tend to surface as *-ɐj^{III}*, *-ɔj^{III}* and *-ʋj^{III}* such that gaj^I *pregnant vi* may occur in form 2 regularly as gaj^{III} or in a reduced form gɐj^{III} while gaj^{III} *impregnate vt* and its regular form 2 gɐj^{III} are invariable. The other languages also concur with Mizo in not supporting any real distinction between *-ɛj*,[36] *-iw*, *-ew*, *-ɔw* [əʋ], *-aw*. The only exceptional forms are the following: Thado has *-ɪw* instead of *-iw* in *elbow n*, 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 (1962a:60) tentatively suggests, remains unclear; *-ɛw* is attested in one case in Thado, Zo and Sizang under *deplete vi*. However, a clear distinction between *-ʋj* and *-uj* may be found in both Thado and Tedim as supported by Luce's transcriptions (1985.II:70-87) of *-wi* and *-ui* respectively. Sizang concurs with Mizo solely reflecting *-ʋj*, and this may be extended to Zahau although *-ʋj* shifts to *-i* after coronal initials; Zo conversely merges them as *-uj*.[37] Occasional differences between Tedim and Thado seem to be due to external

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[33] 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 adverbs in Tedim.

[34] Zahau ^{h}mʋj^{III} *visage n* reflects the regular unstressed vowel.

[35] A transcription of *-ow* would concur better with the other three diphthongs with syllabic weight on the vowel rather than the coda, but the discussion of the Zahau surface articulation in 1.4.2.1 suggests *-ɔw* to be more appropriate

[36] Two Zahau words, ʔɛj^I ~ ʔɛj^{III} *eat vi* and kɛj^I *I n*, have variants ʔi^I ~ ʔi^{III} and ki^I respectively.

[37] The exceptional case of Zo vɔj- *elephant n* is also irregular in its initial in Sizang and is treated as an Austroasiatic loanword in 6.5.4.

influences: Tedim tuj[^II] *water n* and tuj[^I] *egg n* correspond to Thado tʊj[^II] *water n* and tʊj[^I] *egg n*, but table A in Luce (1962a) has Thado tuj[^I] *egg n* and Luce (1985:II.72;82) has Xôngsai tuj[^II] *water n* and tuj[^I] *egg n* which suggest the variation may be due to the influence of a similar alternative word for *water n* in Thado discussed under *Water* (#56); Thado ŋuj[^II] *run-down vi*, corresponding to Tedim ŋʊj[^II], may have been influenced by a semantically identical variant ŋoʊj[^II]. On the basis of the above, the following distinctions may be made:

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

1.4.2.3 *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 tones I and II this is not to the extent of a vowel not bearing syllable weight and the distinction is not noted in the transcription here;[38] in words in tone 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[^II] *back-kick vi* is pɛʔ, which can no longer bear distinctive tone,[39] rather than peʔ[^III] as would be expected by analogy with Zo which, excluding tonal distinctions, is homophonous in the uninflected form. The two Thado forms are shown below:[40]

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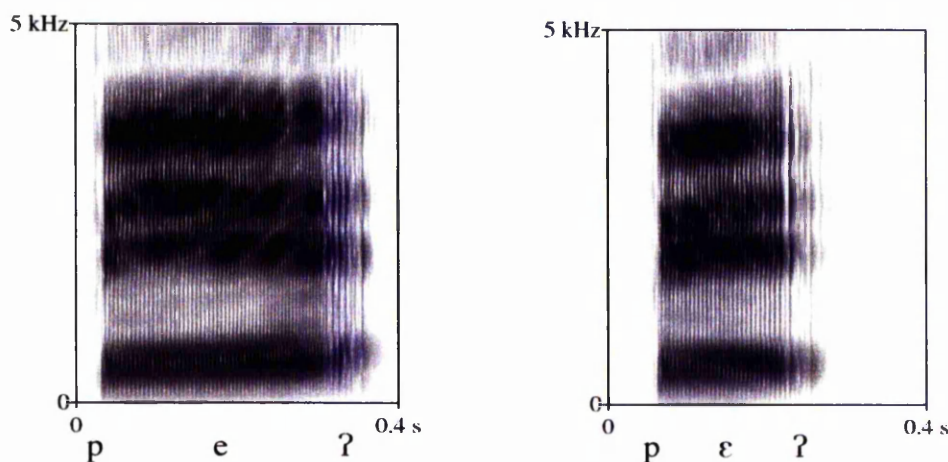
[38] If length rather than syllable weight were being marked, this could be distinguished as [ː] and [ˑ] after the vowel.

[39] This change renders it homophonous with the uninflected Thado word pɛʔ *flat vi*.

[40] The glottal coda in Thado and Zo is wholly unrelated to that of Mizo, Zahau and Tedim; Sizang does not attest a glottal coda.

1.4.2.4 Zo -ʔ / -a

When corresponding to Mizo or Zahau *-r*, the Zo glottal coda is only retained after the mid-vowels ɛ/e and ɔ/o; after ɪ/i, ʊ/u and ɐ/a it has vocalised to *a*.[41] The resulting reflexes of *ɪa* and *ʊa* remain distinct from the original Zo diphthongs *ɪe* and *ʊo* discussed in 1.4.1. The glottal coda in Zo is much weaker than in Thado; the distinction between Zo -ʔ and Tedim -*k* in the spectrograms below for Zo peʔᴵ *back-kick vi* and Tedim pekᴵ *wag tail vi* is discernible but is not nearly as pronounced as in the Thado example discussed in 1.4.2.3.[42]
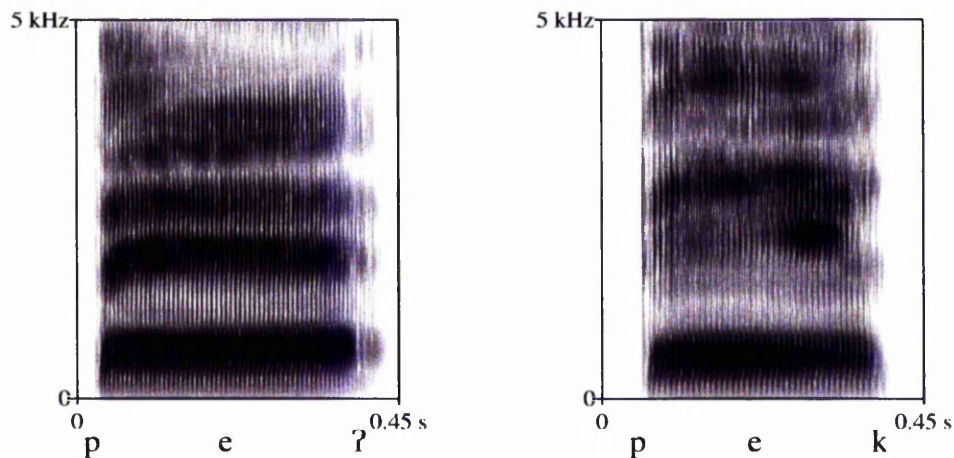
1.5 Initials

Northern Chin has a three-way distinction of voiceless, voiceless aspirated and voiced obstruents. Sonorants may additionally be pre-aspirated in Mizo and Zahau although, as noted by Luce (1962a:43-4), there are occasional discrepancies where one or the other patterns like Thado, Zo, Tedim or Sizang in not distinguishing the aspiration. It is probably not coincidental that many of the words noted by Löffler (2002a:133-4) as discrepant in the Southern Chin language Maraa correspond to the ones listed here and it is likely that many such cases may be attributable to external influences.

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[41] There are a few exceptions in the data-set which appear to provide a rare opportunity to clearly isolate inter-Chin loanwords. A good example is Zo naʔᴵ *nose n* which should regularly correspond to Mizo ʰnarᴵ as naᴵ but is most likely a late loan in place of the more commonly used binome nɛpkʊoᴵᴵᴵ *nose n* literally meaning *snot burrow n*.

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

Mizo	Zahau	Thado	Zo	Tedim	Sizang
k-	*k-*	*k-*	*k-*	*k-*	*k-*
k^h-	*k^h-*	*x-*	*x-*	*x-*	*k^h-*
t-	*t-*	*k-*	*k-*	*k-*	*k-*
t^h-	*t^h-*	*x-*	*x-*	*x-*	*k^h-*
r-	*r-*	*g-*	*g-*	*g-*	*ŋ-*
^{h}r-	*^{h}r-*	*g-*	*g-*	*g-*	*ŋ-*
^{h}r-	*^{h}r-*	*h-*	*h-*	*h-*	*h-*
h-	*h-*	*h-*	*h-*	*h-*	*h-*
ŋ-	*ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*
^{h}ŋ-	*^{h}ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*	*ŋ-*
t-	*t-*	*t-*	*t- / tʃ-*	*t- / tʃ-*	*t- / tʃ-*
t^h-	*t^h-*	*t^h-*	*t^h- / s-*	*t^h- / s-*	*t^h- / tʃ^h-*
d-	*d-*	*d-*	*d-*	*d-*	*d-*
ts-	*ts-*	*tʃ-*	*t-*	*t-*	*t-*
f-	*f-*	*tʃ-*	*t-*	*t-*	*t-*
ts^h-	*s-*	*s-*	*s-*	*s-*	*s-*
s-	*s-*	*s-*	*s-*	*s-*	*s-*
v-	*v-*	*v-*	*v-*	*v-*	*v- / h-*
z-	*z-*	*ʒ- / z-*	*z-*	*z-*	*z-*
n-	*n-*	*n-*	*n-*	*n-*	*n-*
^{h}n-	*^{h}n-*	*n-*	*n-*	*n-*	*n-*
l-	*l-*	*l-*	*l-*	*l-*	*l-*
^{h}l-	*^{h}l-*	*l-*	*l-*	*l-*	*l-*
tˡ-	*tˡ-*	*^{h}l-*	*t-*	*t-*	*t-*
tˡ^h-	*tˡ^h-*	*^{h}l-*	*^{h}l- / h-*	*x-*	*t^h-*
p-	*p-*	*p-*	*p-*	*p-*	*p-*
p^h-	*p^h-*	*p^h-*	*p^h-*	*p^h-*	*p^h-*
b-	*b-*	*b-*	*b-*	*b-*	*b-*
m-	*m-*	*m-*	*m-*	*m-*	*m-*
^{h}m-	*^{h}m-*	*m-*	*m-*	*m-*	*m-*
Ø-	*ʔ-*	*Ø-*	*Ø-*	*Ø-*	*Ø-*

1.5.1 *Alveolars versus Dentals*

The coronals *t-*, *t^h-*, *d-*, *$^{(h)}$n-*, *$^{(h)}$l-* have a dental articulation in Mizo and Zahau. Luce (1962a: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 and Zahau,[43] 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

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[43] This may also be extended to the lateral plosives *tˡ-* and *tˡ^h-*.

34

allophone $\textit{tʃ}$- of Zo, Tedim and Sizang $\textit{t}$- before ɪ/i which is reflected as $\textit{s}$- when from underlying $\textit{t}^h$- except in Sizang where it becomes $\textit{tʃ}^h$-.

1.5.2 *Luce's* $^\eta g$-

Luce (1962a:52, 1962b, 1985:II.70-87) transcribes Zo, Thado and Tedim $\textit{g}$- as $^\eta g$-. This pre-nasalisation is not noted by Henderson (1965:16) for Tedim and, although there is possibly some faint nasalisation of $\textit{g}$-, the spectrograms below of Tedim gɐmᶦ *forest, territory n* and ŋɐmᶦ *dare vt* do not conclusively warrant a transcription of $^\eta g$- for the former. Nevertheless, Luce's observation provides a nice bridge between $\textit{g}$- and the nasal $\textit{ŋ}$- in Sizang, and the role of nasalisation as an articulatory mechanism for maintaining voicing will be discussed further in 3.5.2.3.

g ɐ m   ŋ ɐ m
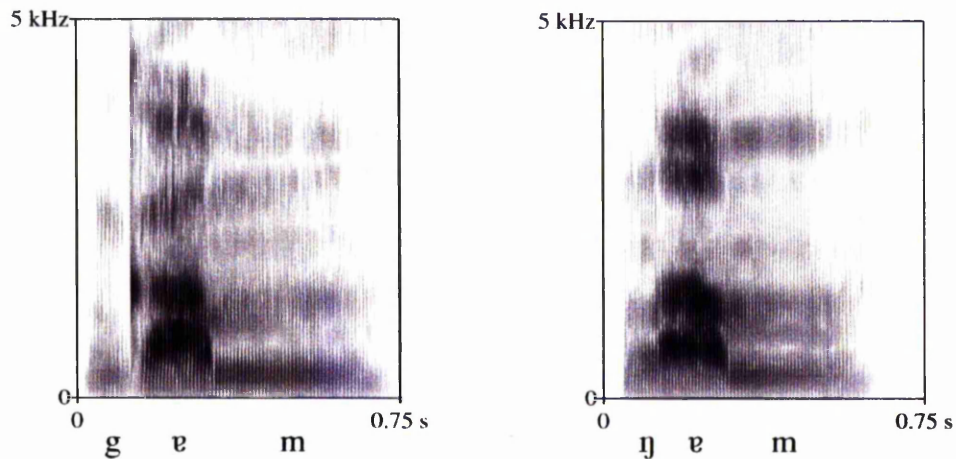
1.5.3 *Zo* $^h l$- *and h*-

The variation between $^h l$- and $\textit{h}$- in Zo, when not correlating with $\textit{h}$- in any of the other languages, generally reflects speaker idiosyncrasy. One informant made a lexical distinction between the two such that *moon n* was always ^{h}laᴵᴵᴵ and *wing, feather n* was always haᴵᴵᴵ. The relevance of this to theories of lexical diffusion, as proposed by Wang (1969:12-8) are discussed in 8.1.1. In the word list only the transcription $^h l$- is used.

1.5.4 *Voiced Fricatives*

Thado post-alveolar ʒ- appears to be slipping towards the alveolar $\textit{z}$- attested in the other languages. This variation is also noted by Luce (1962c); in the word list only the

transcription ʒ- is used.[44] The labiodental fricative *v*- occurs as *h*- before *ʋ/u* in Sizang. Both these changes hint at the previous source of the voiced fricatives in the glides **j*- and **w*- which tempers the proposals for phonemic minimalism, discussed in 1.4.1, in treating the codas -*j* and -*w* as -*i* and -*u*.[45]

1.5.5 *Zahau ʔ-*

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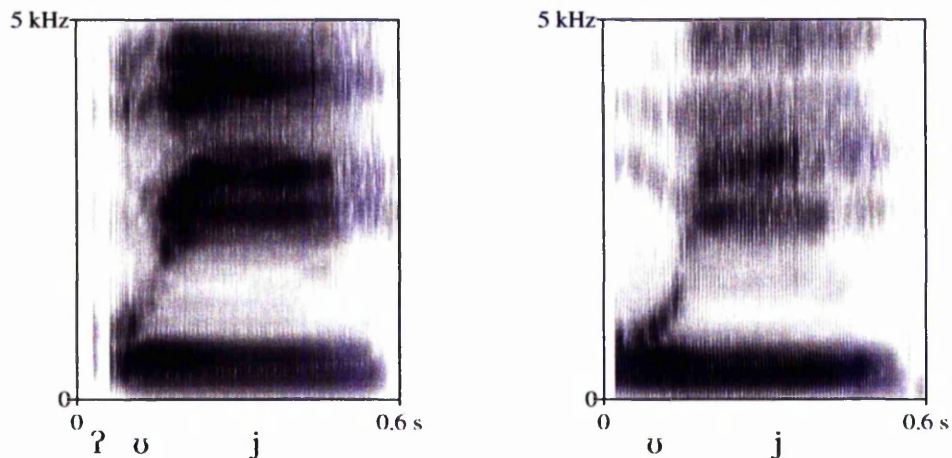
1.6 *Tones*

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

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[44] Notably there are also a select few cases of *x*- being articulated as *kʰ*-; whether this represents dialect confusion or shift is unclear and only the transcription *x*- is used in the data-set.

[45] There are two words where Sizang reflects *v*- before *u*: vʊt *ash n* and the song word vʊjˈsajᴵ *elephant n*; the irregular Tedim vocalism vɔt for the former suggests a possible external source but it could just be a case of sporadic euphonic ablaut as discussed in 7.5.2.2; the latter has irregular syllable weight in Zo and is treated as an Austroasiatic loanword in 6.5.4.

	Mizo	Zahau	Thado	Zo	Tedim	Sizang
I	˥	˧˥	˧˥	˦	˦	˨˩
IIa	⌈ ˧˥	˥˥ ⌉	˥˩	˧˥	˧˥	˧˥
IIb	⌊ ˥˩	˥˩ ⌋				
III	˨˩	˨˩	˨˩	˥˩	˨˩	˥˩

1.6.1 *Tone I*

This is attested in Mizo, Zo and Tedim as a level tone. Stern's observation (1963:229-30) that in Sizang it often surfaces as a low level tone ˩ is also supported here, but his treatment of the frequent Sizang high level tone ˥ as part of the basic tone system is correctly identified by Luce (1962a:68) as a result of sandhi. The Thado and Zahau rising contours correlate with tone II(a) elsewhere, but Hyman (2005) and Osburne (1979:183) 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 suggestion (1986:171-3) that sandhi alternations of tones that have undergone flip-flop, in this case between tones I and II, may reflect earlier forms. Treating tone I as an original level tone would support its treatment in the introduction to Chapter 6 as the unmarked form, but further research into Northern Chin tone sandhi is required.

Stopped syllables with syllable weight not falling directly on the vowel are generally not tone bearing units; their pitch tends to approximate that of tone III. Consequently the occlusion of Mizo and Zahau -*r* to -*ʔ* or -*k* in Thado, Zo, Tedim and Sizang usually involves concomitant re-assignment of syllable weight to the vowel if not already there. However, in Tedim and Sizang there are a few exceptions in tone 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 tʰɐkˡ *new vi*, corresponding to Mizo tʰɐrˡ *new vi*, is also noted by Henderson (1965:20),[46] and may be contrasted with Tedim tʰɐk *itch vi* which, along with Mizo tʰɐk *itch vi*, is unable to bear distinctive tone. In the spectrograms below the Tedim word for *new vi* has a higher pitch contour than the default contour in the following word *itch vi*:

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[46] It is equally applicable to Sizang.

5 kHz ⌐0.5 kHz   5 kHz ⌐0.5 kHz

0   0.25 s   0   0.25 s
0   tʰ   ɐ   k   0   tʰ   ɐ   k
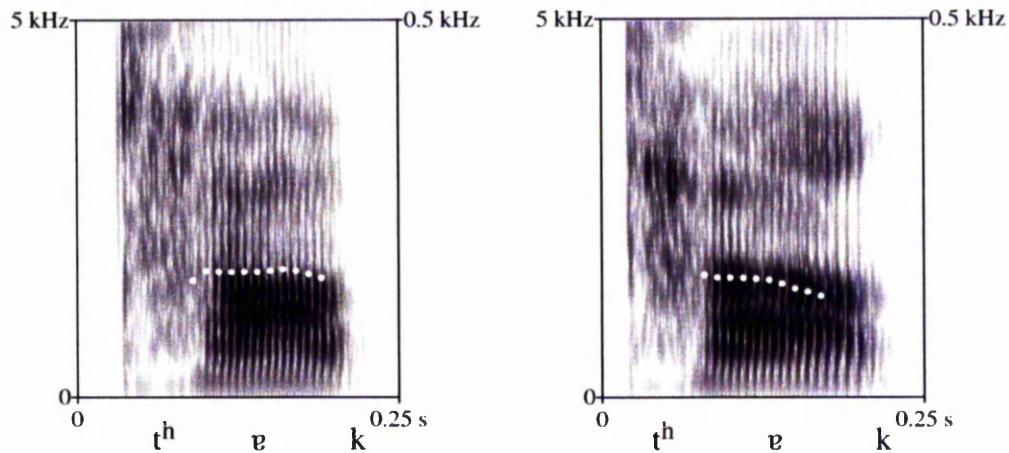
The same word, usually after the animal prefix *sɐ-*, also means *serow n* in Tedim and Sizang; the irregular correspondence between the Mizo and Zahau forms, tʰarᴵ and tʰɐrᴵᴵ respectively, suggests an external origin. Another case in the data set involves Tedim hɐkᴵ *difficult vi* which is confined to a binomial form that allows Henderson (1965:94) to suggest that its curious behaviour may be attributable to its adverbial status.[47] The sole other case in the data-set is Tedim kɔkᴵ *peel up vi*, whose tonal contour is supported by Bhaskararao (1996:54), which has a transitive derivative xɔk that curiously does not bear distinctive tone. The cases above are all equally applicable to Sizang, and although a specific account cannot be made for the curious tonal contour of *new vi*, the evidence above suggests its exceptional status may stem from a previous adverbial or external source.[48]

1.6.2 *Tone II*

The treatment of tones IIa and IIb in Mizo and Zahau as a secondary split from an original single category follows the proposals by Luce (1959a:28-9, 1985:I.83), whose tone categories II and III are inverted in the terminology used here, and is discussed in 6.1. Osburne (1975, 1979:183) does not distinguish tones IIa and IIb in Zahau, but the distinction is noted in table I of Luce (1959a), table A of Luce (1962a), Luce (1962d) and Yip (2004:972). The rising contour for this category in Mizo, Zo, Tedim and Sizang is supported by a possible flip-flop of tones I and II in Zahau and

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[47] The curious phonology of adverbs was noted in footnote 33.

[48] 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.

Thado discussed in 1.6.1. It is probably not coincidental that a flip-flop of Zahau tones I and IIa would bring its tone system into complete alignment with Mizo.

1.6.3 Tone III

This is attested as a falling tone in all the languages which concurs nicely with its historical source proposed in the introduction to Chapter 6. Luce (1962d) and table I of Luce (1959a) only note Thado tones I and II but elsewhere Luce (1962a:68, 1962c) notes the tone III contour which he suggests may be associated with phrase intonation; it is unequivocally attested in the word list here. The contour of Zo tone III is supported by Luce (1962a:68, 1962d), but it sometimes appears to approximate that of Tedim tone III which conversely has a sandhi variant, noted by Luce (1962a:11), that parallels the Zo contour.

Chapter 2: Old Burmese

The validity of orthographic evidence alongside modern dialect evidence has been the subject of some rather inconsequential 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 dismissal (1972a:41) 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 study (1962:36-9) 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, is not difficult to deduce.

2.1 *Vocalism*

2.1.1 *Three Vowel i/u/a system*

Jones (1976:45) reduces the vocalism to a three vowel system accordingly:[49]

SB		OB	SB		OB	SB		OB
-i	°	-i	-u	႞	-u	-a	—ɔ	-a
-ei	၉– / °ဝဥ	-ij	-wei	၉ / ႞ဝဥ	-uj	-e	—ဝဥ	-aj
-ẽi	°ဥ	-im	-oũ	႞ဥ (ᐧ)	-um	-ã	—ဥ (ᐧ)	-am
-ẽi	°ၵ	-in	-oũ	႞ၵ	-un	-ã	—ၵ	-an
-ãi	°ဒ	-iŋ	-aũ	၉—ɔဒ	-uŋ	-ĩ	—ဒ	-aŋ
-eiʔ	°ဒ	-ip	-oʊʔ	႞ဒ	-up	-aʔ	—ဒ	-ap
-eiʔ	°ဝၥ	-it	-oʊʔ	႞ဝၥ	-ut	-aʔ	—ဝၥ	-at

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[49] Common variant forms are shown in parentheses; the rhyme -o ၉—ɔ / —ဒ -aw is often also found as ၉—ɔဒ in the inscriptions.

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-aɪʔ	⚬ꩄ	-ik	-aʊʔ	ɢ—ꩄ	-uk	-ɛʔ	—ꩄ	-ak
			-ou	⚬ / ⚬ꩄ	-uw	-o	ɢ—ꩉ / —ꩄ	-aw
						-iʔ	—ꩄ	-ac
						-i/eɪ/e	—ꩄ	-aɲ

Following a line of thought similar to Duroiselle (1915:99-102), Jones (1988:207) removes the rhyme –ꩄ -aɲ due to its various non-nasal -i, -eɪ, -e pronunciations[50] in Modern Burmese.[51] Contrary to Duroiselle, and in line with the criticisms made by Blagden (1916a:94-5), he supposes that it once existed but was lost very early on,[52] yet his treatment of the two palatal codas as –ꩄ -ac and –ꩄ -aɲ disregards Shafer's proposal (1941:22) to treat them as reflecting Old Burmese -ik and -iŋ in which the palatal feature of the vowel is assumed to have shifted to the coda. If Shafer's proposal is correct, an account then has to be made for what ⚬ꩄ and ⚬ꩉ (Jones' -ik and -iŋ) represent. A year previous to Shafer's article, Luce (1940:304) had suggested that most words with such rhymes seem to be 8th and 9th century Shan loanwords. This proposal is restated in Luce (1985:I.100) and the tacit assumption that the remainder are from Mon, Shan and Pali/Sanskrit is made in Luce (1977b, 1977c). 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)[53] proposes that the source of these rhymes was Tibeto-Burman long *-uːk and *-uːŋ in contrast to the short rhymes *-uk and *-uŋ which gave ɢ—ꩄ and ɢ—ꩉ 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 shows that Benedict's correspondence sets are based on faulty associations. Of relevance to the work here are Benedict's comparisons (1972a:77-8, 1988b:14) of paiʔ ꩄꩄ pik *belly* n,

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[50] The former two pronunciations generally reflect reading and colloquial pronunciations respectively. Regarding the latter, Nishi (1974:26, 1999:667) observes that it is confined to a handful of grammatical words attested in the inscriptions with ⚬ꩄ (ɢ-) -ij that appear to have orthographically merged with –ꩄ -aɲ although their modern pronunciations reflect -ꩄ -aj.

[51] Jones notes, but does not distinguish, a further pronunciation of -aɲ –ꩄ as -ɪ́ which is homophonous with the modern pronunciation of -ɛ -aŋ and is now orthographically distinguished in Written Burmese as –ꩄ. Bradley (1985:194) attributes this mainly to loanwords, but it is actually a standard development from the palatalisation of -n by palatal medials as will be discussed below.

[52] Maran (1971:40-1) makes a similar claim.

[53] This is still accepted by Matisoff (2003:286;361).

əkʰaĩ¹ အခက် (ə)kʰɪŋ¹ *branch n*,[54] maɪʔ မိုက် mɪk *dark vi* / ʰmaĩ¹ မိုင် ʰmɪŋ¹ *downcast vi*

with Mizo puk^IIb *concave vi*,[55] kuŋ^IIa *tree-trunk n* and, muk^IIb *dull (colour) vi*; Shorto (2006:148-9) shows the first Burmese form to be Mon-Khmer in origin and Luce (1977b) shows the following three to be Shan. The external origin of saɪʔ စိုက် cɪk *plant vt*, which Benedict compares with Mizo fŭk *erect vi*, has not been identified but the correct source of the Mizo form is identified under *Erect* (#17). Shafer's proposal, with the additional observations by Luce and Shorto, allows Gong (1980:458-61) to modify Jones' scheme by omitting $\frac{\circ}{\mathrm{L}}$ ာ် and $\frac{\circ}{\mathrm{L}}$ ာ from consideration accordingly:

$\frac{\circ}{\mathrm{I}}$	-i	$\frac{}{\mathrm{I}}$	-u	—ာ	-a
$\frac{\circ}{\mathrm{I}}$ ယ်	-ij	$\frac{}{\mathrm{I}}$ ယ်	-uj	—ယ်	-aj
$\frac{\circ}{\mathrm{I}}$ မ်	-im	$\frac{}{\mathrm{I}}$ မ် ($\frac{\cdot}{\mathrm{I}}$)	-um	—မ် (-)	-am
$\frac{\circ}{\mathrm{I}}$ န်	-in	$\frac{}{\mathrm{I}}$ န်	-un	—န်	-an
—ည်	-iŋ	ၜ—ာင်	-uŋ	—င်	-aŋ
$\frac{\circ}{\mathrm{I}}$ ဝ်	-ip	$\frac{}{\mathrm{I}}$ ဝ်	-up	—ဝ်	-ap
$\frac{\circ}{\mathrm{I}}$ တ်	-it	$\frac{}{\mathrm{I}}$ တ်	-ut	—တ်	-at
—ဃ်	-ik	ၜ—ာက်	-uk	—က်	-ak
		$\frac{\circ}{\mathrm{I}}$ ဝ်	-uw	—ဝ်	-aw

2.1.2 *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, 1986:83) to treat it as part of the rhyme rather than as part of an initial consonant cluster. In terms of the phonological system of Inscriptional/Written Burmese this is entirely justified and compares with the *kaikou/hekou* (rounded/unrounded) distinction in Middle Chinese at around the same time. A concomitant difficulty with this otherwise sound proposal is that medial -*w*- is restricted in distribution to before the low vowel *a*. Noting this complementary distribution of -*u* with -*wa*,[56] Pulleyblank (1963:214-8) reanalyzes -*u* as -*wi* thereby reducing the system to a two vowel *i/a* contrast:[57]

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[54] Note also əkaĩ^II အခက်း əkɪŋ^II *bough n*.

[55] Benedict's comparison of fu^III 腹 puwk < *'pək^w *stomach n* and fu^III 復 pʰuwk < *'ʰpək^w *cave n* with this Mizo form is possible.

[56] Medial -*w*- may not occur before a -*w* coda.

[57] Pulleyblank also suggests that the variant form ၓ of the initial creaky tone vowel ၙ *u^III*, as well as its regular tone form of ၓ *u^I*, in which the vowel *u^III* is surmounted by creaky $\stackrel{\circ}{=}$ *i^III* or regular tone $\stackrel{\circ}{=}$ *i^I*, is evidence for the vowel *u* having been treated as a complex sound *wi* or *ui* at the time of orthographic establishment. However, inscriptional evidence supports Shorto's suggestion, noted in Pulleyblank, that its modern form is due to script standardisation rather than any phonological motivation. Furthermore,

°	-i	ᴛ	-wi	–ᴐ	-a	ᴐ°	-wa
°ᴄᵟ	-ij	ᴛᴄᵟ	-wij	–ᴄᵟ	-aj	ᴄᵟ	-waj
°ᷡ	-im	ᴛᷡ (₋)	-wim	–ᷡ (˗)	-am	ᷡ (˖)	-wam
°ᵮ	-in	ᴛᵮ	-win	–ᵮ	-an	ᵮ	-wan
–ᴘᵟ	-iŋ	ᴄ–ᴐᴄ	-wiŋ	–ᴄ	-aŋ	ᴄ	-waŋ
°ᴐ	-ip	ᴛᴐ	-wip	–ᴐ	-ap	ᴐ	-wap
°ᴐᵟ	-it	ᴛᴐᵟ	-wit	–ᴐᵟ	-at	ᴐᵟ	-wat
–ᴐ	-ik	ᴄ–ᴐᴐᵟ	-wik	–ᴐᵟ	-ak	ᴐᵟ	-wak
°ᴐ	-iw			–ᴐ	-aw		

2.1.3 *Two Vowel i/a System*

2.1.3.1 *-ik / -iŋ versus -ac / -aɲ*

In the above discussion, it has been assumed that Shafer's derivation of –ᴐ *-ac* from *-ik* is phonologically reasonable. Lehman (1970:5) and Matisoff (1973a:79) both note that the modern standard Burmese pronunciation of *-iʔ* [ɪʔ] implies an extraordinary circular sound change in which the palatal feature that originally shifted from the vowel to the consonantal coda has subsequently shifted back to the vowel again. A more significant difficulty is that while palatal medials were able to palatalise Inscriptional Burmese dental codas, as will be discussed below, the high front vowel in Shafer's rhymes *-it* and *-in* was not able to do so. Bradley (1985:194) claims that – ᴐ *-ac* has been pronounced *-iʔ* since at least 1450 but this results from a misreading of Miller (1954:383)[58] and, as Dempsey (2001:219) observes, a prejudice towards later developments. Dempsey (2001:218) uses Hla Pe's data (1960:74;94) on Pali loanwords to show that Shafer's *-ik* must have been much closer in pronunciation to – ᴐ *-ac* as its conventional transcription would indicate.[59] In his original analysis, Jones (1976:45) observes that the digraph ° is restricted to the velar codas –ᴐ *-w*, –ᴐᵟ *-k*, –ᴄ *-ŋ* in a similar manner to the digraph ᴄ–ᴐ. He logically concludes that the phonetic change undergone before velars by the sound represented by ° caused the scribes to

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although Pulleyblank notes that these forms are not found in Mon, the corresponding form in other Indic scripts shows no evidence of a superscript *i* vowel.

[58] 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.

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

create a new symbol $\overset{o}{\underset{\iota}{}}$ to represent it. In purely synchronic terms this is reasonable and, in light of the phonological difficulties with Shafer's hypothesis, Nishi's (1999:676) berating of Jones for not acknowledging Shafer's contribution may not be entirely warranted. The complementary distribution of $\overset{o}{-}$ and $\overset{o}{\underset{\iota}{}}$ makes it curious how much the phonological value of the latter has been debated in the literature;[60] this is particularly the case when, as noted by Ba Shin (1962:28) and Sawada (2003:346), there are even instances in the inscriptions when the digraph $\overset{o}{\underset{\iota}{}}$ is found simply as $\overset{o}{-}$ before velars. Consequently, following Luce's and Shorto's observations that $\overset{o}{\underset{\iota}{}}$တ် and $\overset{o}{\underset{\iota}{}}$င် represent loanwords an account must be made for how the palatal finals –စ် and – ည် came to replace what in synchronic terms should be their slots in the system.

2.1.3.2 *Reanalysis of i as ɨ*

Pulleyblank (1963:218) reinterprets *i* as *ɨ* to create a vertical vowel system corresponding to his analysis of Old Chinese as having a vertical ə/a vowel system.[61] Pulleyblank's proposal also helps to account for contrasts like $\overset{o}{-}$ and $\overset{o}{-}$ယ် which in Jones' and Gong's systems represent *-i* and *-ij*. In phonological terms reconstructing two separate rhymes of this nature does not pose any difficulties; in phonetic terms, unless one is perhaps assuming a vowel length distinction, they are indistinguishable. Ironically this appears not just to be a stumbling block for phonologists trying to tether their theories down to a phonetic reality, but a difficulty for some of the early Burmese scribes whose constant confusion of these two rhymes renders Luce (1981:iii) unable to disambiguate them. It is tempting to assume that they are simply scribal variations devoid of phonological significance much like the free alternation of *-am* as –ည် or $\overset{\cdot}{-}$. However their systematic distinction in Written Burmese and phonetic distinctiveness in modern spoken Burmese means this must not be the case. Reinterpreting them as *-i* and *-ɨj* allows for a very close but distinct interpretation of the two that under the lax spelling laws of the inscriptions would have easily been confused. Ideally the Chinese ə/a alternation would correlate perfectly with Burmese *ɨ/a* as Pulleyblank's layout would imply. In fact the standard lowering of Sino-Tibetan

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[60] The debate stems from as early as Blagden (1914:138) and Wolfenden (1929:197) through to Dempsey (2001:206-15) who essentially follows Jones' lead.
[61] Nishi's response to this (1999:678) may be taken as representative of the general field of linguistics where current dogma dictates that all vowel systems must be triangular.

ə to Burmese *a* in all syllables unaffected by preceding labializing or palatalizing features,[62] or the codas *-j, -w* and *-l,* means Sino-Tibetan rhymes such as *-ək* and *-ak* have merged in Burmese as the latter.

2.1.3.3 *Palatal Rhymes -wac and -waɲ:*

Pulleyblank (1977-8:191-2), who incidentally makes no note of what would otherwise be an inherent contradiction of his previous article, rejects his former treatment of – စ် and –ၟ် as *-ik* and *-iŋ* to propose that they actually represent original palatals which support his reconstruction of palatal codas in Old Chinese. Pulleyblank does not discuss how this interpretation affects the symmetry of the Old Burmese vowel system but support for his proposal comes from the fact that there is evidence for the labialised rhymes ္ဝစ် *-wac* and ္ဝၟ် *-waɲ* in the inscriptions. They are so sparsely attested that it is tempting to treat them as scribal errors but, unlike the cases discussed in Ba Shin (1962:36-9), the phonological motivation for such variation is unclear. Luce (1981:50;60) notes that the seldomly occurring *-wac* appears to be a variant of ္ဝတ် *-wit* which it settles as in Written Burmese. Only one nasal form, ʧweɪ[II] ေကွဲး / ကွ္ဝၟ် klwaɲ[II] *serve vt,* has been found in the inscriptions but the consistency of its spelling is noted in Stewart & Dunn (1940-81:38), Luce (1981:65) and Nishi (1974:26).[63] Nishi (1999:668) notes the loss of the coda in Written Burmese to be curious, but in terms of its modern pronunciation in *-weɪ* it is entirely concordant with other words with an original –ၟ် *-aɲ* rhyme.[64] It seems likely that the inherent incompatibility of labial and palatal features in the same syllable led *-waɲ* to become *-weɪ* much earlier than *-aɲ* became *-eɪ;* the development of *-wac* into *-wit* concurs with the later development of *-ac* into *-it* (and modern *-ɪʔ*), after the original rhyme in ်တ် *-it* had shifted to a more diphthongal articulation that would eventually give modern *-eɪʔ.* In light of the above it seems that Old Burmese ္ဝစ် *-wac* and ္ဝၟ် *-waɲ* had almost entirely lost their palatal articulations prior to Inscriptional Burmese and that their occasional attestations are relics of their former selves.

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[62] See the discussion in 5.1.2.

[63] There is one case where the medial *-w-* appears to be lacking but Nishi suggests this to be due to a problem of space on the inscription rather than through any phonological motivation.

[64] Nishi notes a similar occurrence in the word ʧe[II]zu[II] ေကျးဇူး / ကြ္ဝၟ klaɲ[II]zaw[II] *grace, favour n* whose provenance, which still remains unclear since Blagden's (1916b:28) and Taw Sein Ko's (1915:97) discussion, is most likely from an external source.

2.1.4 *The Rhymes of Old Burmese*[65]

	OB		ST		OB		ST
°	-i	<	*-(j)əl	-a	<	*-a / -ə
°ည်	-ij	<	*-(j)əj	-aj	<	*-aj / -al
°မ်	-im	<	*-jəm	-am	<	*-am / -əm
°န်	-in	<	*-jən	-an	<	*-an / -ən
(°င်)	-iŋ)	<	—	-aŋ	<	*-aŋ / -əŋ
—		<	—	-aɲ	<	*-aɲ / -əɲ / -jəŋ
°ပ်	-ip	<	*-jəp	-ap	<	*-ap / -əp
°တ်	-it	<	*-jət	-at	<	*-at / -ət
(°က်)	-ik)	<	—	-ak	<	*-ak / -ək
—		<	—	-ac	<	*-akʲ / -əkʲ / -jək
°ဝ်	-iw	<	*-(j)əw / -wə	-aw	<	*-aw

	OB		ST		OB		ST
ၟ	-wi	<	ʔ[66]	-wa	<	*-wa
ၟည်	-wij	<	*-wəj / -wəl	-waj	<	*-waj / -wal
ၟမ် (ၟ)	-wim	<	*-wəm	-wam	<	*-wam
ၟန်	-win	<	*-wən	-wan	<	*-wan
ေ—ၟင်	-wiŋ	<	*-(j)aŋʷ / -(j)əŋʷ / -wəŋ	-waŋ	<	*-waŋ
—		<	—	-waɲ	<	*-waɲ / -wəɲ
ၟပ်	-wip	<	*-wəp	-wap	<	*-wap
ၟတ်	-wit	<	*-wət	-wat	<	*-wat
ေ—ၟက်	-wik	<	*-(j)akʷ / -(j)əkʷ / -wək	-wak	<	*-wak
—		<	—	-wac	<	*-wakʲ / -wəkʲ

The Sino-Tibetan sources are based on comparative evidence to be discussed throughout this work. The merger of *-jək* and *-jəŋ* with *-əkʲ* and *-əɲ* in Old Burmese as -ac and -aɲ has left available slots in the system for the loanwords in -ik and -iŋ whose phonological values correlate with what would otherwise have been predicted for *-jək* and *-jəŋ* by analogy with the developments of *-jət* and *-jəp* to -ip and

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[65] For simplicity, the Sino-Tibetan rhotic *-r* is not included in this chart due to its dialectal variation discussed in 5.2.4. Northern Chin and Chinese cognate sets have not been found in the following chapters to account for all of these changes which are assumed on the basis of structural symmetry alone; it is hoped they will be confirmed by further research. Medial -j- is not noted before *a* because it is retained as part of the initial complex in Burmese without fusing with the rhyme as it did before *ə*; see the discussion below. Along with medial -w- before labialised codas, medial -j- is similarly indistinct before palatalised codas.

[66] The rhyme *-wəl* would be expected by analogy with *-əl* but this appears to merge with *-wəj* instead as paralleled by the merger of *-(w)al* with *-(w)aj*. A discussion of Old Burmese -wi and its corresponding form in Northern Chin is found in 5.2.3.1.

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-*it*. The expected development of -*jək* and -*jəŋ* to -*ik* and -*iŋ* has been overridden by the ability of velars to maintain a palatal articulation but the affinity between the two nicely accounts for Bradley's observation (1985:192;194) that in the Arakanese and Marma dialects of Burmese, ⟨ိက်⟩ and –ⓢ have merged in pronunciation.[67]

2.2 *Pure Initials*

Hla Pe's observation (1948:62, 1960:97) that native Burmese words are not spelled with voiced initials is well-founded. Consequently Old Burmese, as it is generally attested in the inscriptions, appears to distinguish initials purely on the basis of aspiration. The lists of words in Okell (1969:205-8) and Thurgood (1981:35-7) show that, in the case of verbs, this often marks a distinction of transitivity with the aspiration, following the Northern Chin evidence in 7.4, being derived from a prefixal *s*-. The emergence of voicing sandhi in Burmese is discussed by Nishi (1998:255-9) who notes that in several cases voicing appears to have been retained after the loss of preceding syllables.[68]

A few late changes in the pronunciation of initials are dated by Pe Maung Tin (1922:129-30) to have begun around the end of the 18th century: the shift of the palatals ⟨ø⟩ *c*- and ⟨ဆ⟩ *c^h*- to the sibilant articulations *s*- and *s^h*-;[69] the shift of the original sibilant ⟨သ⟩ *s*-, concomitant with the former shift of the palatals, to a dental fricative *θ*-;[70] the merger of ⟨ရ⟩ *r*- with ⟨ယ⟩ *j*-.[71] Excluding the merger of *^hj*- and *^hr*- as *ʃ*-, which caused some orthographic confusion and will be discussed further below, none of the above had any effect on the orthography, and the Old Burmese initials may be treated as follows:

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[67] The distinctive case of –ⓟⓢ -*aɲ* was discussed above. Nevertheless, the nasal counterpart ⟨ိင်⟩ has merged with secondary palatalised -*n* codas now represented as –ⓢ; see the discussion below.

[68] See also Benedict (1972a:21-2).

[69] The latter is typologically very unusual and in many varieties of modern spoken Burmese is not distinguished.

[70] This is commonly realised as a dental affricate /θ͡θ/.

[71] The time of the merger of all obstruent codas to a glottal stop and the reduction of all nasal codas to nasalisation of the preceding vowel most likely occurred around the same time; Pe Maung Tin (1922:130) suggests it to have occurred later than the above changes but Yanson (2006:119) suggests sometime around the middle of the 18th century.

SB	OB	SB	OB	SB	OB	SB	OB
k-	က– k-	kʰ-	ə– kʰ-	ŋ-	c– ŋ-	ʰŋ-	ç– ʰŋ-
s-	ဝ– c-	sʰ-	ဆ– cʰ-	ɲ-	ည– ɲ-	ʰɲ-	ဈ– ʰɲ-
t-	တ– t-	tʰ-	ထ– tʰ-	n-	န– n-	ʰn-	နှ– ʰn-
p-	ပ– p-	pʰ-	ဖ– pʰ-	m-	မ– m-	ʰm-	မှ– ʰm-
j-	ယ– j-	ʃ-	သျ– ʰj-	j-	ရ– r-	ʃ-	ရှ– ʰr-
l-	လ– l-	ʰl-	လှ– ʰl-	w-	ဝ– w-	ʰw-	ဝှ– ʰw-
θ-	သ– s-	h-	ဟ– h-	ʔ-	အ– ʔ-		

2.3 Medials

The generally accepted treatment of medial ွ -w- as part of the rhyme in Inscriptional Burmese rather than as a medial like ျ -j-, ြ -r- and ‍ -l- which have a far more restricted distribution, was noted above. A difficulty in distinguishing -w- in this manner was hinted at by the requirement to set up a Sino-Tibetan -j- after all consonant types to account for later developments in Burmese vocalism. A closer study of Burmese orthography suggests that -j- may actually be reconstructed for Old Burmese with the same distribution as medial -w- such that it too may be separated from -r- and -l-.

2.3.1 Medials -j- and -w-

Disregarding aspiration, the following table shows all possible initial types with *a* vocalism.[72] The evidence for reconstructing Old Burmese medial -j- in cases where it is not attested consistently in Written Burmese or Inscriptional Burmese will be discussed on a case-by-case basis below.

SB		OB	ST	SB	OB	ST
tʃ-	ကျ–	kj-	< *kj-	kw-	ကွ– kw-	< *kw-
ɲ-	ဂြ–, ည– / ဉ–	ɲ-	< *ŋj-	ŋw-	ငွ– ŋw-	< *ŋw-
s-	ဝ–	cj-	< *cj-	cw-	စွ– cw-	< *cw-
(ɲj-	ဉ–	ɲ-	< *ɲ-)	ɲw-	ဉွ– ɲw-	< *ɲw-
s-	ဝ–	cj-	< *tj-	tw-	ကွ– tw-	< *tw-
ɲ-	ဉ–	ɲ-	< *nj-	nw	နွ– nw-	< *nw-
pj-	ပျ–	pj-	< *pj-	pw-	ပွ– pw-	< *pw-
mj-	မျ–	mj-	< *mj-	mw-	မွ– mw-	< *mw-
j-	ရ– / ရျ–	rj-	< *rj-	rw-	ရွ– rw-	< *rw-

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[72] The medials -j- and -w- are not retained in syllables with *a* vocalism due to them merging according to the principles discussed in 2.1.4.

lj-	လျ-	lj-	<	*lj-	lw-	လွ-	lw-	<	*lw-
ʃ-	ရ- / သျ-, သြ-, ဆျ-	ʰj-	<	*sj-	sw-	သွ-	sw-	<	*sw-
ʃ-	ရ- / သျ-, သြ-, ဆျ-	ʰj-	<	*hj-	?	–	?	<	–
–	–	–	<	–	jw-	ယွ-	jw-	<	*jw-
?	–	?	<	*wj-	–	–	–	<	–
j-	ယ-	j-	<	*ʔj-	w-	ဝ-	w-	<	*ʔw-

As with Old Chinese, the medials may co-occur in the same syllable as -jw-.[73] The fact that -j- takes precedence suggests that lack of evidence for medial -j- after initial w- may perhaps stems from phonotactic constraints concerning syllable structure.

2.3.1.1 Inscriptional Burmese ɲ- and Written Burmese ŋr-

Taking the orthographic evidence at face value creates a curious distributional difficulty, noted by Okell (1971:23), whereby -j-, -r-, and -l- may occur after k-, p- and m- while only -r- may occur after ŋ- as င-. This leads Bradley (1979:147), in spite of the lack of supporting evidence in Loloish languages, to propose ŋr- clusters in Lolo-Burmese; Matisoff (2003:81) similarly follows Benedict (1972a:44) in reconstructing Tibeto-Burman ŋr- on the basis of the Burmese evidence. Yanson (1990:57-9, 2006:104-5) dismisses Bradley's suggestion, which may also be extended to Benedict and Matisoff, by noting that the only word with ŋr- in the Inscriptions is the Pali loanword ငရဲ ŋraj *hell* n, now written ngaje[II] c 軍,[74] to further suggest that original ŋj- became spelled as ŋr- in Written Burmese after the merger of the medials -j- and -r-. Yanson's proposal convincingly suggests that the transcription ŋr- is used more as an orthographic convention based on the existence of such a combination in the script, to which it should be added that in most cases the Written Burmese spelling has settled in favour of ɲ-. A clear example of this is ɲooᴵ ညို njɨwᴵ *dark (in colour)* vi which has an orthographic variant with medial -r- ငြို that Matisoff (2003:184) notes but does not attempt to explain. The proposal that ɲ- may represent an original ŋj- is supported by Nishi's observation (1974:18-19, 1999:675) that ɲ- was not distinguished from ŋj- before a high front vowel in much the same way that ကျ- kj-, as noted by Nishi (1977:47-8), never occurs before a high front vowel in Inscriptional Burmese but in Written Burmese is always attested with the medial. Both Nishi

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[73] Unfortunately no comparative sets with -jwa in Old Burmese or Old Chinese have been found so it remains unclear whether in Northern Chin the palatal or labial element dominated.
[74] The Pali origin is supported in Hla Pe (1960:89).

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(1974:20) and Yanson (2002c) use this to suggest that before a high front vowel, velars never had a palatal medial in Old Burmese; this is supported by the discussion of rhymes above in which the medial -*j*- of *jə* combines with the following *ə* to give *i* and ultimately *i*.

2.3.1.2 *Inscriptional Burmese rj- and Written Burmese r-*

Medial -*j*- is also attested after the liquids *l*- and *r*-; the former is maintained in Written Burmese whereas the latter, as noted by Benedict (1972a:54), has simplified to ရ *r*-. Yanson (2002b:166) criticises Benedict's observation by citing ja' လယ် / ရ္ပ rja' *dry field n*;[75] Nishi (1975:3, 1977:46-7) notes this to be the sole exception and that its spelling with *j*- only began sometime between the 18th and 19th centuries, right around the time when the initial *r*- was merging with *j*-, under an incentive to differentiate it from ja' ရ္ပ / ရ္ပ rja' *hundred n*.

2.3.1.3 *Old Burmese cj- and Inscriptional/Written Burmese c-*

Another key source of identifying an original medial -*j*- may be found in Nishi's observation (1974:1, 1999:668-9) that, along with initial *j*-, it caused secondary palatalisation of the dental codas -*t* and -*n*.[76] In the case of nasal codas, Nishi (1974:26) notes that these secondary palatalised ones may be distinguished from the original palatal nasals by their modern standard Burmese pronunciation -*ī* as opposed to -*i/eı/e*.[77] The Written Burmese orthographic distinction between –ည် for original palatals and –ဥ် for secondarily derived ones is noted by Nishi (1997:979-80;992) to be a recent development with the latter rarely occurring in the later inscriptions and being so far unattested in the earlier ones. Consequently, in spite of the lack of orthographic distinction where both are attested as စ–, Nishi (1974:16) is able to make a distinction between *c*- and *cj*- in Old Burmese which concurs well with Matisoff's distinction (1969:157) of dental *ts*- and palatal *c*- in Lolo-Burmese. In the

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[75] Yanson notes Hla Pe's suggestion (1967a:75) that it is a Mon loanword from the 15th century but misreads him to assume that it is not attested in Mon before the 15th century; on this basis Yanson suggests it must be a Burmese loanword into Mon. Peiros (1997:245) supports Hla Pe's suggestion for an external source.

[76] In an interesting development, original Sino-Tibetan -*jə*- which gave Old Burmese vocalic -*i*- was left without the palatal force to palatalise dental codas between Inscriptional Burmese and Written Burmese while -*ja*-, which retained the palatal, was able to do so.

[77] Hla Pe (1960:92-3) observes that there is frequent interchange between –ဥ် and –ဥ် in Pali loanwords supporting the nasalised evolution of the former.

reconstruction here a transcription of *c-* and *cj-* will be maintained due to the assumption that it is the palatal medial *-j-* rather than any inherent palatal features of the initial that caused the coda fronting; this will be discussed further below.

2.3.1.4 *Old Burmese nj- / tj- and Inscriptional/Written Burmese ɲ- / c-*

Words beginning with ည– *ɲ-* in Written Burmese are not numerous; when those of demonstrable origin in *ŋj-* are removed, the list becomes even smaller and suggests that the remaining cases of *ɲ-* may be derived from *nj-*. Further research is required to confirm this but the curious distributional anomaly with စ– *c-* appearing in both initial and coda position but *-ɲ* only in coda position will be seen in 3.5.1 to be paralleled in Old Chinese, and significantly *-t* and *-n* only occur as codas after *ɲ-* when the rhyme is labialised via medial *-w-* which may have inhibited the spreading of the palatal feature. Evidence for a shift of *nj-* to *ɲ-* may be found in correspondence sets like *Night* (#31) with Northern Chin *jan^(III) *night n* corresponding with Burmese ɲĩ^(III) ည၉ / ည၉ ɲan^(III) *night n*, or *Low, Soft* (#99) to account for a possible association between ɲã^(III) ည့ ɲam^(III) *soft, inferior, subside (as pain/fever) vi* and neĩ^(III) နိမ့ nim^(III) *low, low-lying, inferior vi.*

Some cases of *c-*, but not all due to the attestation of *cj-*, may possibly be similarly derived from *tj-*. There are in fact a few cases of တျ– *tj-* in Written Burmese but Nishi (1974:19) treats them as peripheral to the Old Burmese phonological system and (1974:43) specifically criticises Matisoff's use (1972a:30) of the variant spelling တျက်တျက် tjaktjak of the adverb tɛ̀tɛ̀ʔ တက်တက် taktak *completely* as evidence for reconstructing a Lolo-Burmese **dj-*.[78]

2.3.1.5 *Inscriptional Burmese ^h j- / hj- / sj- and Written Burmese ^h r-*

Nishi (1999:675) shows Written Burmese ရ– ^(h)*r-* to fluctuate with several inscriptional forms: ဟျ– ^(h)*j-*; ဟျ– *hj-*; သျ– *sj-*. Excepting loanwords like ʃã^(II) ရှမ်း / သျှမ် sjam^(II) *Shan n*, in which the sibiliant initial is original,[79] or əʃĩ^(t) အရှင် / အသျှင် ə^(h)raŋ^(l) *lord n*, in which Yanson's suggestion (2002b:164) of a Pali origin confirms an original rhotic initial, it

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[78] See also the discussion under *Red* (#205).
[79] See Luce (1959c:68-9) and Yanson (2002c) for further discussion.

is difficult to establish the original form. To some of Nishi's cases internal phonological and morphological evidence offers a solution: Yanson (2002c) shows ʃi^{iii} ရှိ / ဝှိ hi^{iii} *be vi* to have developed into Written Burmese ^hr- via an intermediary stage *hj-* triggered by an epenthetic medial *-j-* as was noted to occur with *k-* before high front vowels in 2.3.1.1; the word ʃi^{ii} ရှင်း / ဟွင်း ^hjan^{ii} *yoke (of animals) n* may be reconstructed as ^hran^{ii} via a plausible association with ʃi^{i} ဟွင် ^hjaɲ^{i} *put side by side vt* which, as the transitive derivation of jã^{i} ရင် ran^{i} *side-by-side vi*, should be reconstructed as ရင် ^hran^{i} *put side-by-side vt* showing coda palatalisation to have occurred after ရ- ^hr- had begun shifting toward its modern palatal articulation ʃ- via ဟွ- *hj-* or ဟ- ^hj-.[80] In other cases like *eight vi*, discussed in 6.5.4, and *Ashamed* (#30), external Sino-Tibetan evidence can provide a correct reconstruction.

2.3.2 *Medials -l- and -r-*

2.3.2.1 *Inscriptional Burmese -l- and Written Burmese -j- / -r-*

Disregarding the case of *ŋr-*, for reasons outlined above, the medials ◌ *-l-* and ◌ *r-* are restricted to *k-*, *p-* and *m-*.[81] Cases of ◌- *hr-* in Inscriptional Burmese are shown by Yanson (1978, 1994:366-7) to be due to Mon scriptural influence on Written Burmese ရ- ^hr- and may be discounted. Nishi (1977:41-3) and Luce (1985:I.106) show that Inscriptional Burmese *-l-* merged with ◌ *-j-* after velars but *-r-* after bilabials in Written Burmese before all ultimately merging as *-j-*:[82]

SB		OB		SB		OB	
tʃ-	(< *kr-*)	ကြ- *kr-*		tʃ-	(< *kj-*)	ကျ- / ကြ- *kl-*	
pj-	(< *pr-*)	ပြ- *pr-*		pj-	(< *pr-*)	ပြ- / ပ္လ- *pl-*	
mj-	(< *mr-*)	မြ- *mr-*		mj-	(< *mr-*)	မြ- / မ္လ- *ml-*	

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[80] See the discussion in 6.4 regarding the association of tones I and II.

[81] Benedict (1972a:111) notes an apparent confusion between bilabial obstruent and sonorant prefixes in Tibeto-Burman. Although this perhaps helps to account for why there is no evidence for velar nasal clusters in Old Burmese native words, the clear distinction between *p-* and *m-* in Burmese remains unexplained.

[82] See Okell (1971:15-20) and Nishi (1977:44-7) for a discussion of some exceptional cases.

2.3.2.2 Inscriptional Burmese -lj-

There are a few cases in the inscriptions where the medial combination ⟨ၠ⟩ -lj- is attested. Nishi (1977:43-5) suggests that after velars this generally seems to reflect the change -l- > -l^j- > -j- but that after bilabial initials -lj- also appears to shift to -j- which contradicts the general shift of -l- to -r- in that environment. He tentatively suggests that in such cases the original medial combination may have been -lj- as attested in words like mjoṵ^{II} ⟨မျိုး⟩ mjɨw^{II} *seed, type, lineage n* which occurs in the inscriptions variously as ⟨မ္လိဝ္⟩ mlɨw or ⟨မ္လျိဝ္⟩ mljɨw. The fact that in initial position the lateral *l-* could support a medial -j- suggests that *plj-* or *mlj-* clusters, which as discussed in 3.5.2 stem from a Sino-Tibetan bilabial prefix, add support to Nishi's hypothesis. This analysis could also be extended to velar initials but the general shift of medial -l- to -j-, rather than -r-, in such an environment has obscured any evidence for this which will only now be discovered through external comparisons.

2.4 Tonality

2.4.1 Suffixal -ʔ and -s

Although tone III is marked generally, but inconsistently, in the inscriptions as ⟨ၐ⟩ -ʔ, the lack of marking of tones I and II makes an analysis based on orthographic distinctions rather difficult. However, following the evidence in the Ajāwlat Inscription, discussed in Pe Maung Tin & Luce (1960:239-50) and Luce (1969-70:I.111-3), where tone II appears to be often marked with –ဟ် -h, Egerod (1971:168-9) and Pulleyblank (1978:175) note a similarity with the proposals that Middle Chinese tones are marked by glotalic and breathy phonation from Old Chinese origins in -ʔ and -s as discussed in 3.3. However, Weidert (1987:83) notes that the creaky glotalic phonation of Burmese tone III appears to correspond to the glotalic feature of Chinese tone II while the breathy phonation of Chinese tone III appears to correspond to the breathy phonation of Burmese tone II. Consequently, when compared with the Sino-Tibetan tonal categories, established in the introduction to Chapter 6, there appears to be a curious flip-flop of tones II and III in Burmese:

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	SB	WB	IB	ST
I	˧ *(low)*	–	–	–
II	˥ *(high)*	–ะ	–ုဆ *(-h)*	*-ʔ*
III	˨ *(creaky)*	–ౢ	ౢ *(-ʔ)*	*-s > -h*

Further compounding the evidence for an original *-h* in tone category II is the fact that Written Burmese consistently uses the Sanskrit *visarga* –ะ to mark this category which also represents *-h*. The issue is additionally obfuscated by the evolution of modern spoken Burmese for which Nishi (1997:993-4), presumably following Henderson's (1952:151) observations on Khmer, suggests that concomitant with breathy voice would be a lower pitch such that tone II should have been lower pitch than tone I with normal voice. Although Matisoff (1979:19-20) and Yue-Hashimoto (1986) show suprasegmental tonal flip-flops of this nature, as opposed to a segmental flip-flop as the Inscriptional evidence would imply, to be not unknown in Sino-Tibetan, the curious implication of sequential flip-flops in the evolution of Burmese suggests the analytical procedure must be faulty.

Dealing first with Nishi's observation, Sagart (1986:90, 1988:84) provides evidence from many peripheral Chinese dialects to suggest that an original segmental *-s* may be better associated with creaky phonation. Pulleyblank (1986b:78-80) suggests Sagart's proposal to be phonetically implausible and suggests that there must have been at least some kind of intermediary *-h* period; Pulleyblank's opinion is later espoused by Sagart (1999b:132-3) who brings further dialect evidence to support this. The difficulties with the orthographic evidence are addressed by Button (2005:7) who, following Pe Maung Tin & Luce's (1960:243) and Sawada's (2003:330) observation that –ုဆ *-h* is generally only used to mark tone II in conjunction with short vowel symbols which are usually reserved for glottalic tone III in open syllables, remarks that the situation is very reminiscent of Shorto's comment (1976:1060) that in the Mon inscriptions vowel length distinction was neutralised before *-h* and *-ʔ*. Button consequently opines that the transcription of short vowels with –ုဆ *-h*, alongside short vowels with glottal, was simply a borrowed transcriptional convention from Mon devoid of phonological significance.[83] As for the later use of *visarga*, this was only

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[83] See also the suggestion under *Village* (#45) that *-h* is occasionally attested in Mon loanwords into Burmese as an inscriptional artefact.

applied after long vowels and although it may well, as Bradley (1982:123) and Wheatley (1995:453) suggest, represent a discernible breathy phonation sometimes associated with modern spoken Burmese tone II, this certainly cannot be transferred back to Old Burmese as Lehman (1992a:236;240) and Nishi (1997:993) attempt. Further support comes from Sawada's remark (2003:346) that if breathy phonation had been a clearly discernible feature of tone II, then Inscriptional Burmese could have marked it with $\underset{\mathsf{T}}{}$, or a subscript version of –ဟ် -h, in the same way that $\underset{\text{အ}}{\text{c}}$ was used to glottalically mark tone III; as it stands only the Ajāwlat inscription shows any attempt to mark the category at all. Consequently Haudricourt's proposal (1975:342) to derive Burmese tone II from -s, along similar lines to Egerod and Pulleyblank above, is unlikely; this supports Matisoff's specific rejection (1982:8;45) of Pulleyblank's proposal due to a lack of a correlation with -s elsewhere in Tibeto-Burman. Interestingly, Matisoff (2003:478) restates this position but adds the observation that the few Tibeto-Burman words he reconstructs with final or suffixal -s may have merged with Lolo-Burmese tone II; an account for this is made in 5.2.7.

2.4.2. *Prefixal s-*

Contrary to the suffixal -s hypothesis postulated above, Thurgood (1981) proposes that Burmese tone 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, following the above discussion, may now be treated as derived from an original suffixal -s. An argument by Thurgood (1981:43;49) that seems to have been overlooked is that the proposal is only made for certain tone III verbs with tone I provenances such that all other cases are attributed to the same unidentified source as Lolo-Burmese tone III for which, as Thurgood notes, a separate account must be made. Weidert (1987:156) points out that Thurgood's proposition (1981:49), that prefixal s- must have caused creaky tone III development at a time prior to the aspiration of initials by s-, as evinced by the many verbs in tone I with aspirated initials and tone III with unaspirated initials, makes his prefix theory hard to accept.[84] Benedict (1983:15-16) attempts to distinguish, in Burmese and Chin, between root clusters beginning with s- that gave aspiration and root initials with s-

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[84] To his credit, Thurgood acknowledges this difficulty and suggests that while some instances may well derive from -s, there is a lack of evidence (1981:49-50;56).

prefixes that gave tone III but then is unable to account for Burmese verbal forms with both aspiration and tone III. Furthermore, the implicit assumption in Thurgood's work is that tone II verbs do not have tone III counterparts but correspondences like pʰrã̃ᴵᴵ ြ◌ှ**:** *spread vi*[85] with pʰrã̃ᴵᴵᴵ ြ◌ှ. *spread vt* and sʰī̃ᴵᴵ ဆင်**:** *flow, spread out vi* with sʰī̃ᴵᴵᴵ ဆင် *pile/stack up vt* suggest this also may not be the case. Thurgood's work is nonetheless of paramount importance because it establishes in Burmese a clear association of transitivity/causativity with tone III as well as with initial aspiration; this is something that is well-attested in Northern Chin, as discussed in 7.1.5 and 7.4, and supports Sun's association (1999:194-5) of both prefixal *s-* and suffixal *-s* with causation in Tibeto-Burman languages. Sun suggests that the suffixes are derived secondarily from the prefixes but it seems rather that the two processes are distinct but complementary. Examples like nē̃ᴵ §◌ nim̃ᴵ *subside vi*, ʰnē̃ᴵ §◌ ʰnim̃ᴵ *suppress vt*, nē̃ᴵᴵᴵ §◌ nim̃ᴵᴵᴵ *low, low-lying, inferior vi*, ʰnē̃ᴵᴵᴵ §◌ ʰnim̃ᴵᴵᴵ *lower vt*, or loũᴵ လ္ lwim̃ᴵ *warm vi*, ʰloũᴵ လ္ ʰlwim̃ᴵ *warm (oneself) vt*, ʰloũᴵᴵᴵ လ္. ʰlwim̃ᴵᴵᴵ *reheat vt* suggest that apparent cases of concomitant *s-* prefixation and *-s* suffixation more likely stem from discrete processes acting at separate stages on the language. A further valuable contribution of Thurgood is his association of verbal nominalisation with tone III (1977:687, 1981:67-69) which is also attested in Northern Chin as discussed in 7.3.

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[85] Usually used to mean *flush vi* in reference to the spreading of blood in the face.

Along with Old Burmese, as discussed in the introduction to Chapter 2, Old Chinese has similarly been the focus of rather inconsequential discussions regarding the validity of the literary tradition in its reconstruction.[86] To Miller's dismissal (1975:1237-43) of the *Shijing* as ambiguous in its rhyming, and the *Qieyun* and *Yunjing* as being divorced from real language, Pulleyblank (1984a:74), focusing on the *Yunjing*, counters that modern dialectal evidence shows genuine correspondences to the divisions attested there, and Sagart (1999b:10) notes that that the main distinguishing features of modern Chinese dialects emerged after the migrations occurring no earlier than the 2nd century BC such that the comparative method simply cannot reach the time depth of the *Shijing*. More recently, Miller's mantle has been taken up by Norman & Coblin (1995) who take particular objection to the proposals in Pulleyblank (1984a) that Middle Chinese may be divided into Early Middle Chinese, corresponding to the distinctions in the *Qieyun* rhyme dictionary, and Late Middle Chinese, codified in the *Yunjing* rhyme table. In particular, Norman & Coblin (1995:578-82) suggest the following: the *Qieyun* is of little value due to it being an amalgamation of northern and southern dialects rather than a real language; the *Yunjing*, compiled as a key to the *Qieyun*, is by no means necessarily representative of a Tang koine. Sagart (1999b:9) notes that the only real difficulty concerning the weight accorded to the literary tradition instead of the vernacular by the *Qieyun* is the lack of evidence for iambic prefixes,[87] while Pulleyblank (1998b:204-6) cites dialectal evidence as well as Tang linguistic commentaries and transcriptions in support of a koine. Norman & Coblin's plea, restated in Coblin (2003), for renewed vigour in Chinese dialectal research is commendable but this will almost certainly be confirmatory, with additional insights, of what is already known about Old Chinese rather than antithetic.

3.1 Vocalism

3.1.1 Baxter's Six Vowel and Li's Four Vowel System

Rather than pitting his six-vowel *i, u, ə, e, o, a* system of Old Chinese at loggerheads with Li's four vowel *i, u, ə, a* and three diphthong *ia, ua, iə* system, Bodman (1980:47)

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[86] See Baxter (1992:32-43;139-74) for a good summary of the historical development of this field.
[87] See the discussion in 3.5.2.

suggests that it simply represents an earlier stage than Li's Old Chinese. Bodman's implicit assumption of vowel-breaking between his and Li's system is confirmed by Baxter's explicit correlation (1980:8-9) of Li's *ia* with Bodman's *e* and of Li's *ua* with Bodman's *o*; Li's *iə* essentially gives *i* in Bodman's system[88] and, were Li to have reconstructed *uə*, it would have correlated with Baxter's *u*. Li does not reconstruct *uə* due to his observation that rounded syllables in such rhymes seem to be generally confined to coronal initials and codas which appear to have rounded *ə* to *uə*.[89] The conditioning environment is unclear and Baxter (1992:251-5) resolves the problem by noting that before coronal codas, syllables with coronal initials are in complementary distribution with syllables with velar initials in their Middle Chinese reflexes such that he is able to derive all of Li's rounded Middle Chinese cases from an *u* vowel and all of Li's *iə* cases from *ə*. Baxter's observation restores balance to Li's system due to Li (1974:264) having to reconstruct *ua* as a temporary measure to account for rounded vowels with coronal initials and codas to differentiate them from unrounded vowels in the same environments. However, on the basis of *Shijing* rhyming, Li rejects Yakhontov's proposal (1970:65), adopted by Baxter (1992:236-40), to treat it as *o*. It is likely that Li would also reject Baxter's treatment (1992:240-7) of his corresponding unrounded *ia* as *e* in the *Shijing*.

Baxter's reconstruction of separate rhyming categories in the *Shijing* represents the fundamental point of difference from Bodman's system on which it is based.[90] The statistical evidence presented by Baxter for his *e* and *o* rhymes, which he further extends to *i* and *u* to create an even distribution of vowels before final codas, is questioned by Pulleyblank (1994b:167) on the basis of the requirement for several special exceptions. In response to Yakhontov's proposals, Pulleyblank (1963:209) makes the alternative proposal that the rounding of *wa* to *o* and *wə* to *u* may rather be a feature of the *Shijing* dialect that had a tendency toward rounding but did not practice it exclusively. Baxter (1992:839) admits that this accounts for the evidence but counters that this requires a distinction of k[w]an and kwan to be made in the reconstruction corresponding to his k[w]an and kon. In Li's system this is distinguished as k[w]an and kuan in much the same way as Matisoff (2003:25) attempts to distinguish

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[88] It also occasionally correlates with Bodman's *ə* as will be discussed below.
[89] The plain vowels in Baxter's and Li's systems do not correlate before velars, including where Li reconstructs -g where Baxter has an open vowel; this is discussed further below in 3.2.3.
[90] See the discussion in Baxter (1992:255).

k^w- and *kw*- in his Tibeto-Burman reconstructions.[91] Consequently, while Baxter's new divisions of the *Shijing* rhymes on the basis of rounding and fronting are relatively well supported statistically, it is unlikely that this represents anything more than distinctive rhyming practices in the *Shijing*, perhaps influenced by idiosyncrasies of the *Shijing* dialect. Nevertheless, following Baxter's initial attempts (1994a), Matisoff (1995:36) is eager to associate his five vowel *i, u, e, o, a* Tibeto-Burman system with Baxter's six vowel Old Chinese system[92] where *ə* is assumed to have merged with *a* in Tibeto-Burman.[93] The fuzziness of the correlations, as similarly noted by Sagart (1995a:248), appears to have led Matisoff (2003:xii) to default back to Karlgren's (1957) system. Although Sagart (2006a:217-8) is justified in chastising Matisoff for reverting back to such an out-dated system in light of the significant advances in the field since Karlgren's time, it appears that, erroneous comparisons aside, the major stumbling block is a persistence of scholars in assuming that a triangular vowel system is somehow more natural.[94]

3.1.2 *Pulleyblank's Two Vowel System*

Treating Baxter's pure vowels as diphthongs in Li's system could be superficially viewed as a sleight-of-hand devoid of phonological significance to simply achieve a smaller vowel set. Yet, Li's system also has distributional difficulties whereby *i* only occurs before dentals or velars and *u* only before velars. By reconstructing palatal -*c*/-*ɲ* codas in addition to labiovelar -k^w/-$ŋ^w$ codas (1977-8:187-94),[95] Pulleyblank is able to remove the distributional anomalies in Li's system to reduce Li's four vowel Old Chinese system to just *ə* and *a*.[96] Pulleyblank accounts for Li's diphthongs *ia* and *iə* with a freely occurring medial -*j*-[97] to which, contrary to Li's evidence against its reconstruction (1974:238) and Pulleyblank's proposals for metathesis discussed above,

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[91] Pulleyblank (1977-8:200-2, 1993a:366-8) prefers to assume that the medial -*w*-, when not from an original labiovelar initial, occurred via the addition of dental suffixes to syllables ending in rounded glides causing metathesis of the glide with the vocalic nucleus. Although this seems to have occurred in certain cases, it is unlikely that an account for all cases of medial -*w*- may be made in this manner.

[92] Baxter actually writes *ə* as *i* which is carried through to Baxter (1994a:26); Baxter (1995), a published summary of which may be found in Matisoff (1995:36), reverts back to *ə*.

[93] See Benedict (1972a:183-4; 1973b:9) and the discussion in 5.1.2.

[94] This will be further discussed in 8.2.

[95] Pulleyblank also reconstructs uvular codas but more recently (1991a:44-51) replaces these with labiovelars to then replace the original labiovelars with labiopalatals; for the reasons outlined below these modifications will not be adopted in the system used here.

[96] The possibility of a *ə*/*a* vowel system for Old Chinese is first proposed in Pulleyblank (1963:207).

[97] Pulleyblank (1993a:370, 2004:153) suggests another cause of this may be a palatalising sibilant prefix as discussed under *Extinguish* (#50).

may now be added a freely-occurring medial -w- to account for Li's *ua* and by extension *uə*.[98] This leaves a *ə/a* vowel system with medial -j- and -w- that perfectly parallels the proposal for the development of Old Burmese as discussed in 2.1.4 and 2.3.1. Baxter (1994b:153-4) criticises Pulleyblank's assignation of the palatal and labial features to the surrounding segments rather than the vowels on typological grounds; comparative Tibeto-Burman evidence aside, his suggestion that a similar procedure could be applied to his system but is unwarranted, may be challenged by some of the distributional gaps in his system that will be discussed below.

3.2 *Codas*

The system for Old Chinese rhymes follows that of Pulleyblank (1977-8:202-3). Pulleyblank's more recent proposals for labiopalatal codas (1991a:47, 2004:150-9) which concomitantly remove uvulars from the system, albeit with some reshuffling of correspondences, are not adopted here for want of better evidence in light of the newly emerging evidence for uvular initials in Old Chinese and Sino-Tibetan.[99]

	Yin	Yang	Ru
I	侵 -əm	緝 -əp	
II	談 -am	盍 -ap	
III	微 -əl	文 -ən	術 -ət
IV (i)	歌 -al	元 -an	月 -at
(ii)			祭 -ats[100]
V	脂 -əj	真 -əɲ	質 -əc
VI	支 -aj	耕 -aɲ	錫 -ac
VII	之 -ə(ɰ)[101]	蒸 -əŋ	職 -ək
VIII	魚 -a(ɰ)	陽 -aŋ	鐸 -ak
IX	幽 -əw	冬 -əŋ^w	毒 -ək^w
X	侯 -aw	東 -aŋ^w	屋 -ak^w
XI	宵 -aʁ		藥 -aq

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[98] The distinction of medial -w- before labiovelar codas encounters the same problems as with Pulleyblank's medial -j- before palatal codas. This issue is beyond the scope of this paper but see the discussion under Extinguish (#50) for some preliminary observations. Medial -w- is not distinctive after bilabial initials in Old Chinese.

[99] See the discussion in 3.5.1 and 4.10.2.

[100] The *Shijing* rhymes suggest that suffixal -*s* after -*at* persisted longer than after other rhymes; see the discussion below.

[101] Pulleyblank actually reconstructs -ɣ but later (1995c:298) modifies the coda to -ɰ which may not always have been present; see the discussion below.

The reconstructions of *-m, -p, -n, -t, -k, -ŋ* are supported by Li (1974) and Baxter (1992); the other codas will be discussed below.

3.2.1 *Laterals*

The proposal for an Old Chinese *-l* coda comes from Schuessler (1974a:82-4) who notes *xiesheng*[102] and rhyming contacts with *-n* and Tibeto-Burman comparanda in *-l*. Developing his previous observations of Tibeto-Burman comparanda in *-l* (1962:215-6), Pulleyblank (1977-8:185-6) follows Schuessler to further propose that *-l* merged with *-j* very early on; this is preferable to Baxter's reconstruction of an original *-j* for which a rather arbitrary denasalisation of *-n* to *-j* is proposed to account for the *xiesheng* links with *-n* (1992:294;414). Regarding the *-n/-l* interchange, Pulleyblank (1993a:363) notes a difficulty in accounting for the Tibeto-Burman *-r* coda and makes the tentative suggestion that *-r* may have developed dialectically into Old Chinese *-n* or *-l*. This proposal mirrors one by Starostin (1989:338-41) although, like Baxter, he treats Pulleyblank's *-l* as *-j*.[103] Starostin's proposal is adopted by Baxter (1995:1) following his comment (1994b:156) that Sino-Tibetan comparanda in *-l* do not necessarily imply that the coda had not shifted to *-j* by the time of Old Chinese.[104] Baxter's remark is valid but the discussion in 5.2.2, that suggests a similar shift of *-l* to *-j* to have occurred in Northern Chin, certainly favours Pulleyblank's reconstruction which allows for a more even distribution of the Old Chinese *-j* coda as will be discussed below.

3.2.2 *Palatals*

In addition to where his *-j* corresponds to Pulleyblank's *-l*, Baxter reconstructs a third rhyme *-ij* that corresponds to Pulleyblank's *-əj* but then reconstructs an open vowel counterpart *-e* to correspond to Pulleyblank's *-aj*. Baxter (1992:292) wants to reconstruct *-e* to allow all his vowels to appear in syllable-final position but this requires him (1992:578-9) to apply a rule of *-j* insertion after *-e* to give Middle Chinese *-ej* (Pulleyblank's *-εj*). Pulleyblank (1993a:361-2) observes that

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[102] Phonologically related words sharing the same phonetic component in their graphic form.
[103] Interestingly Peiros' discussion (1998:215) of the distinction between *-l* and *-l* codas in the Sino-Tibetan system of Peiros & Starostin (1996) actually favours Pulleyblank's distinction of *-n* and *-l* rather than Starostin's *-n* and *-j*; see the discussion in 5.2.4.
[104] Baxter (2005b:9-21) further develops the evidence for this dialect shift of *-r* by locating the dialectal differences to specific regions

reconstructing an original *-j* coda would not require any arbitrary rules but that Baxter is constrained by theoretical considerations. Pulleyblank's proposal for a palatal series (1977-8:190; 1997:12-6) takes Hashimoto's proposal (1970:336-362) to reconstruct Middle Chinese palatal codas *-ɲ* and *-c* in the Late Middle Chinese 梗 *-ajŋ/k* rhyme group back to the Old Chinese level.[105] As Pulleyblank points out, this is a natural progression in light of Old Chinese *-aɲ* and *-ac* being the most common source of Middle Chinese 梗 *-ajŋ/k*; the lack of an 'inner' rhyme group (i.e. without a low *a* nucleus) corresponding to the 梗 rhyme is accounted for by the coronalisation of the codas from the rhymes *-əɲ* and *-əc*. Baxter (1992:422-5;434-7;451-2;491-500) reconstructs the palatal series as *-ij*, *-in*, *-it* and *-e*, *-eŋ*, *-ek* respectively which prompts Pulleyblank (1993a:369) to note the distributional lack of *-i*, *-iŋ*, *-ik* in Baxter's system. Baxter tentatively suggests (1992:563) that *-i* may have merged with *-ij*, and follows (1992:299;301) Li's proposal (1974:274) for a merger of *-iŋ* and *-in* by the time of the *Shijing* to further suggest a similar merger of *-ik* and *-it*. The distinction of *-i* and *-ij* as an artificial phonological recourse of historical linguists rather than a representation of any phonetic reality is discussed in 2.1.3.2 and the introduction to Chapter 5; the difficulty with Li's proposal is discussed by Pulleyblank (1982a:250-3).[106] Hashimoto's proposals for palatal codas combined with the Burmese evidence, cited by Pulleyblank (1977-8:195-6) and discussed in 2.1.3.3, makes Pulleyblank's proposal for a palatal series convincing.

3.2.3 *Velar Glides*

Pulleyblank's reconstruction of a possible glide *-ɰ* where Baxter reconstructs open vowels is a relic of the disfavoured voiced stop hypothesis essentially used by

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[105] Pulleyblank (1984a:119) treats these as Middle Chinese *-jŋ* and *-jk* rather than actual palatals on the basis (1977-8:188, 1979:29) that *-ɲ* and *-c* were retracted to velar articulations after the low *a* vowel. Pulleyblank (1991a:47) modifies his Old Chinese reconstructions of *-ɲ* and *-c* to *-ŋʲ* and *-kʲ* which is shown in 5.2.5 to account better for the Old Burmese and Northern Chin evidence. In the reconstructions used here, Pulleyblank's original *-ɲ* and *-c* will be retained for Old Chinese while *-ŋʲ* and *-kʲ* will be used for Sino-Tibetan; this represents more of a transcriptional convention than any phonological statement on the difference between the two.

[106] The word mɨŋ[III] 命 miajŋ[III] < *m-ˈraɲ[III] *fate n, command vt* with lɨŋ[III] 令 liajŋ[III] < *ˈraɲ[III] *command vt* as phonetic, rhymes as *m-ˈrəɲ[III] in the *Shijing*; Pulleyblank's *-aɲ* and *-əɲ* correspond to *-iŋ* and *-in* in Li's system which allows Li to suggest a sporadic and isolated dialectal shift of *-iŋ* to *-in*. Baxter's reconstruction of *-eŋ* for the former and *-in* for the latter forces him to assume that *-iŋ* > *-in* in the *Shijing* dialect but *-iŋ* > *-eŋ* in the dialect later represented by the *Qieyun*; this is not felicitous and contradicts the Tibeto-Burman evidence that he uses to suggest *-iŋ* > *-in* in both the dialect represented by the *Shijing* and the predecessor of the *Qieyun*.

scholars like Li to account for contacts between *ru* rhymes in *p*, *-t*, *-k* and their corresponding *yin* rhymes.[107] For Li (1974:249) this represents little more than a notation rather than an explanation but the solution is provided by Haudricourt (1954b:364) who, noting the *yin* rhymes are usually in tone III which he attributes to an *-s* suffix, proposes that the *-p/t/k* finals may have developed glide-like articulations, corresponding to the *yin* rhymes, under the influence of this suffix.[108] Pulleyblank (1962:216-221, 1973b:371) bolsters Haudricourt's proposal by providing specific transcriptional evidence for *-s* in words originally developed from a *-ts* cluster.[109] Pulleyblank (1977-8:186-7) justifies his retention of the glide after *ə* on the basis of Tai loanwords, for which Li (1945:341) believed the development of Old Chinese *-g* into the vowel *-u* was responsible, and (1995c:298) that the natural fronting of *-ɰ* to *-j* between Old Chinese and Middle Chinese avoids having to apply an arbitrary rule of *-j* insertion as Baxter (1992:578-9) is forced to assume; the evidence for *-ɰ* after *a* is less forthcoming, particularly in light of the open vowel *-a* in Tibeto-Burman, but he notes (1995c:298) occasional *xiesheng* and rhyming contacts with velars. Nevertheless, the fact that universally reconstructing *-ɰ* leaves Old Chinese with no open syllables makes Pulleyblank's suggestion (1995c:297-8) that it may simply represent a case of epenthesis used to make isolated syllables well-formed likely. In the Old Chinese reconstructions provided here, Pulleyblank's *-ɰ* is omitted for simplicity.

3.2.4 *Labiovelars*

The existence of labiovelars in Old Chinese is relatively uncontentious; the specificities are less so. Baxter's proposal (1992:302) for a single labiovelar stop affords it a very limited distribution and no nasal counterpart. Recognizing the issue, Baxter (1980:16) attempts to treat it as a *-w* coda followed by a glottal stop *-ʔ* which later becomes *-k*, but the evidence discussed below, that a glottal stop was the source of tone II, forces Baxter (1992:302) to reluctantly maintain this isolate. Li also

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[107] Li uses these voiced codas more as a functional notation than as an actual reconstruction. However, scholars like Gong (1995:57-9) attempt to assign a phonological reality to them. A detailed analysis of all the facets of the argument may be found in LaPolla (1994:135-154).

[108] Comparisons like 入 ȵip < *'nwəp *enter vi* and 內 nwəj[III] < *nwət[III] < **nwəp[III] *inside n* in Pulleyblank (1991a:59) show *-p*[III] *(-p-s)* to have merged with *-t*[III] *(-t-s)* well before the time of the *Shijing*.

[109] It is noted above that the *Shijing* rhyming shows *-s* to have persisted after *-t* longer than after other codas.

reconstructs $-ak^w$ but balances this out with $-ək^w$ in his system corresponding to Baxter's $-uk$. The discussion under 3.2.5 below shows Pulleyblank's reconstruction (1977-8:197-9) of $-aq$ for Li's and Baxter's $-ak^w$ to account better for the Middle Chinese reflexes;[110] this leaves Pulleyblank able to reconstruct $-aw$, $-aŋ^w$, $-ak$ for Baxter's $-o$, $-oŋ$, $-ok$ and similarly $-əw$, $-ək^w$, $-əŋ^w$ for Baxter's $-u$, $-uŋ$, $-uk$. Li's reconstruction of $-əg^w$, $-ək^w$, $-əŋ^w$ for the latter is unproblematic[111] but his reconstruction of $-u$, $-uŋ$, $-uk$ for the former needs to be addressed. Pulleyblank (1977-8:195, 1979:30) notes that, in spite of its Middle Chinese reflexes, there is strong internal and external evidence that Li's $-u$, $-uŋ$, $-uk$ corresponds to a low vowel in Old Chinese. The similar development of both in Middle Chinese is corroborated by the evidence in 5.2.6 suggesting that $-əw$, $-ək^w$, $-əŋ^w$ and $-aw$, $-ak^w$, $-aŋ^w$ have merged in Burmese and Northern Chin.

3.2.5 *Uvulars*

The benefits of Pulleyblank's reconstruction (1977-8:197-9) of $-aq$ and $-aʁ$ where Baxter has $-ak^w$ and $-aw$ are two-fold: it accounts for the lack of a typologically unusual uvular nasal that corresponds to a missing $-aŋ^w$ in Baxter's system; it better accounts for the variations in labiality of the Middle Chinese reflexes which are usually unrounded when derived from $-aq$[112] but always rounded when derived from $-aʁ$ for which Pulleyblank (1977-8:199) suggests a development of $-aʁ > -aβ > -aw$.[113] Pulleyblank's concerns (1982b:209) that his inability to find solid external evidence for uvular initials makes it difficult to reconstruct them as codas with any certainty,[114]

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[110] Pulleyblank (1977-8:197-9) reconstructs $-aʁ$ for the corresponding *yin* glide treated by Baxter as $-aw$ and Li as $-ag^w$ which will be further discussed below.

[111] The voiced labiovelar $-g^w$ is based on the voiced coda hypothesis discussed in 3.2.3.

[112] Baxter (1992:533) suggests the exceptional cases where a $-wk$ coda as opposed to a $-k$ coda develops in Middle Chinese may be due to dialect mixture where delabialisation of his $-k^w$ did not occur. If the rhyme is to be reconstructed with an uvular $-aq$ then it must conversely be assumed that labialialisation occurred in these dialects; this is perhaps associated with the labialisation attested in the corresponding *yin* rhyme although further investigation may show Sagart's reconstruction (2007:1-2) of labio-uvulars in initial position to have a bearing on this if they can correspondingly occur in coda position.

[113] Although the intermediary form $-aβ$ is supported by Pulleyblank's suggestion (1963:206) that it is attested in foreign transcriptions, his phonological explanation for the change $-aʁ > -aβ > -aw$ on the basis of the occasional change of Middle English $-χ$ to modern English $-f$ ignores the fact that the labiodentalisation was restricted in English to words with a preceding labial u vowel. Nevertheless, an association of labialisation with back articulations may be found in the change in Cockney English of the velarised/pharyngealised $-ɫ$ into $-w$.

[114] Pulleyblank (1991a:47) abandons his uvular hypothesis to instead adopt Baxter's reconstruction of $-aw$ and $-ak^w$ and concomitantly replaces his original $-aw$, $-aŋ^w$, $-ak^w$ with $-aɥ$, $-aŋ^ɥ$, $-ak^ɥ$. As Vovin (1995:324-5) observes, when combined with the plain velars and labiovelars and palatovelars, this

may now be allayed by Sagart's proposal (2007), to be discussed below, for uvular initials in Old Chinese.

3.3 *Tonality*

The three tone system of Old Chinese, with tones I and II as basic and tone III as derived,[115] corresponds to the Old Burmese and Northern Chin evidence discussed in 2.4.1 and the introduction to Chapter 6 respectively.

3.3.1 *Tone III from -s*

The origin of tone III in suffixal -*s* is proposed by Haudricourt (1954b:346) on the basis of his observations of similar developments in Vietnamese (1954a:70-78) and is relatively uncontroversial.[116]

As a derived tone, Downer (1959:267-9) distinguishes several categories for tone III in Classical Chinese. His inability to isolate a specific grammatical function leads him to propose (1959:262) that any regularity attested in his categories may be fortuitous with derived forms essentially being created on a need-by-need basis; he distinguishes this from the inflectional system of Indo-European. The scarcity of forms in many of Downer's latter categories allows Mei (1980:434-9) to reduce the categories to three predominant ones: verbs to nouns; nouns to verbs; endoactive verbs to exoactive verbs. He further proposes (1980:438) that the change of nouns to verbs may be attributed to analogy at a later stage. Sagart (1999b:133) appears to favour Mei's approach but Schuessler (1985) uses pre-classical evidence from Early-Zhou Chinese to question Mei's separation of Old Chinese into distinct layers; he follows Downer's proposal that his categories are coincidental amalgams (1985:349) to suggest that they obscure an underlying unilateral inversion of attention flow underlying all these tone III derivations (1985:361). The desirability of Schuessler's proposal is that it attributes a single function to the -*s* suffix believed to have triggered the derivations; the

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creates a four-way distinction of velars in a system which, albeit perfectly distributed symmetrically, is not well distributed articulatorilly. With the recent reinvigoration of the reality of uvulars in Old Chinese, it seems wiser to retain Pulleyblank's original proposal.

[115] The late development of the Mandarin Chinese tone Ib category from different manner features of initials is discussed in Pulleyblank (1978a:192).

[116] Benedict's proposal (1972b:27) to treat it as a sandhi phenomenon is discussed in footnote 323. Pulleyblank's modification (1995a:160, 1995b:30) of -*s* to -*ʃ* is not adopted here due to it being predicated on a reconstruction of Old Chinese initials not adopted here; see the discussion of initials below.

difficulty lies in its counterintuitive treatment of -*s* as an intransitiviser (1980:349) with causativisation being curiously treated as something "which flows naturally from its intransitive character" (1980:354). 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 by it. Yet, whatever the significance of analogy in tone III derivations may have been,[117] several examples in the Northern Chin data (e.g. *pol[I] *group n, associate vi* only retaining its form 2 derivation *pol[III] for the verb in Tedim 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. The significance of this is that the role of tone III as a nominaliser and transitiviser/causativiser of verbs in Chinese corresponds perfectly with its identical functions in Northern Chin and Burmese.

3.3.2 *Tone II from -ʔ*

The source of Chinese tone II in a glottal stop -ʔ is first suggested by Pulleyblank (1962:225) via analogy with Haudricourt's proposal for Vietnamese (1954a:80-1). Mei (1970:88-97) develops Pulleyblank's proposal by providing three specific sources of evidence: preservation of glottality in some coastal, predominantly Min, Chinese dialects; Buddhist transcriptions and tonal commentaries; Sino-Vietnamese loans. The faint glottalic nature of tone II in open vowels in Zo is noted in footnote 42 and provides some additional confirmatory evidence to that presented by Mei; the apparent contradiction of Burmese creaky tone III being associated with Chinese tone II rather than III was discussed in 2.4.1. Schuessler (2007:48) suggests an occasional association between tone II and enodactive verbs or nouns; the very limited evidence that tone II may sometimes have been suffixal in origin like -*s* for tone III is discussed in Sagart (1999b:133-4). A few comparative sets showing similar alternations in Northern Chin and Old Burmese are discussed in 6.4.

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[117] This may be the source of the sporadic etyma in Downer's latter categories.

3.4 *Type A and B Syllables*

The syllables of Middle Chinese are classified in the *Yunjing* via a system of four divisions; the third of these represents approximately half the lexicon and is generally distinguished from the others by its palatal *fanqie* spellers.[118] Noting the inherent improbability of Karlgren's proposal (1954:248) that in Old Chinese all of these syllables could have had a medial -*j*-, Starostin (1989:328-9;516-7) proposes a prosodic distinction whereby short vowels develop into these Type B syllables in contrast to long vowels in Type A.[119] Starostin bases this proposal on the surface length distinctions in Mizo with which he believes there to be a significant correlation. Baxter, who initially follows Karlgren in reconstructing medial -*j*- (1992:269), adopts Starostin's proposal (1995:1),[120] but Pulleyblank (1994a:91; 2001:32) rejects it on phonological and statistical grounds. Interestingly, Starostin's proposal represents the inverse of a former suggestion by Pulleyblank (1962:98-100) that long vowels may be the source of Type B syllables. Pulleyblank is unable to find any supporting evidence for this, but later (1994a:91-3, 2001:27), following Stern's proposal (1963:228-9) for syllabic peaking in Sizang, discussed in 1.4, suggests that syllabic peaking on the vocalic nucleus, that concomitantly surfaces as vowel length in Sizang, corresponds with Type B syllables. Phonologically, Pulleyblank's proposal that type B syllables with falling accents, or syllabic peaking on the vowel nucleus, develop the vowel *i* has much to favour it; his Early Middle Chinese distinction between syllables derived from Type A with a plain *ə* or *a* nucleus and those from Type B with a high vowel nucleus *i, ɨ, u* that either replace *ə* or form a diphthong with *a* (1973a:118-9) is supported by the development of *ɨ* into *i* and *u* when occurring in a palatalizing or labializing conditioning environment (1994a:79-81). Statistically Pulleyblank's proposal is less sound: Pulleyblank only lists four comparanda, limited to numerals, of which *eight* and *nine* may be discounted due to Stern's faulty analysis of diphthongs, as well as *six* due to Stern's mis-transcription (1963:240) of it with penultimate stress.[121] Furthermore, Pulleyblank's proposal is essentially the inverse of Starostin's

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[118] Palatal spellers also occur in the fourth division in what are known as *chongniu* characters; see the discussion in Pulleyblank (1984a:173-4).

[119] The A/B terminology follows Pulleyblank (1994a:73).

[120] Baxter's later rejection (2005a:41, 2005b:7) of this is discussed below.

[121] The short vowel in the data-set here is confirmed in Table A of Luce (1962a).

proposal, and it is unlikely that all of Starostin's comparisons, flawed as several may be, are wrong.

Although surface vowel length in Northern Chin is generally consistent, it seems that Matisoff's assumption (2007:440) that it is unlikely to be related to the Old Chinese Type A/B distinction is correct. Sagart (2006a:213), who is less dismissive of the possibility but aware of the apparent exceptions, more recently (2007:1), and along with Baxter (2005a:41, 2005b:7), uses a doubled initial consonant to mark Type A syllables; this is premised on Norman's proposal that the distinction developed from a contrast involving initials (1994:403-5).[122] A more damning piece of counterevidence against Starostin's and Pulleyblank's proposals is found in 6.1 where it is shown that, bar a few exceptional forms, there is an intrinsic association between tone II, specifically in its modification as IIb, and long vowels with obstruent codas. 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 tone; Lehman's logical counter (1978:720) that the argument could be inverted to treat syllabic shortness as the generator of reduced tone in checked syllables is relevant only if one disregards Weidert's latter observation (1975:11) that long checked syllables outside of tone IIb are mostly phonoaesthetic in origin.[123] The fact that Weidert's reductionism cannot account for vowel length in syllables with sonorant codas suggests that any association with surface vowel length before obstruent codas may only be superficial and that the actual source of contrastive surface vowel length must lie elsewhere; this casts doubt on any association with Chinese Type A or B syllables which are not restricted in this manner.

3.5 *Initials*

3.5.1 *Pure Initials*

The reconstruction of Old Chinese initials is incredibly complex and still not well-understood. To the system of Sagart (1999b:25-42), which is generally adopted here,

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[122] Norman actually proposes pharyngealisation as a blocker of palatalisation in Type A syllables. See Pulleyblank (1996a) for a response which criticises Norman's rather contradictory assumption that retroflexion could also block palatalisation in Type A syllables but not in Type B syllables.
[123] Notably words with diphthongs and open rhymes develop a tone II reflex in form 2 contrary to their expected tone III reflex due to their inherent length; see the discussion in 7.1.

Sagart's further proposals (2006a:212; 2007) for uvulars are added in spite of Matisoff's concerns (2007:439) regarding their reality in Sino-Tibetan.[124] Sagart's reconstruction of uvulars accounts for *xiesheng* alternations between Middle Chinese ʔ-, x-, ɣ-[125], j- and their common occurrence in *xiesheng* series with velars.[126] The alternation of velars with ʔ- was actually one of Pulleyblank's tentative suggestions (1977-8:198) for evidence of uvular initials in Old Chinese. In the table below, Sagart's $ts^{(h)}$- and dz- are treated as $c^{(h)}$- and ɟ-:

k-	k^h-	g-	ŋ-	^{h}ŋ-	x-[127]
k^w-	k^{wh}-	g^w-	$ŋ^w$-	$^hŋ^w$-	
c-	c^h-	ɟ-			
t-	t^h-	d-	n-	^hn-	
p-	p^h-	b-	m-	^hm-	
r-	^hr-				
l-	^hl-				
w-	^hw-				
s-					
ʔ-					
$ʔ^w$-					
q-	q^h-	ɢ-			
q^w-	q^{hw}-	$ɢ^w$-			

Noticeably lacking from the above table are Old Chinese ɲ- and j-: a possible lack of ɲ- in Old Burmese was suggested in 2.3.1.4 which, although failing to account for the deficiency, makes it typologically less unusual; Sagart's proposal (1993:244-5) that Middle Chinese j- seems to always be a reflex of Old Chinese l- may, following his uvular proposal, be extended to ɢ- in type B syllables. His further suggestion (1995a:251, 1999b:29) that Tibeto-Burman evidence in support of Old Chinese j-stems from loanwords reflecting a secondarily derived j- is contradicted by Schuessler (2007:96-7) who, following Baxter's original proposal (1992:202), prefers to reconstruct Old Chinese j- which he believes remained unchanged in Tibeto-Burman. Sagart (1993:244-5) does not dismiss this idea but points out that positive evidence is

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[124] See the discussion in 4.10.2.

[125] Sagart's transcription of this as *h*- follows Baxter (1992:58) who notes that it actually has a voiced articulation of ɦ- or ɣ-.

[126] Sagart (2007:3) assumes that velars developed from uvulars when preceded by a lost iambic prefix of some kind.

[127] The lack of a voiced counterpart to x- is discussed in Sagart's response (1999b:30) to the proposals in Baxter (1992:209-10). Schuessler (2007) follows Pulleyblank's original proposal (1962:143) to reconstruct *h*-, although Pulleyblank (1991a:57-8) prefers x-. Unfortunately no good Tibeto-Burman comparative sets have been found.

required to prove it, and Schuessler (2007:124) concedes that establishing a clear difference between his *l-* and *j-* is somewhat elusive. The discussion in 4.8.2 and the loanwords in 6.5.4 show no specific evidence for reconstructing Sino-Tibetan **j-*.

3.5.2 *Prefixes*

Sagart (1999b:63-110) makes a detailed investigation into Old Chinese prefixes. Ting (2002a:200) suggests that only prefix *s-* and *k-* are relatively unproblematic; to this may be added the special case of *r-*, to be discussed below, and a bilabial prefix of some kind which is supported by the Burmese evidence in 2.3.2. Examples like mɪŋ[III] 命 miajŋ[III] < *m-'raɲ[III] *fate n, command vt* and lɪŋ[III] 令 liajŋ[III] < *'raɲ[III] *command vt* show good evidence for a bilabial prefix, although, as is discussed in footnote 81, distinguishing between obstruent and nasal bilabial prefixes is not a simple matter. It should also be noted that examples of velar and bilabial prefixation appear to be mainly limited to liquid initials; this is presumably a reflection of prefixes being able to form clusters with liquid initials in contrast to simply being dropped before other initials. The cases of *s-* and *r-* are somewhat different in this respect and will be discussed along with *k-* in more detail below:

3.5.2.1 *Prefixal k-*

Sagart's proposal (1999b:124-130) to differentiate prefixes via close/fused and loose/iambic juncture provides a neat way of resolving some intractable problems with initials.[128] This allows him to suggest the following developments between Old and Middle Chinese:[129] **kl-* / **kr-* > *k-*; **k-l* / **k-r-* > *l-*.[130] Nevertheless, Ting's reservations (2002a:195-199) regarding the implications this has for the monosyllabicity of Chinese characters as regards *Shijing* metrics cannot be taken lightly. That Old Chinese most likely had pre-syllables is not at issue but, to allay Ting (2002b:404-8) who is not persuaded by Sagart's further proposals (2002:392-6), it is certainly possible that this colloquial feature of the language was dropped in the

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[128] Sagart's proposal is bolstered by Norman's suggestion (1986:383-4) that pre-syllables may have affected the development of Min Chinese initials which Sagart (1999b:26) believes may be directly correlated with iambic prefixation.

[129] Sagart distinguishes these as *k-l/r* and *kə-l/r-* in order to distinguish cases of infixal *-r-* which he treats as *kr-*; in the system here, Sagart's infixal *-r-* is treated as a prefix and the transcriptions *kl-/kr-* and *k-l-/k-r-* will be used to correlate with the Northern Chinese evidence discussed in 4.2.

[130] He further suggests (1999b:129) that iambic prefixes could be lost early before *l-* in which case the Middle Chinese reflex would represent the ordinary development of Old Chinese *l-* into Middle Chinese *d-/j-*.

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Shijing such that the words were indeed treated as monosyllables; this of course would be isolated to such literary works and would not affect the ability of these pre-syllables to interact with the root initial as the language developed. The modern dialectal examples discussed in Yang (1977-8:292-4) and Sagart's focus (2001:127-34) on *k-* make it tempting to regard Sagart's iambic proposal as being restricted to this single prefix; this is further supported by the Northern Chin evidence discussed in 4.2.

3.5.2.2 *Prefixal r-*

Old Chinese allows medial *-r-* to occur after all consonant types. In the development into Middle Chinese, Pulleyblank (1965c:205, 1991b:12-3) notes that this caused retroflexion of coronal initials and in Type A syllables gave diphthongs with *i* after the vowel nucleus. Benedict (1987:30-1) questions the *-r-* hypothesis on the basis that it cannot be correlated with Tibeto-Burman evidence where medial *-r-* has a much more restricted distribution. Coblin (1986:13) introduces a notational distinction between Sino-Tibetan *-r-* and *-r̂-*: the former is used when both Old Chinese and Tibeto-Burman reflect the medial; the latter is used when only Old Chinese reflects it. A lack of phonological reality means Coblin's notation provides an account but no explanation for the issue which leads Benedict (1988b:18) to note Coblin's distinction but to refrain from making his position clear. In response to the criticisms by Benedict (1987:30-1), Baxter (1994a:26) notes that Old Chinese medial *-r-* has a morphological function which may have proliferated via analogy and it may correspond to other Tibeto-Burman phonemes as well as *-r-*. Evidence for a morphological function is proposed by Pulleyblank (1973a:118) and is expanded upon by Sagart (1999b:111-20). Pulleyblank further proposes that Old Chinese medial *-r-* may correspond to a prefix *r-*, and Schuessler (2007:84) suggests that the Written Tibetan prefixes *g/d-* and sometimes *s-* seem to correspond to Old Chinese medial *-r-*;[131] the dropping of prefixes would further contribute to the paucity of examples of medial *-r-* in Tibeto-Burman.[132]

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[131] This is a development of an original proposal by Schuessler (1974b:189-91) that complex prefixal clusters of two or more elements in Written Tibetan provoked the loss of medial *r*; a broader scan of the Written Tibetan evidence suggests this not to be the case.

[132] This of course rekindles the discussion over whether obstruent prefixes were originally voiced as a literal interpretation of the Written Tibetan orthography would suggest and Matisoff (1972a:33-7;55-6) would like to suppose in order to account for occasional unexpected tonal developments in Loloish, or whether they were voiceless as Bodman (1980:73) notes the Old Chinese evidence to suggest.

3.5.2.3 *Prefixal s- versus Sagart's N- and Pulleyblank's ɡ-*

In 2.4.2 and 7.4 it is shown that aspiration via prefixal *s-* made intransitive verbs transitive in Northern Chin and Old Burmese. Pulleyblank (1973a:117-8) and Sagart (1999b:70-1) note a few cases of transitivisation in Old Chinese via a prefixal *s-* but, following Pulleyblank's observations (1973a:114-6), it conversely appears that Chinese more commonly had a voicing prefix that made transitive verbs intransitive. Sagart (1999b:63-73) suggests that, rather than causing aspiration, an *s-* prefix in Old Chinese appears to give distinctive sibilant reflexes in Middle Chinese. Sagart's proposal is well-founded but, excluding the case of sɿ$^{\text{III}}$ 寺 zɿ$^{\text{III}}$ < *'s-də$^{\text{III}}$ *servant n* and ṣɿ$^{\text{III}}$ 侍 dʑi$^{\text{III}}$ < *'də$^{\text{III}}$ *accompany, wait upon vt* that supports his proposal for nominalisation via *s-* prefixation, there is very little solid evidence of *s-* prefixation before voiced obstruents. This creates an interesting case of complementary distribution whereby, the examples of a transitivising *s-* prefix involve sonorant initials while the examples of an intransitivising voicing prefix in Pulleyblank (1973a:114) and Sagart (1999b:75) involve obstruent initials.

Pulleyblank's proposal (1986:9-10) to reconstruct a voicing prefix *ɡ-* that correlates with the Burmese nominalising *a$^{\text{III}}$-* [ə-] *ɜ̃ə-* prefix reduces any common ground with the Northern Chin and Burmese prefixal *s-* whose purely transitivising function has, unlike suffixal *-s*, no nominalising function. Alternatively, Sagart (1999b:77, 2003:759, 2006b:64) proposes an unspecified nasal voicing prefix *N-* on the basis that Chinese loanwords in Miao-Yao occur with pre-nasalised stops which, in light of Miao-Yao having a series of voiced stops, must imply that the Chinese stops were pre-nasalised at the time of borrowing. Sagart's evidence for the existence of Chinese pre-nasalised stops at some stage in its development is incontrovertible, yet they were perhaps not always of this nature. Superficially Luce's proposals (1962a:30, 1962b, 1985:II:70-87) for a pre-nasalised velar $^{\eta}$*g-* in Thado, Zo and Tedim, as discussed in 1.5.2, seems to confirm this original nasal prefix. However the morphological alternations in Thado, Zo and Tedim occur between *k-* and *x-* (< *k^{h}-*) rather than *k-* and $^{\eta}$*g-*, and furthermore this pre-nasalisation is only attested with the velar *g-* and not with *d-* or *b-*. According to Ohala (1983:200), pre-nasalisation of stops often develops in languages as a means to maintain voicing and particularly relevant to the Northern

Chin evidence is Ohala's observation (1983:195;199) that the further back in the mouth a stop is made, the harder it is for it to accommodate voicing. Consequently Sagart's nasal voicing prefix appears to fare no better than Pulleyblank's proposal.

The idea of a possible association between voiced intransitives alternating with voiceless transitives is originally made by Benedict (1972a:124-5) who notes several examples in Tibeto-Burman languages which he suggests may be somehow associated with the Lolo-Burmese alternations assumed to be derived from a causative *s-* prefix. Sagart (2006b:66) counters that the lack of evidence in Lolo-Burmese for the voicing alternation is due to it already having pre-nasalised initials. However, if Matisoff's reconstruction (1972a:13-4) of the Lolo-Burmese initials is correct,[133] then the alternation of plain initialled intransitives and aspirated initialled transitives in Old Burmese actually stems from a Lolo-Burmese alternation of *b-* and *s-b-* as the Old Chinese evidence would suggest. Further research is required but the identical morphological patterning of Northern Chin, Old Burmese and Old Chinese makes the hypothesis that Old Chinese voiced stops became voiceless stops when preceded by an *s-* prefix distinctly feasible.

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[133] Matisoff's revision of his previous Lolo-Burmese voiced initials (1968:887-8) to pre-nasalised initials (1972a:15) may perhaps be open to the same criticism as Sagart's Old Chinese pre-nasalised initials but this is beyond the scope of this paper.

Chapter 4: Northern Chin Initials

Northern Chin has a three-way distinction of voiceless, voiceless aspirated and voiced obstruents. Accomodating this into Benedict's proposal (1972a:17-8;20-1) for a two-way voicing distinction in Tibeto-Burman is somewhat problematic. Miller (1974:196-7;200) criticises Benedict due to his rationale not being explicit[134] and Pulleyblank (2000:38) notes a distinction around aspiration to be equally well supported. At the other extreme, Starostin (1989:50-1;61-3, 1995:227) suggests a four-way distinction of voicing and aspiration in Sino-Tibetan on the basis of Norman's proposals (1973) for Min Chinese. Starostin's proposal is adopted in Peiros & Starostin (1996) but Peiros (1998:215) says it requires further confirmation. Sagart (1999b:24) questions the validity of Starostin's supportive evidence to propose (1984:97, 1999b:25) that the distinctive aspiration of voiced obstruents in Min developed from a sandhi triggered originally by differential phrasal stress placement. Sagart's explanation seems much more plausible and leaves a three-way distinction in Old Chinese, with aspiration only occurring with voiceless obstruents, that parallels Northern Chin. Although aspiration, whether original or conditioned by an s-prefix,[135] and voicing, with Old Burmese devoicing voiced initials and aspirating plain initials, is fairly regular, the miscorrelation of voicing and aspiration with verbal transitivity, discussed in 3.5.2.3, makes specific correlations difficult to identify. The situation with distinctive aspiration of sonorants is even less regular and no attempt is made to disambiguate them here. Unfortunately little more can be said at this stage except perhaps invoking Matisoff's defensive response (1975:165-6) to Miller that the complexity of the system with the loss of many original prefixes, which Peiros (1998:215) readily admits his and Starostin's system does not adequately address, precludes any definitive statements as yet.

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[134] Benedict suggests that aspiration is conditioned by a voiceless obstruent being unprefixed in initial position.

[135] Contrary to Benedict's suggestion (1972a:106) that it may trigger aspiration like the causative s-prefix, the appearance of the animal prefix sə- before words with aspirated and unaspirated initials in Northern Chin shows this not to be the case. Benedict's proposal to derive it from a reduced form of the Tibeto-Burman root for Northern Chin *sa" *meat n* is confirmed by the clear association of the avian prefix və- with *wa" *bird n* in Northern Chin. In this regard, Luce's suggestion (1959a:30) that these represent later developments in Tibeto-Burman languages not to be reconstructed in the original proto-system seems correct.

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*k-	k-	k-	k-	k-	k-	k-
*kʰ-	kʰ-	kʰ-	x-	x-	x-	kʰ-
*ŋ-	ŋ-	ŋ-	ŋ-	ŋ-	ŋ-	ŋ-
*ʰŋ-	ʰŋ-	ʰŋ-	ŋ-	ŋ-	ŋ-	ŋ-

The attestation of *b-* and *d-* in Northern Chin leads Ohno (1965:16-7) to suggest that it must be possible on distributional grounds to reconstruct an original *g-* phoneme but that the actual processes are still unclear. It is tempting to assume that *g-* shifted to ɣ- as it did between Old and Middle Chinese[136] such that, on the basis of the Southern Chin reflexes of *r-* as ɣ-, Sino-Tibetan *g-* and *r-* simply merged. While this would be possible for the four more northern languages, in Mizo and Zahau this would assume a circular sound change of *r- > ɣ- > r-* where, even if the original articulation is assumed to be ɣ-, a change of ɣ- > r- is contrary to the standard shift of coronal *r-* to a posterior location rather than vice-versa.[137] The most likely solution is that original *g-* simply devoiced to *k-* in Northern Chin; the evidence for this comes from the evolution of the velar articulations of *r-*, discussed in 4.3, where the tendency for the velar to lose voicing has led to Tedim and Sizang using the recourse of nasalisation to prevent the change. The explanation as to why Tedim and Sizang did not adopt nasalisation to prevent the devoicing of the original *g-* as they appear to be doing with the new *g-* simply reflects different linguistic behaviour at different time periods. In the more northern languages it seems likely that the shift of *g-* to *k-* would favour the shift of ɣ/ʁ- *(< r-)* to *g-* due to this now being an available slot in the phonemic inventory:

ST	NC	OB	OC
*k-	k-	kʰ- / k-	k- / g-
*kʰ-	kʰ-	kʰ-	kʰ- / k-
*g-	k- (< *g-)	k-	g-
*⁽ʰ⁾ŋ-	⁽ʰ⁾ŋ-	⁽ʰ⁾ŋ-	⁽ʰ⁾ŋ-

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[136] This refers to Type A syllables; in Type B syllables it remained as *g-*.
[137] See Chambers & Trudgill (1980:187-9).

[#1]   **Bitter**

[M]   *ka (2003:451)
[P&S] *gʰaː (1996:#2039)

[NC]   *kʰaᴵᴵ *bitter vi*

A semantic association with *kʰaᴵᴵᴵ *bile n* is supported in Matisoff (2004:357-8) and discussed further in 7.3.

[OB]   kʰaᴵᴵ əˀˀ kʰaᴵᴵ *bitter vi*

[OC]   kʰuᴵᴵ 苦 kʰɔᴵᴵ < *kʰaᴵᴵ *bitter vi*

Matisoff follows Benedict (1972a:158;165) in reconstructing an -*n* suffix to compare gan¹ 肝 kan¹ *liver n*. Miller (1974:197-8) questions this association both on the phonological requirement for an arbitrary -*n* suffix as well as on the semantic grounds that *liver n* has no semantic link with *bitter vi*. The areal semantic associations of *liver n* are shown to be either with *heart n* by Wilkins (1996:284) or with *bile n* by Matisoff (2004:357-8). Although Matisoff (2003:306) suggests an association with *bitter vi*, discussed under *Liver* (#86), there are no phonological grounds for setting up such a comparison here.

[#2]   **Barking-Deer**

[M]   *kəj (2003:189)
[P&S] *g⁽ʰ⁾ij (1996:#2313)

[NC]   *kʰïⁱ *barking-deer n*

[OB]   ʤï¹ ҽᴙ / ၆ϭϩ kʰïjⁱ *barking-deer n*[138]

Shafer (1952:148) provides a good individual Mon-Khmer link but the source is most likely Tibeto-Burman due to other Mon-Khmer languages, noted by Shafer (1952:115) and Shorto (2006:461;489), reflecting a separate root.[139]

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[138] Not attested in the inscriptions.
[139] Benedict (1972a:116) compares the segmentally homophonous first syllable of ʧʰeɪⁿɵiʔ ҽᴙɿϽϭ kʰïjⁿsac *leopard n*, in which the latter syllable means *leopard n* by itself, with Mizo kej¹ *tiger n*, but

Matisoff (2003:145-6) suggests a clear case in Lolo-Burmese for a distinction between the cluster *kr-* and prefixed *k-r-*. An attempt at such a distinction in Sino-Tibetan appears to be made by Peiros & Starostin (1996) for Mizo *t$^{(h)}$-* but generally *kr-* rather than *k-r-* prevails.[140] A more useful comparison may be found in their proposal (1996:III.iii) to reconstruct Northern Chin *kl-* as a unit phoneme *ƛ-* in Sino-Tibetan.[141] Although Peiros (1998:215) maintains the lateral affricate in Sino-Tibetan, Starostin (2004:64) more recently revises it to *T-l-*, with *T-* generally being a morphological prefix of some kind that in most cases may be treated as *k-*,[142] due to confusion between *t^{l}-* and *l-* in their Mizo reflexes. This brings Peiros & Starostin's system more in line with that of Benedict and Matisoff where only one lateral initial *l-* is reconstructed and allows for the following observations: of the twenty-five cases of Mizo *t^{l}-*, nineteen are derived from *T-l-*, four from *l-*, two from *kl-*; of the twenty-four cases of Mizo *t^{lh}-*, nineteen are derived from *l-* of which two have possible *k-* prefixes, four from *T-l-*, one from *g^{h}l-*. In the latter case, the fact that Peiros & Starostin do not reconstruct aspirated/voiceless sonorants in Sino-Tibetan accounts for the predominance of *l-* with Mizo *t^{lh}-* generally seeming to be tacitly attributed to some kind of prefixal element before the lateral. The distinction between cluster initials and prefixed initials seems to be an unsuccessful attempt to distinguish between reflexes in other languages always showing evidence for a cluster in the former and those only sporadically so in the latter of which the following two cases are good examples:[143]

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neither the rhyme nor tone correspond and the syllable also occurs in the Arakanese word t^{h}eɪ^{n}t^{h}ooʰt^{h}eɪ^{n}t^{h}aˡ ဆွဲၐၞ္ဆွဲးၐၾ k^{h}ɨj^{n}t^{h}ɨw^{n}k^{h}ɨj^{n}t^{h}aˡ *long-armed ape n.*

[140] Excluding eleven cases simply reconstructed with *r-* with no comment regarding a prefixal or cluster and one irregular root, twenty of the twenty-two cases are derived from clusters while two are assigned prefixal origins.

[141] The proposal stems back to Starostin's division (1989:217-220, 1995:227) of Old Chinese *xiesheng* series with laterals into *l-*, *^{h}l-* and *ƛ-*, *ƛ^{h}-*, *ʟ-*, *ʟ^{h}-* on the basis that, in spite of many commonalities and occasional mixing, Middle Chinese sibilant reflexes are confined to the former and retroflexes to the latter. Sagart (1999b:36-40) shows such a division to be statistically unsound and notes that prefixal/infixal *r-/-r-* and prefixal *s-* can adequately account for any such tendencies.

[142] Other cases of *T-l-*, which mostly correspond to Starostin's Old Chinese lateral affricates, may generally be treated as *l-* unless a prefix, like *s-* or *r-* in Old Chinese, is warranted from other daughter languages.

[143] Perhaps also of note here are the following: *(k)rialˡ *stripe v* for which Mizo and Zahau suggest an original *kr-* while Thado, Zo, Tedim and Sizang suggest *r-*; *kˡɪak^{IIb} *snap vi* and *k^{hl}ɪak^{IIb} *snap vt* for which Zahau suggests *k$^{(h)}$-* rather than *k$^{(h)}$l-*.

[#3]   **Wind**

[M]   *g-ləj (2003:192)
[P&S] *lij (1996:#1761)

[NC]   *kʰliˈ *wind n*

[OB]   leɪˈ လေ / လိုꩻ လိjˈ *air, breeze, wind n*

[#4]   **Moon**

[M]   *s/g-la (2005:10)
[P&S] *s-la (1996:#1684)

[NC]   *kʰlaᴵᴵᴵ *moon n*

[OB]   laᴵᴵᴵ လ laᴵᴵᴵ *moon n*

[OC]   ɕiᴵᴵᴵ 夕 ziajk < *s-ˈla-k *evening n*

The comparison is from Sagart (1999b:160) although no account is made for
the velar coda. The word is related to ieᴵᴵᴵ 夜 jiaᴵᴵᴵ < *ˈlakᴵᴵᴵ *night n* which
Takashima (2004:1-5) shows to be sometimes written with the character iᴵᴵᴵ 亦
jiajk < *ˈlak *also* in the earliest inscriptions.[144] The word ɕiᴵᴵᴵ 夕 ziajk < *s-ˈlak
evening n is attested in the earliest inscriptions as 𝒟 in contrast to 𝒟 for yɛᴵᴵᴵ
月 ŋuat *moon n,* but both forms very soon become interchangeable.[145] The
parallelism with the Old Chinese velar suffix in ȵiᴵᴵᴵ 日 ȵit < *ˈnəc < **ˈnəjˈ-k
sun, day n under *Sun* (#40) suggests the superfluous -*k* suffix may be
connected with its use as a temporal period associated with its origin as a
celestial object.[146]

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[144] Sagart's association (1995a:251) of ieᴵᴵᴵ 夜 jiaᴵᴵᴵ < *ˈlakᴵᴵᴵ *night n* with Burmese ȵaᴵᴵᴵ ၉ ȵaᴵᴵᴵ *night n* is
rejected under *Night n* (#31).
[145] Takashima (2004:3) observes that in spite of the graphic confusion it is unlikely that there is any
phonological relationship between these two words.
[146] Peiros & Starostin's comparison of 夕 with Mizo rɪakᴵᴵ *stay over night vi* and Burmese jɛʔ ရက် / ရက်
rjak *day (of 24 hours) n* is discrepant in terms of initials. Superficially it seems that this may be
supported by Matisoff's (2003:323-7) and Peiros & Starostin's (1996:#769) comparison of Mizo ʰrɪakᴵᴵᵇ
grease n and Burmese jɛʔ ရက် / ရက် rjak *liquid-extract n* with Chinese iᴵᴵᴵ/ieᴵᴵᴵ 液 jiajk < *ˈlak *liquid, juice*
n. However, the Burmese word is confined to the second part of compounds and appears to be derived
from əjɛʔ အရက် ərak *distilled liquor n,* shown by Hla Pe (1967a:81) and Stewart & Dunn (1940-81:303)

The necessity to distinguish between *kr-/kl- and *k-r-/k-l- concurs well with the observations for Old Chinese in 3.5.2.1 and suggests that bilabial clusters in Inscriptional Burmese which are possibly also reconstructible in Old Chinese,[147] may be attributed solely to prefixes now lost in Northern Chin rather than to any original clusters. In some cases, what appear to be prefixes may actually be reduced forms of previous syllables:

[#5]   **Finger**

[M]   *juŋ (2003:285)
[P&S]   *juŋ (1996:#1466)

[NC]   *jʊŋ[II] *finger, root n*

[OB]   (lɛʔ)ʧʰaõ[II] (လက်)ချောင်း (lak)kʰjɨwŋ[II] *finger n*

Benedict (1972a:76-7), supported in Weidert (1987:184), suggests that the velar coda of the first syllable for *hand n* has spread over to the initial of the second syllable. The fact that ʧʰaõ[II] ချောင်း kʰjɨwŋ[II] is treated by Hla Pe (1967b:183-4) as one of the main Burmese classifiers, in this case specifically referring to rod-like objects, would seem to argue against this, yet it is not noted in Ohno's dicussion (2005:277-9) of the main Inscriptional Burmese classifiers which suggests a possible later origin.

4.2.1 *Velar Clusters with r-*

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*kr-	ṭ-	ṭ-	k-	k-	k-	k-
*kʰr-	ṭʰ-	ṭʰ-	x-	x-	x-	kʰ-

Basing himself on Benedict's development (1972a:41-2) of ideas originally presented by Shafer (1940:309-10), Solnit (1979:117) proposes a similar development of *pr- to ṭ- in Mizo/Zahau and p- elsewhere. Matisoff (2003:405) reconstructs a Tibeto-Burman root *pral for one of Solnit's examples comparing Mizo ṭʰal[I] *summer n* with

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to be a Mon loanword ultimately from Arabic, in which the first syllable sə ə from the Mon source has been reanalysed as a prefix.
[147] See Sagart (1999b:79-89) for the Old Chinese evidence.

Tedim pʰɐlᴵᴵᴵ *winter n.*[148] There are several problems with this comparison; the tones are different; the syllable weight is different; the glosses, plausibly connected by Matisoff via a semantic connection of *dry season n,* are different.[149] In fact, the Tedim word for *summer n* is kʰalᴵ, a perfectly regular correlate of the Mizo form.[150] A more convincing example provided by Solnit is Mizo ʈʰaᴵᴵᴵ *good vi* and Tedim pʰaᴵᴵᴵ *good vi* to which Zahau ʈʰɪmᴵ *needle n* and Zo/Tedim pʰɪmᴵ *needle n* may be added. It is probably no coincidence that it is precisely these same two words which Löffler (2002a:133) finds to be irregular in the Southern Chin language Maraa. In the case of the latter, the other three languages, including Mizo, have borrowed the English word *pin n* which may have subsequently affected the articulation of the native word in Zo and Tedim. In the case of the former, Ohno (1965:16) also treats it as irregular but makes no comment on its source;[151] it is also significant that the inflected forms, Mizo ʈʰɐt and Tedim pʰɐt, are irregular as a velar *-k* would be expected. Further evidence that the original clusters were uniquely velar in origin may perhaps be found in the lack of a voiced retroflex ɖ- in Mizo and Zahau to correlate with ʈ- and ʈʰ-.[152] The devoicing of *g-* to *k-,* discussed previously, can easily account for this, but if *br-* was

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[148] Matisoff's comparison (2003:523) of Mizo bɪakᴵᴵᵇ *converse vi/t* with Burmese pwɛʔ 水 prwak *scold, berate vt* tacitly implies that the shift of *pr-* to ʈ- does not occur after voiced initials; this unlikely scenario is discussed further below. In any case, the Mizo word is a form 2 inflection of bɪaᴵᴵᴵ with a suffixal *-s,* and the Burmese word has a root meaning *effervesce vi* from which the above gloss is but a semantic extension; a similar association may be found in Northern Chin *tsɪarᴵ *bubble v.*

[149] Peiros & Starostin (1996:#670) make a similar semantic proposal by comparing Mizo ʈɐɳᴵ *dry vi* with liaŋᴵᵇ 凉 liaŋᴵ < *k-'raŋᴵ *cool vi.* A difficulty with the proposal is that the Mizo form is only supported in Zahau where it occurs in tone II as ʈɐŋᴵᴵᵃ.

[150] No Mizo or Zahau correlate to Tedim pʰɐlᴵᴵᴵ has been found.

[151] There are two other possible cases in the word list: Mizo and Zahau ʈɔwᴵ *sprout vi* appears to correspond to pɔwᴵ *sprout vi* elsewhere, yet Mizo also has a form pɔwʔ *poke out vi, poke into vt* which, in the case of the latter gloss, appears to be a transitive derivation of the *p-* initialled form; Mizo ʈʰɛlʔ *extinguish vt* appears to correspond to Tedim pʰɛlʔ *extinguish vt* yet its sense of separating wood from a burning fire or breaking up a fight/quarrel shows significant semantic overlap with Mizo pʰɛlʔ *untie, dismantle vt.*

[152] Matisoff (1972a:41, 1988a:688) attempts to associate Mizo ʈekᴵᴵᵇ *lightning n* with Lolo-Burmese *t(r)ek but the validity of the Lolo-Burmese *-k* is is questioned by Nishi (1977:9) and acknowledged as a difficulty by Matisoff (2003:374). Matisoff (2003:373-4) modifies the reconstruction to Sino-Tibetan *gle:k on the basis of an Asho Chin form, listed by Luce (1985:II.87) as ⁿglɛʔᴵᴵ, but the lack of an *-r-* phoneme anywhere in Asho, either individually or as a feature of retroflexion, is shown in Stern (1962:11) and Luce (1962a:53). Stern (1962:11), commenting on Löffler's suggestion (1960:548) that medial *r > l* in loans from Burmese into Asho, suggests that this may be a more general shift in the language as a whole; this supports a reconstruction of Northern Chin *krekᴵᴵ. Matisoff's semantically and phonologically tenuous comparison of sɪʔ ဝစ် cac *dartingly, tinglingly vi* originally had a *-t* coda as evinced by the inscriptional examples of the verb sɪʔ ဝစ် / ဝစ် cjat *sift, sieve vt* from which it is derived.

also a legitimate combination then a separate account for the loss of voicing needs to be made.[153] On this basis the following correspondences may be proposed:

ST	NC	OB	OC
*kr-	kr-	k^hr- / kr-	kr-/ gr-
*k^hr-	k^hr-	k^hr-	k^hr-/ kr-

[#6] **Dove**

[M] *k(r)əw (2003:125;199)
[P&S] *gru (1996:#2032)

[NC] *k^hru[1] *dove n*

[OB] k^hoʊ[1] နို့ / နှိဉ် k^hiw[1] *dove n*
ချောʊ[II] ချူး / ကြိုဉ် k^hriw[II] *dove n*

Both forms are attested in the inscriptions, and Luce (1981:27) treats them as variants:

က�‌ဗောတယ�‌တ်နှိဉ် *(WK 3.42)*
kabota birth[154] dove
Kapota birth: dove.[155]

ဥ‌ကြိုဉ်ပ‌စ်‌လ‌ယ‌စ်ၖၖၟ *(SIP 43.30)*
dove[156] shoot field 50
Fifty dove shooting-grounds.

Matisoff (1969:168) suggests the vacillation of medial -r- may be due to onomatopoeia. The curious tone II contour in the form retaining the medial may represent an attempt at differentiation from ချောʊ[1] ချူ / ကြိုဉ် k^hriw[1] *horn n* which Matisoff (1969:194-5) notes to be phonologically very similar.[157]

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[153] There is similarly no evidence for original *tr-* clusters with Matisoff's tentatively proposed comparison (2003:267;303) of *distend vi/t*, discussed in 6.5.4, being Mon-Khmer influenced or unrelated.

[154] Hla Pe (1960:80) notes this to be a Pali loanword; it specifically refers to the various *Jātaka* incarnations of the Buddha about which a fuller discussion as it pertains to Inscriptional Burmese may be found in Luce (1956) and Luce & Whitbread (1971:172-5;200-17).

[155] Based on an original translation by Luce & Whitbread (1971:201).

[156] The assimilatory effect of the prefix ə u[III], is the source of the modern spoken Burmese voiced initial.

[157] The word for *horn n* also attests an obligatory prefix ə u[III] in the inscriptions; the occasional confusion of -r- and -j- in transmitted texts, discussed by Nishi (1977:46-7), occurs in both *dove n* and *horn n* leading them both to be be spelled in Written Burmese with an erroneous -j-.

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[OC] ʨiɔuˡ 鳩 kuwˡ < *ˈkrəwˡ *dove n*

Schuessler (2007:320) notes an aspirated initial in some southern varieties of Chinese.

[#7] **Weep**

[M] *krap (2003:336;339)
[P&S] *kʰrəp (1996:#2336)

[NC] *krɐp *weep vi*

[OC] ʨʰïˡᴵᴵᴵ 泣 kʰip < *ˈkʰrəp *weep vi*

The aspiration is irregular; Schuessler (2007:423) suggests it may have an onomatopoeic association with an exhaling or outward gesture.

4.2.2 Velar Clusters with l-

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*kl-	tˡ-	tˡ-	ʰl-	t-	t-	t-
*kʰl-	tˡʰ-	tˡʰ-	ʰl-	h- / ʰl-	x-	tʰ-

Solnit (1979:118) extends his comparison of the clusters with *r* to suggest that Mizo *tˡ-*, corresponding to Tedim *t-*, may also reflect Tedim *p-* from orginal *pl-* clusters. Of his two examples, the latter, as a specific avian name, is not included in the data-set but from Solnit's transcriptions both the tone and the initial voicing appear to be discrepant. The former is a comparison of Mizo tˡuᴵᴵᴵ ~ tˡukᴵᴵᵇ *fall vi* and Tedim pukᴵᴵ ~ pukᴵᴵᴵ *fall vi* along with their aspirated causative derivations tˡʰuᴵᴵᴵ ~ tˡʰukᴵᴵᵇ *fell vt* and pʰukᴵᴵ ~ pʰukᴵᴵᴵ *fell vt*. The lack of velar coda in the Mizo form 1 already makes this suspect but the otherwise good phonological and semantic association seems to merit consideration. Nevertheless there are two invalidating pieces of evidence: Thado, which unlike the other languages that fall into the Mizo or Tedim camps respectively, straddles both with ʰluᴵᴵᴵ *fall vi* reflecting the *kl-* cluster and pʰuʔᴵᴵ *fell vt* reflecting the *pʰ-* initial;[158] the Zo form is pʰʋaᴵᴵ whose final *a* must reflect an original *-r* not *-k*.[159]

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[158] Northern Chin *kl- and *kʰl- are not differentiated in Thado which has ʰl- for both. In fact all the forms appear to be related, as Solnit suggests, but the alternation of bilabial and velar initials seems to

The discussion under *Fall* (#8) and 7.5.2.2 shows Mizo t^hu^{III} ~ t^huk^{IIb} *fall vi* to be simply an ablaut variant of t^ha^{III} ~ t^hak^{IIb} *drop vi* with secondary semantic specialisation.

ST	NC	OB	OC
*kl-	kl-	k^hl- / kl-	kl- / gl-
*k^hl-	k^hl-	k^hl-	k^hl- / kl-

[#8] **Fall**

[M] *gla-k ⪥ *kla-k (2003:480)
[P&S] *kla (1996:#2189)

[NC] *kla$^{II(/III)}$ *drop vi*
 *k^hla$^{II(/III)}$ *drop vt*

The tonal variation is suggestive of the Mon-Khmer influence, to be discussed below, which may also have influenced the ablaut variants *klu^{II} *fall vi* and *k^hlu^{II} *fell vt* attested in Mizo and Zahau. Matisoff's velar final accounting for Mizo $t^{(h)l}ak^{IIb}$ (< *$k^{(h)}la^{II}$-s) represents a regular form 2 derviation via an -s suffix from form 1.[160]

[OB] ʧa^{III} ကျ / ကွ kla^{III} *fall vi*
 ʧ^{h}a^{III} ချ / ခွ k^hla^{III} *drop vt*

Sagart (2006a:214-5) includes these Burmese forms under a Sino-Tibetan root *kra which he attempts to disambiguate from a separate root *glak under which he includes the Mizo form 2 ^{l}lak^{IIb}. The Mizo evidence was discounted above and the Burmese evidence is contradicted by a medial -l- in the inscriptions:

ဆိပ်ခပ်ကာယ်လောက္ကခါ ယျူကို ၆ လော ၄ ဇအ် *(LK 95)*
poison all[161] surpass[162] also fall REM REAL body also turns[163] REAL

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be due to Mon-Khmer influence rather than due to an intrinsic Northern Chin trait. See the discussion under *Fall* (#8).

[159] Consequently Matisoff's addition (2003:280) of Mizo $t^hiŋ^l$ *complete vi* to Benedict's comparison (1972a:176) of pjeɪ^{III} ပြည် /ပွည် plaɲ^{III} *full vi* and p^{h}jeɪ^{III} ပြည် /ပွည် p^{h}laɲ^{III} *fill vt* and iŋ^{Ib} 盈 jiajŋ^l < *^{l}laɲ^l *full vi* seems unjustified. Furthermore, Matisoff's extension (1988b:6) of Benedict's comparative set to include pjĩ^l ပျဉ် pjaɲ^l *plank n*, which Benedict (1972a:40) reconstructs under a separate root, is unwarranted due to it being attested with an original -n in the inscriptions as ပျဉ် pjan^l.

[160] Possibly also associated are *kra$^{II/III}$ *drop vi* and *k^hra$^{II/III}$ *drop vt* whose tonal issues are discussed under their respective entries in the word list.

[161] See Pe Maung Tin & Luce (1963:62).

> *All the poison falls and the body also turns.*[164]
>
> [OC] luo[III] 落 lak < *k-lak *drop, fall vi*
>
> Sagart's suggestion (2008:154) that by reconstructing *glak an account for a suffixal -*k* does not need to be made is mitigated by the removal of the Mizo etymon to leave 落 as the only exponent.[165] Schuessler (2007:371) notes a clear Mon-Khmer association and several alternative roots in Shorto (2006:521-2;524;527) without velar codas suggest this may perhaps be extended to Old Burmese and Northern Chin. The loan direction is unclear and it is likely that there was mutual influence between both language families. The fluctuation of medial -*l*- and -*r*- in the Mon-Khmer forms parallels a possible association with ɕia[III] 下 ɣai[II/III] < *gra[II/III] *descend, below vi* which Sagart (2006a:215) includes under his root *kra.[166]

4.3 Rhotics

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*r-	r-	r-	g-	g-	g-	ŋ-
*ʰr-	ʰr-	ʰr-	h-	h-	h-	h-

Luce (1962a:52, 1985:I.81-2) and Peterson (2000:81-5) note that in several Southern Chin dialects reflexes of *r- have a uvular or velar-fricative articulation. This supports Solnit's suggestion (1979:115-6) that its derivation to *g*- or *ŋ*- in the most Northern dialects may be due to a shift of *r*- to a velar continuant articulation or due to an original Tibeto-Burman velar allophone;[167] Matisoff's association (1969:172) of Written Burmese *r*- with Lahu *y*- provides further support for such a change.[168]

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[162] Pe Maung Tin & Luce (1960:247) treat this as a gerundive of ke ကဲ kaj[n] *surpass*.

[163] Ba Shin (1962:96) notes that ၵၠ should read ၵၠ.

[164] Based on an original translation by Ba Shin (1962:126-7).

[165] The velar prefix is supported by *xiesheng* evidence.

[166] A comparison of ɕia[III] 下 ɣai[II/III] < *gra[II/III] with the Old Burmese forms is proposed in Bodman (1980:145, 1985:155;158) on the basis of his suggestion that Old Chinese *kl-, in contrast with *k-l-, merged with *kr-; this is accepted by Baxter (1992:232) as a change prior to Old Chinese but, although not directly discussed, does not appear to concur with the modifications to Baxter's system proposed by Sagart (1999b:122-8).

[167] The function of nasalisation as a means to maintain voicing was discussed in 3.5.2.3.

[168] Matisoff's (2003:336) and Peiros & Starostin's (1996:#676) comparison of Mizo rep *mantel n* with the middle syllable of mi[n]ja?paʊ[n] ၷၥၵၠၥၠ: mi[n]rappwiŋ[n] *wooden fireplace n* is phonologically and semantically problematic: the middle syllable ja? ၸၥ / ၵၸၥ rjap is noted by Luce (1959b:40) to have a medial -*j*- in its inscriptional form and to have a basic meaning of *place n*; the meaning *fireplace n* of

ST	NC	OB	OC
*$^{(h)}$r-	$^{(h)}$r-	$^{(h)}$r-	$^{(h)}$r-

[#9] **Wither**

[M] *raw (2003:225)
[P&S] *rɨːw (1996:#714)

[NC] *raw^l *darken (as leaf/fruit)* vi

Peiros & Starostin also note Matisoff's comparison of Mizo rɔw^l *dry* vi but the rhymes do not correspond and the semantic link is less good.

[OB] jo^l ေရွ္ raw^l *wither, over-ripe* vi

[#10] **Alive, Green**

[M] *s-r(j)aŋ ≍ *s-riŋ (2003:307;506)
[P&S] *tsʰreŋ (1996:#1257); *tsʰeːŋ (1996:#2721)

[NC] *^{h}rɪŋ^l *green* vi, *beget* vt

[OB] ʃĭ^l ရှင္ ^{h}raŋ^l *alive* vi

There is no evidence for a palatal coda in the inscriptions:

ပုဟ္ထေလာင္ေလရွင္လာေအံ *(LK 95)*
Buddha[169] future also alive come REAL
The Bodhisattva also comes to life.[170]

In an attempt to avoid the necessity of positing allofamic variation, Benedict (1972a:85) suggests that the Burmese vocalism is perhaps conditioned by the

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the compound noun is contingent on the preceding syllable mi^{II} ဆ mi^{II} *fire* n to which the final syllable paŏ^{II} ေပါင္း pɨwŋ^{II} *arched cover* n has been further added. Peiros & Starostin's proposal (1996:#661) to associate Mizo rɐm^{IIa} *brittle* vi with jā^{II} ရမ္း ram^{II} *rash, reckless* vi, which they further associate with ʧā^{II} ကြမ္း kram^{II} *rough* vi, is plausible but requires further investigation; Matisoff's comparison of Mizo rɪŋ^{IIb} *nape* n with lɛ^l လည္ laɲ^l *neck* n does not correspond in initial or tone, and Peiros & Starostin (1996:#645;1691) reconstruct them under separate roots.

[169] The use of superscript r ရ for medial r ြ is common for this word in the Lokahteikpan. The various inscriptional spellings of this word, attested in Written Burmese as ၃ရွား, are discussed by Duroiselle (1919:26-7) who notes a Sanskrit origin which is supported by Luce (1985:II.66).

[170] Based on an original translation by Ba Shin (1962:127).

initial cluster but his evidence is wanting.[171] There are cases in the inscriptions of the word being preceded by an apparently prefixal *r-* ရ- as ရ[ွှ]င် rhraŋ but the *r* probably represents an original *ə-* အ– that has assimilated to the following initial *r-*.[172] Although Luce (1981:76) treats ရ[ွှ]င် as � �[ှ]င် [h]raŋ[i] *alive vi* in the following inscription, his earlier gloss (1969-70:II.38) of the whole phrase ပုရှာ်ရ[ွှ]င်, in which the former part means *Buddha n*, as *His Majesty* suggests an association with �[i] အၡင် ə[h]raŋ[i] *lord n*:

ဤယ်မျှသောကာပုရှာ်ရ[ွှ]င်ၡာတော *(OBEP 48a)*
This many[173] ATTR SUBJ Buddha alive for EMPH[174]
These many (offerings) are for the Lord Buddha.[175]

Yanson (2002b:164) believes �[i] အၡင် ə[h]raŋ[i] *lord n* to be of Pali origin; it is often found in the inscriptions as အသျင် əsjaŋ which is shown by Nishi (1974:19) to be a variant spelling.[176] It is plausible that confusion with this word caused the loss of the original palatal coda in *alive vi*.

[OC]   ṣəŋ[i] 生 ṣiajŋ[i] < *s-'raɲ[i] *live, alive, fresh vi*
        tɕ[h]ɪŋ[i] 青 ts[h]ɛjŋ[i] < *s-[h]raɲ[i] *green, blue vi*

The development of *s-* prefixed rhotics follow Sagart's revisions (1999b:69) of the proposals in Baxter (1983, 1992:205-6).

[#11] **Louse**

[M]   *s-r(j)ik (2003:344;347)

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[171] Matisoff's (1985a:48) and Peiros & Starostin's (1996:#1521) comparison of �[iii] ၡ[iii] [h]raɲ[iii] *squirrel n* which compares with ṣəŋ[i] 鼬/狌 ṣiajŋ[i] < *'sraɲ[i] *weasel n* casts doubt on Benedict's suggestion. Matisoff's comparison of Mizo [h]lɛj[iia] *squirrel n*, with which Shafer (1952:154) suggests a Mon-Khmer link, via a lateral allofam with no nasal coda/suffix is unlikely and its inclusion by Peiros & Starostin (1996:#1695) under a separate root is preferable.

[172] The occasional attestation of [h]*r-* ရ- as *hr-* ဟြ- is discussed in 2.3.2.1 and is of no phonological significance.

[173] This gloss follows Pe Maung Tin & Luce (1960:244;255).

[174] Following Yanson (2002a:47, 2005:227), this may be functionally treated as a copula in sentence final position.

[175] Based on an original translation by Luce (1969-70:2.38).

[176] Of note is an old Written Burmese spelling သျင် [h]sjaŋ in Stewart & Dunn (1940-81:524). In light of the above, Matisoff's (2003:70) and Peiros & Starostin's (1996:#765) comparison with Northern Chin *reŋ[i] *father's sister's husband n* and Shorto's (2006:208) tentative Mon-Khmer association are unlikely.

4.3.1 Confusion of [h]r- and r-

There are four cases in the word list where Thado, Zo, Tedim and Sizang correspond to Mizo and Zahau [h]r- as if it were simply plain r-.

NC *[h]r-	Mizo [h]r-	Zahau [h]r-	Thado g-	Zo g-	Tedim g-	Sizang ŋ-

Luce (1962a:50) suggests that these velar reflexes reflect original [h]r-, while the reflexes in h-, discussed in 4.10, reflect a local variant of h- in Mizo and Zahau; statistical evidence belies this proposal. Solnit (1979:116) prefers to distinguish original Tibeto-Burman *sr- from *s-r- to account for the difference but there seems little to warrant this. It seems rather that the rare cases of [h]r- patterning as r- in Thado, Zo, Tedim and Sizang simply reflect the instability of aspiration before sonorants in Mizo and Zahau as discussed in 1.5. A good comparative set is the following:

[#12] **Creeper**

[M] *s-rwi(j) (2003:218)
[P&S] *ruj (1996:#835;837)

[NC] *[h]rʊj[II] *rope, creeper n*

The Xôngsai data in Luce (1962c:3, 1985:II.82) suggests an original -l coda.[177]

[OB] jweɪ[II] ခွေး / ရွယ် rwɨj[II] *creeper n*[178]

[OC] lɛi[II] 蘽 lwi[II] < *'rwəl[II] *creeper n*

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[177] Shafer (1952:146) suggests a Mon-Khmer link but the the correpondence is poor.
[178] Not attested in the inscriptions.

4.4. Laterals

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*l-	l-	l-	l-	l-	l-	l-
*ʰl-	ʰl-	ʰl-	l-	l-	l-	l-

These are attested regularly in Old Burmese and Old Chinese:

ST	NC	OB	OC
*(h)l-	(h)l-	(h)l-	(h)l-

[#13] **Lick**

[M]   *ljak (2003:81;323;327-8)
[P&S] *lak (1996:#1926)

[NC]   *ʰlak^{II} *lick* vt

[OB]   ljɛʔ ʌ̃ɟ̃ɔ̃ ljak *lick* vt

Nishi's observation (1977:10-11) that some of the Lolo-Burmese correlates here differ in their rhymes from those corresponding to mjɛʔ ʯ̃ɟ̃ɔ̃ mjak *eye n* and jɛʔ ʱɔ̃ / ʯ̃ɟ̃ɔ̃ rjak *day (24 hours) n* may perhaps be associated with the issues involving the coda in Old Chinese. Alternatively, the Austronesian link in Sagart (2005:163), which is extended to the Chinese comparanda below, suggests external influence may have played a role.

[OC]   ʃi^{III} 舐 ziạ^{II} < *'ljaj^{II} < **'ljak^{j}-ʔ *lick* vt[179]

The reconstruction follows Baxter's proposal (1992:182) that a velar coda would be lost before suffixal -ʔ corresponding to tone II.[180] Strong evidence

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[179] Pulleyblank (1991a:67) and Sagart (2005:163) support the comparison with the Burmese form above but Pulleyblank (1991a:66-7) and Sagart (2006a:218) further suggest an association with ʃi^{Ib} 食 ẓik < *'s-lǝk *eat* vi. There may be some kind of word-family relationship but it does not correspond directly to the forms here as the reflex would be Northern Chin lɛk/lak and Old Burmese lak. A medial -j- could be reconstructed in the Old Chinese form *s-'ljǝk without disrupting the vocalism but this would give Northern Chin lɪk/lik and Old Burmese lik. Sagart (2005:163) also proposes an Austronesian link which seems preferable to Shafer's (1952:138) possible Mon-Khmer link.

[180] The palatal feature of the coda would of course remain in the same way as if the suffix had been -s. The specificities regarding this proposal are still unclear but Baxter (1992:182) provides some interesting internal evidence further discussed in 3.3.2. Baxter & Sagart (1997:59-60) add an alternative suggestion that in some cases -ʔ may just be a weakened form of -k conditioned by stress or suffixes no longer evinced.

for an original velar coda in this word stems from the data for the Fuzhou dialect of Min Chinese in Bauer (1988:150) where the -*k* is still retained.

[#14]   **Road**

[M]   *lam (2003:250)

[P&S]   *ləm (1996:#1706)

[NC]   *lᵉmᴵᴵ *road n*

[OB]   lã́ᴵᴵ ɔɔ̃́ᴣ lamᴵᴵ *road n*

    Possibly also related is ʰlã́ᴵᴵ ɔŋ̃́ᴣ ʰlamᴵᴵ *reach out, stride vt.*

4.5 *Affricates*

4.5.1 *Unaspirated*

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*ts-	ts-	ts-	tʃ-	t-	t-	t-
*dz-	f-	f-	tʃ-	t-	t-	t-

Benedict (1972a:18) proposes deriving Mizo *f-* from Tibeto-Burman *dz-;[181] this is accepted by Löffler (2002a:128-9) and corresponds well with a similar proposal for a voiced provenance by Peiros & Starostin (1996:IV.iii).[182] The change this entails is not too dissimilar from the fronting of θ- to *f-* in Cockney English; the loss of voicing, paralleling the change of *g-* to *k-* discussed above, is readily accounted for by Ohala's observation (1983:201-2) that fricatives have an even greater tendency to become voiceless than stops. Benedict's proposal (1972a:18) to treat Tibeto-Burman *ts- as a

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[181] Benedict (1972a:18) also derives it from a voiced sibilant *z-* but his correspondence sets for this phoneme are dubious. Just as Sagart (1999:29-30) shows it to be unnecessary for Old Chinese, it seems unlikely that a voiced sibilant *z-* is required in Sino-Tibetan. Matisoff (2003:43) suggests that *dz- may give Mizo *ts-* or *f-* indiscriminately but his addition of *ts-* appears to be unnecessary.

[182] A lack of awareness of the merger of Mizo and Zahau *ts-* and *f-* with coronal *t-* in Zo, Tedim and Sizang can lead to miscomparisons: Matisoff (1988b:4) and Peiros & Starostin (1996:#1026) compare Tedim temᴵ *level vi* with Burmese tamᴵ ɔ́ tamᴵ *rod-like object n* but Mizo tsemᴵ shows the original initial to have been *ts-. Matisoff (1988b:4-7) further associates Tedim dimᴵᴵ *full vi* but semantic issues, for which Matisoff (1988b:9) attempts to make a debateable but plausible account on the basis of Indo-European, aside, the phonological discrepany is further compounded by the establishment of *ts- rather than *t- for *level vi*.

source of Mizo s- is not confirmed by the data here[183] where it is attested unchanged as ts- in Mizo.[184]

ST	NC	OB	OC
*c-	ts-	c^h- / c-	c- / ɟ-
*ɟ-	dz-	c-	ɟ-

[#15] Break

[M] *tɕat (2003:330;334)

[P&S] *dʑ^{h}Vt (1996:#1672); *tɕVt (1996:#1361)

[NC] *tset *snap (as rope) vi*

[OB] s^{h}aʔ ∞oˊ c^{h}at *brittle vi*

[OC] –

Matisoff's comparison of tʂɤ^{lb} 折 tɕiat < *'tat *bend, break vt*, which has an intransitive form ʂɤ^{lb} 折 dʑiat < *'dat *bend, break vi*, is suggestive, but the initials do not correspond.[185]

[#16] Suck

[M] *dʑjup ⋊ *dʑoːp (2003:382)

[P&S] *dʑ^{h}jVːp (1996:#1670)

[NC] *dʑop^{ll} *suck vt*[186]

The Burmese evidence below suggests a possible relationship with *tsʊap^{ll} *lungs n* which Matisoff (1978:113-9) derives from an original Tibeto-Burman *tsi-wap in which the first part means *lung n* and the second *soft vi*. The

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[183] In spite of Matisoff's response (1995:42-3), Baxter's rejection (1994a:28-9) on phonological and semantic grounds of Matisoff's comparison (1988b:10-13) of Tedim and Mizo saj^l *elephant n* and Mizo zaj^{lll} *temperament n* with tsai^{lb} 才/財/材 dzəj^l < *ɟə^l *material, talent n* is justified.

[184] Matisoff's comparison (2003:251) of sã^l ȧ cam^l *enjoy, benefit from vt* with Mizo tsam^l *sojourn vi* via a gloss of *stay (of royalty) vi* is tonologically and segmentally acceptable but Stewart & Dunn (1940-81:84) show Matisoff's gloss to be only applicable in compounds with nã^{ll} ₄₴: nan^{ll} *palace n*.

[185] No Old Chinese comparanda have been found but the correspondence with c-/ɟ- may be made on the basis of it being the only remaining, and most logical, slot in the system.

[186] Matisoff suggests that Lai Chin dop *suck vt* is related as a stop-initialled allofam, but Sizang, whose reflex of *dʑop^{ll} is the regular top^{ll}, also has a word dup^l *suck out directly (e.g. from an egg) vt* which compares much more favourably to the Lai form.

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Burmese vocalism implies Sino-Tibetan *-wəp* rather than *-wap* which suggests the reduction to a monosyllable may have happened earlier there than in Northern Chin which was able to undergo the regular lowering of *ə* to *a* without undergoing rounding triggered by a medial *-w-*; this concomitantly makes the tentative assumption that the secondary rounding of *wap* to *op* in Northern Chin, as discussed in 5.2.1.3, happened prior to the fusion of the two syllables there.

[OB] soʊʔ �ၥ် cwɨp *suck vt*

Matisoff (1972a:43) cites a variant spelling soʊʔ �ၥ် cwɨt which he originally treats as an irregular derivation but later (2003:382) uses as the basis for an allofam *dʑut. Inversely, the word əsʰoʊʔ ၁၁ၥၥ် əcʰwɨt *lungs n* is assigned a variant spelling əsʰoʊʔ ၁၁ၥ် əcʰwɨp in Stewart & Dunn (1940-81:104) which in light of the above most likely represents the original. Unfortunately no inscriptional evidence has been found for either but possible Austronesian and Tai-Kadai links with a *-t* coda are noted by Benedict (1976c:93).

[#17] **Erect**

[M] *tsjuk (2003:357)
[P&S] *dʑʰɨː(k) (1996:#1656); *tsuk (1996:#1180); *tsj(r)ɨk (1996:#1329)

[NC] *dʑʊk *erect vi*

Matisoff's and Peiros & Starostin's compare *tsʰʊk *descend vi* with the former Burmese form but the initials do not concur.

[OB] saʊʔ ေၥၥ် cwɨk *steep vi*
      sʰaʊʔ ေၥၥ် cʰwɨk *build, erect vt*

Matisoff's comparison of saɪʔ ၌ၥ် cɨk *plant vt* is rejected in 2.1.1.

Another good example is Matisoff's reconstruction (1985a:8) of Lolo-Burmese *ʔ-dʑanᴵᴵᴵ for Burmese sãᴵᴵᴵ ၀၌ canᴵᴵᴵ *stretch vi* and sʰãᴵᴵᴵ ၁၌ cʰanᴵᴵᴵ *stretch vt* to which Peiros & Starostin (1996:#1650) compare Mizo fanᴵ *stretch vi/t*.

4.5.2 *Aspirated*

NC	Mi	Za	Th	Zo	Te	Si
*ts^h-	ts^h-	s-	s-	s-	s-	s-

Benedict's proposal (1972a:17) that Mizo ts^h- derives from Sino-Tibetan *t^h-,[187] rather than c^h-, is supported here.

ST	NC	OB	OC
*t^h-	ts^h	t^h-	t^h-/t-

[#18] **Emerge**

[M] *s-twak (2003:321)
[P&S] *duak (1996:#464)

[NC] *ts^hʋak^{II} *emerge vi*

[OB] t^hwɛʔ ဥၥၥ် t^hwak *come out vi*

[#19] **Vagina**

[M] *s-tu (2003:247)
[P&S] *ʤaw ✕ *ʤiw (1996:#1644); *t/d^{h}u (1996:#1071)

[NC] *ts^hu^{II} *vagina n*

[OB] –

Benedict (1972a:53) suggests a possible association with saʋʔ ေၥၥ် cwik *vulva* but the initial and coda are discrepant; Peiros & Starostin miscite it without the -*k* coda.[188]

[OC] ʈʂ^{h}ɔu^{II} 醜 ʨ^{h}uw^{II} < *ʰt^{h}əw^{II} *anus n*

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[187] More specifically in Benedict's system this corresponds to *t- which is aspirated by default in initial position. The requirement for distinctive aspiration in accounting for the Northern Chin affricate series casts serious doubt on Benedict's proposal to distinguish initial consonants via voicing rather than aspiration.

[188] They actually cite the correct spelling under a separate root (1996:#1321).

4.6. *Sibilant s-*

4.6.1 *Affricate Source*

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*s-	s-	s-	s-	s-	s-	s-

The fate of Sino-Tibetan *k^{hj}- appears to be Northern Chin *s*-:

ST	NC	OB	OC
*k^{hj}-	s-	c^h-	c^h-/c-

[#20] **Wash**

[M]   *s(j)il (2003:425;508)
[P&S]   *siɔːl (1996:#1567)

[NC]   *sɪl[II] *wash vt*

[OB]   s[h]eɪ[II] ေဆး / သစ်ဟွၟ် c[h]ɨj[II] *wash vt*[189]

This comparison is from Löffler (1966:134) who associates the Mizo form.

[OC]   ɕi[II] 洗/洒 sɛj[II]/sɛn[II] < *s-c[h]əl[II]/*s-c[h]ən[II] *wash vt*

The evidence for a root initial c^h- stems from the relationship of ɕi[I] 西 sɛj[I] *west n*, as a depiction of a bird's nest 卥 in the earliest inscriptions,[190] with the homophonous character ɕi[I] 棲 sɛj[I] *nest n, roost vi* whose phonetic is tɕ[h]i[I] 妻 ts[h]ɛj[I] < *c[h]əl[I] *consort, wife n*. Pulleyblank's proposal (1962:132;215-6, 2001:48) to reconstruct ɕi[I] 西 sɛj[I] with *s-n- due to it appearing to be phonetic in naj[II] 廼 nəj[II] < *nə[II] is plausible in light of *s-[h]n- also giving Middle Chinese *s*- in the system here, but suffers from the rhymes not corresponding.[191] However Sagart (2004:72) observes there to be no other obvious explanation for the use of such a phonetic and suggests that the root initial of 洗 was *s- and the character 洒 was only used interchangeably with 洗 after the shift of

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[189] Not in the inscriptions.
[190] See Sagart (2004:71-2) for a justification of this analysis in the *Shuowen*.
[191] The graphic composition may have occurred between Old and Middle Chinese when the divergent Old Chinese rhymes had become very similar; after grave initials the Old Chinese rhyme *-əl actually gives the same Early Middle Chinese reflex -əj as Old Chinese *-ə(ɯ).

*s-^{h}n- to s- had occurred. Unfortunately Sagart's proposal disqualifies the Old Burmese comparandum; further research is required although possibly of note is Mizo sıŋ^{IIa} *ten-thousand n* as plausable loan from Chinese tɕ^{h}iɛn^I 千 ts^{h}ɛn^I < *s-^{h}nəɲ^I *thousand n*.

[#21]   **Hot**

[M]   *tsa-t (2003:462-4)
[P&S]   *ts^{h}a (1996:#1189)

[NC]   *sa^I *hot vi*

Matisoff's -*t* suffix that accounts for Mizo sɐt (< *sa^I-s) represents a regular form 2 derviation via an -*s* suffix from form 1.

[OB]   s^{h}a^I အော c^{h}a^I *hungry vi*

See the other comparanda in Benedict (1972a:27) for the semantic link.

4.6.2 *Benedict's *sj- Hypothesis*

Benedict (1972a:53) proposes another source of Northern Chin *s*- to be Tibeto-Burman *sj-. In the development of Northern Chin vocalism adopted here this would assume the fronting of *ə* and *a* to ɪ/*i* and ɛ/*e* in all cases but Benedict's proposal is primarily based around the following correspondence set with *a* whose Lolo-Burmese reconstruction is less than certain:[192]

[#22]   **Meat**

[M]   *sja (2003:448)
[P&S]   *sja (1996:#1543)

[NC]   *sa^{II} *meat n*

[OB]   Өa^{II} အော: sa^{II} *meat n*

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[192] Benedict's only other correspondence, with the medial -*j*- tentatively enclosed in parentheses, is Burmese Өwe^{II} ဆွတ် swəj^{II} *whet, sharpen vt* with Mizo suj^{IIb} *whittle vt* (1972a:43) which is an irregular variant form of sɐjʔ.

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Bradley (1979:152) adds an extra Lolo-Burmese initial phoneme *x- to Matisoff's (1972a:55-6) *s- and *ɕ- (sj-) to account for cases in Lisu where h- or x- correspond to sibilants elsewhere. This leads him (1979:306) to reconstruct Lolo-Burmese *xa^II meat n which is supported by Benedict (1975:291). Bradley explicitly notes (1979:152) that this initial phoneme should not be reconstructed back to Tibeto-Burman but makes no account for how it could then have emerged. It is plausible that this is a case of original Lolo-Burmese *h-, which is noted in 4.10.2 to be rare, followed by a medial glide, but without further evidence little more can be proposed.

Although it could be proposed that -j- may have merged with s- before vowel fronting occurred in Northern Chin to give ɕ- which remained distinctive enough from *s- to prevent it from occluding to t^h-, this causes difficulties for cases of coda palatalisation in Old Chinese triggered by medial -j- in words like Tree (#84). It may be noted that loanwords are a further source of Northern Chin s- as shown in 6.5.4.

4.7 Dentals

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*t-	t-	t-	t-	t-	t-	t-
*t^h-	t^h-	t^h-	t^h-	t^h-	t^h-	t^h-
*d-	d-	d-	d-	d-	d-	d-
*n-	n-	n-	n-	n-	n-	n-
*^{h}n-	^{h}n-	^{h}n-	n-	n-	n-	n-

4.7.1 Unshifted

Except for Northern Chin t^h- the dentals are mostly reflected unchanged from Sino-Tibetan:

ST	NC	OB	OC
*t-	t-	t^h- / t-	t- / d-
*d-	d-	t-	d-
*$^{(h)}$n-	$^{(h)}$n-	$^{(h)}$n-	$^{(h)}$n-

[#23] **Stand**

[M]   *diŋ (2003:307)
[P&S] *d^heːŋ (1996:#473); *[t]eŋ (1996:#867)

[NC] *dɪŋ¹ *stand v*

[OB] tɛ¹ ∞ρ̣̌ taɲ¹ *establish vi/t*

[OC] tʰɪŋ¹ᵇ 亭 dɛjŋ¹ < *daɲ¹ *settle, regulate vt*
tɪŋᴵᴵᴵ 定 dɛjŋᴵᴵᴵ < *daɲᴵᴵᴵ *establish vi/t*

[#24] Length

[M] *duŋ (2003:285-6); *duŋ ⩲ *tuːŋ (2003:288)
[P&S] *toŋ (1996:#955); *dʰuŋ (1996:#509); *t$^{(h)}$uŋ (1996:#1083)

[NC] *dʊŋ¹ *length n*
*tʊŋ¹ *warp n, erect vi/t*

The voiced initial in Zahau dɔŋᴵᴵᴵ *cubit n*, which corresponds to tɔŋᴵᴵᴵ elsewhere, suggests the Northern Chin word to be a Burmese loan; this accounts for the curious vocalism.

[OB] taʊ̃¹ ော̃ⲟ̌ twɪŋ¹ *cubit, wing n*[193]

[#25] Hurt, ill

[M] *na-n/t (2003:440)
[P&S] *nəː (1996:#519)

[NC] *na¹ *hurt, ill vi*

Matisoff's -*t* suffix accounting for Mizo nut (< *na¹-s) represents a regular form 2 derviation via an -*s* suffix from form 1.

[OB] na¹ ၍ာ na¹ *hurt, ill vi*

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[193] This word also means *mountain, south n* which Peiros & Starostin (1996:#1003) compare with Mizo dʊŋᴵᴵᵇ *mountain range n* and ʈʂʊŋᴵᴵᴵ 家 truawŋᴵᴵᴵ < *r-'taŋ^{vIII} *mountain n*. The derived Mizo tone and its exclusive attestation in Mizo make it suspect but more interesting is Peiros & Starostin's tentative link with tʊŋ¹ 東 təwŋ¹ < *taŋ^{vI} *east n*. A semantic connection with this is plausible on the basis of Ohno's observation (1967:87) that *mountain*, in its sense of *south n*, may more specifically be referring to the area found above rivers in contrast to mjaʊʔ ၜြောၐ် / ၜ္ၛောၐ် mlɨwk *north n* which is an abbreviation of mjɪʔaʊʔ ၙ်စသာၐ် / ၙ္ၛ်ၙ္ၛြောၐ် mlacʔɨwk literally meaning *river under*; a similar semantic confusion over cardinal directions may be found in Northern Chin where *tsʰek means *east n* in Mizo but *north n* in the other languages and *kʰlɐŋ¹ means *west n* in Mizo but *south n* elsewhere.

Matisoff compares na? ၌ဝ၃် nat *spirit n* but the derivation of final *-t* in Northern Chin from *-s* makes this unlikely.

[OC] –

Notwithstanding semantic issues, Matisoff's and Peiros & Starostin's comparison of nan[ib/iii] 難 nan[i/iii] *difficult vi, difficulty n* is unlikely because following the discussion in 3.2.1 and 5.2.4.1 it would originally have had an *-r* coda which would have been retained in Northern Chin.

4.7.2. *Sibilant in Origin*

The origin of Northern Chin ts^h- in Sino-Tibetan *t^h- suggests an alternative source for Northern Chin t^h- which Benedict (1972a:17) suggests may be found in *s. This gives the following correspondences:

ST	NC	OB	OC
*s-	t^h-	s-	s-

[#26] **Kill**

[M]   *sat (2003:330;335)
[P&S] *saːt (1996:#1495)

[NC]   *t^{h}et *kill vt*

[OB]   θa? သတ် sat *kill vt*

[OC]   ṣa^1 殺 ṣəit < *r-sat *kill vt*[194]

[#27] **Itch, breath**

[M]   *sak (2003:317); *sak (ibid:317;326)
[P&S] *sak (1996:#1488); *sək (ibid:#1489)

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[194] The Middle Chinese reflex develops as if from *-ə-*. However, the discussion in Baxter (1992:267-69;371-2;580-1) suggests this may be a result of the initial complex. See also the discussion under *Alive, Green* (#10).

[NC] *tʰɐk *itch, spicy vi*

[OB] Θɛʔ သက် sak *slightly bitter vi; breath, life n*

> The Burmese form glosses bridge the semantic gulf between Northern Chin and Old Chinese. Although these could be accidental homophones in Burmese, a possible association may be established from compounds like ənãᵢᵢᵢəΘɛʔ အနံ့အသက် ənamᵢᵢᵢəsak *odor n* and əΘãᵢəΘɛʔ အသံအသက် əsamᵢəsak *voice n* in which the former syllables seem to carry the semantic weight[195] and the latter syllable could plausibly be associated with either gloss.

[OC] ɕiᵢ 息 sik < *ᵢsək *breathe vi*

[#28] **Rot**

[M] *ʐu(w) (2003:227)
[P&S] *so ⪥ sew (1996:#1515)

[NC] *tʰuᴵᴵ *rot vi*

> The association of tʰuᴵᴵᴵ (< *tʰus) *rotten discharge n* is discussed in 7.3.

[OB] Θoʊᴵᴵ သို့: / သို့ဝ် siwᴵᴵ *stale vi*[196]

4.8 Glides

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*w-	v-	v-	v-	v-	v-	v-
*j-	z-	z-	j-	z-	z-	z-

4.8.1 Labiovelar w-

The provenance of Northern Chin *v-* as a labiovelar glide *w-* is well-supported: Benedict (1972a:18), relying on missionary orthographies, transcribes the Mizo reflex as *w-*; Luce records *w-* for some Southern Chin languages (1962a:55) and transcribes *vʷ-* in Xôngsai (1962c; 1985:II.70-87). As with the shift of *r-* to *g-* in the more Northern Chin languages that was possibly favoured by the loss of voicing of original

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[195] The word nãᵢᵢᵢ နံ့ namᵢᵢᵢ *odor, smell n* is discussed under *Smell* (#96); the word əΘãᵢ အသံ əsamᵢ *sound, voice n* is related to ɕiᵢ စိတ် simᵢ < *ᵢsəmᵢ *heart, mind n* as noted in Matisoff (2003:532).
[196] Not in the inscriptions.

*g- to *k-*, the shift of *w- to v- was perhaps favoured by the devoicing of f- in Mizo and Zahau that again diffused north like the shift of *j- to z- to be discussed below. The Sizang reflex of *w- as h- before u perhaps also hints at a previous non-fricated source. Although attested in Old Burmese and Old Chinese, Luce (1962a:51) explcitily notes no evidence for ^{h}w- in Northern Chin.

ST	NC	OB	OC
*$^{(h)}$w-	w-	$^{(h)}$w-	$^{(h)}$w-

[#29] **Bear**

[M] *wam (2003:252;531)
[P&S] *ʔ^{w}əm (1996:2013)

[NC] *wɔm^l *bear n*

> This is most likely related to *wɔm^l *black vi*. Notably the word *bear n* usually occurs with the animal prefix sə- perhaps literally meaning *black animal n*. The original ɐ vowel has undergone secondary rounding to ɔ under the influence of the labial initial; see the discussion in 7.5.2.2.

[OB] wũ^l ɔ̀ wam^l *bear n*

[OC] ɕyʊŋ^{Ib} 熊 wuwŋ^l < *^{l}wɔm^l *bear n*

4.8.2 Palatal j-

Peterson's observation (2000:94) that j- in some Southern Chin languages corresponds to z- in the Northern ones is supported by the data in Luce (1985.II:70-87). Peterson's further suggestion (2000:80) that the shift to z- first occurred in lanaguages like Mizo and Zahau and then diffused northwards is supported by the fact that Thado, as the language furthest north, still often retains a post-alveolar articulation. Luce's data (1962a:39) does not support Peterson's proposal (2000:94) for an original ^{h}j- in Southern Chin which is not attested in the North.[197] The dubious

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[197] Peterson (2003:175-8) notes a form ^{h}jul *follow* in the Southern Chin language Hyow, the name of which also reflects ^{h}j-. The Northern Chin form is *juj^n showing a shift of -l to -j in coda position which will be discussed further in 5.2.2.

status of Old Chinese *j-* is discussed in 3.5.1 and precludes a solid Sino-Tibetan reconstruction:

ST	NC	OB	OC
*ʔ-	j-	(h)j-	ʔ

[#30] **Ashamed**

[M] *s-r(j)ak ✕ *g-yak (2003:317;326)
[P&S] *jak (1996:#1418); *srək (ibid:#1522)

[NC] *jɐk *ashamed, humble vi*

[OB] ʃɛʔ ရက် / ယှက် ʰjak *ashamed vi*

Peiros & Starostin keep the Burmese and Northern Chin forms apart due to the Written Burmese ʰr- initial which Matisoff accounts for with allofams. Only one inscriptional form has been identified and this reflects ʰr-:

မရြောက်မရှက် *(IB 32.19-20)*
not scared not ashamed
Not scared and not ashamed.

However, Stewart & Dunn (1940-81:324) note a variant Written Burmese spelling ʃɛʔ ယှက် ʰjak which concurs with Matisoff's reconstruction (1972a:68, 1988a:1269) of *j- in Lolo-Burmese as opposed to Bradley's *s-r- (1979:342).

[#31] **Night**

[M] *s-ja-n (2003:165;329)
[P&S] *n-ja (1996:#1412)

[NC] *jan[III] *night n*

Benedict's derivation (1972a:102) of the -n suffix must be rejected on the basis of the Burmese evidence below for an original -n coda.

[OB] ɲî[III] ညဉ့် / ညဉ့် ɲan[III] *night n*

ထိုဝ်ညောင်္ဈမဒ္ဓိဣ္ကုံမက်(မက်)ဧအဲ *(LK 221)*

That night Maddī sleep[198] dream (dream)[199] REAL
That night Maddī dreams a dream.[200]

Following Thurgood (1981:10) and Luce (1981:3), ɲa[III]ည ɲa[III] *night n* may be treated as a reduced variant form. The palatalisation of the coda suggests an original medial -*j*-, but Benedict (1972a:100) and Sagart (1999b:35) believe that *j* was the root initial and that a nasal prefix caused the distinctive Burmese reflex. Benedict proposes that an *n*- prefix was derived from from ne[I/III] နေ့/နေ့ nəj[I/III] *sun, day n* as the first part of what was originally a compound noun; Sagart proposes that the generic nasal voicing prefix that he assumes caused voicing before obstruents in Old Chinese was retained in Burmese as nasalisation in Chinese loanwords. Like Benedict, Sagart is not aware of the original -*n* coda in Burmese making his proposal for a Chinese loan origin, discussed below, debateable. The compound neɪ[III]jɛʔ နေ့ရက် / နိယ့်ရျက် nɪj[III]rjak *day n*, discussed under *Sun* (#40), is supportive of Benedict's hypothesis for a similar night-time compound.

[OC]   –

Sagart's proposal (1995a:251) that iɛ[III] 夜 jia[III] < *'lak[III] *night n* should be reconstructed with *N-l-* and was loaned into Burmese after the loss of the velar coda makes no account for the -*n* coda in Burmese. His supporting example (1999b:35) treating ɲi[I] ညီ ɲɨ[I] *younger-brother n* as a loan from ti[III] 弟 dɛj[II] < *'ləj[II] *younger-brother n* via an *N*- prefix may be rejected due to it ignoring the fact that in Inscriptional Burmese the word is often attested with a velar initial as င ŋɨ[I] which palatalised before the high front vowel *i* in Written Burmese as discussed in 2.3.1.1:[201]

ပုဩာကျွန်ှ... ငဲါကု *(IB 5.2-4)*
Buddha[202] slave ... younger-brother Nga[203] Ku

[198] See the discussion in footnote 339.
[199] Following Ba Shin (1962:72), the second ဝက် is assumed to have been omitted.
[200] Originally translated by Ba Shin (1962:141).
[201] See Pe Maung Tin & Luce (1960:244-5) for confirmation of this treatment.
[202] Pe Maung Tin & Luce (1960:242) gloss this as *The Holy One* and suggest that it could in this instance mean *pagoda n.*
[203] Pe Maung Tin (1930:21) and Pe Maung Tin & Luce (1960:233) note this to be a prefix attached to male Burmans.

4.9. Bilabials

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*p-	p-	p-	p-	p-	p-	p-
*p^h-	p^h-	p^h-	p^h-	p^h-	p^h-	p^h-
*b-	b-	b-	b-	b-	b-	b-
*m-	m-	m-	m-	m-	m-	m-
*$^h m$-	$^h m$-	$^h m$-	m-	m-	m-	m-

4.9.1 Unshifted

These are generally retained unchanged from Sino-Tibetan:

ST	NC	OB	OC
*p-	p-	p^h- / p-	p- / b-
*p^h-	p^h-	p^h-	p^h-/ p-
*b-	b-	p-	b-
*$^{(h)} m$-	$^{(h)} m$-	$^{(h)} m$-	$^{(h)} m$-

[#32] **Discard**

[M] *ba ⋊ *baːj (2003:483-4)
[P&S] *paːj (1996:#179); *Pjəl (1996:#360)

[NC] *paj^III *discard vt*

[OB] pʰeˡ ဖယ် pʰajˡ *push/set aside vt*

Okell (1969:208) tentatively suggests there may be an association with pɛˡ ဖယ် pajˡ *reject, decline vt*. The tone I appears to reflect the underived form as opposed to tone III in Northern Chin and Old Chinese.

[OC] pɔ^III 播 pa^III < *pal^III *sow, disseminate vt*

Matisoff (2000a:161, 2003:394;425) compares Mizo vɔr? *sow vt* but the phonological correspondence is poor.[204]

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[204] Matisoff (2000b:365) alternatively suggests that the Chinese forms are related to a separate root *pʷaːj in Benedict (1972a:41) including Mizo pʰʋajˡ *shavings n*, attested in Weidert (1987:144), Thado vajˡ *chaff n* and Burmese pʰweⁿ ၌ pʰwajⁿ *husk n*. The Burmese form is a semantic specialisation of a verb meaning *fine, small vi* which puts it in a separate semantic field and from which the single Mizo etymon may well be a loan; Northern Chin *wajˡ *chaff n* could perhaps be related but it requires assuming *p-/w-* variation for a root in which it is otherwise not required.

[#33] **Son-in-law**

[M] *s-maːk (2003:325)
[P&S] *maːk (1996:#65)

[NC] *mak^II *son/brother-in-law n.*

[OB] (Θə)mɛʔ (ɔɔ)မက် (sə)mak *son-in-law n*

Following Matisoff (1972a:61), the first syllable may be treated as an abbreviated form of Θa^II ɔɔး sa^II *child n*; a similar case may be found in the word Θəmi^II ɔဒ်း səmi^II *daughter n* discussed in 6.5.3.

[#34] **Ripe**

[M] *s-min (2003:277)
[P&S] *s-min (1996:#107)

[NC] *^hmɪn^I *ripe vi*

[OB] ^hmɛ^III ၿၞ္ ^hmaɲ^III *ripe vi*

Tone III is derived from suffixal *-s* and corresponds to Northern Chin form 2 *^hmɪn^III (< *^hmɪn^I-s).

4.9.2. Lenition to w-

Benedict (1972a:23) notes a sporadic lenition of *p-* to *w-* across Sino-Tibetan which he attributes to preceding prefixes.[205] Benedict's analysis is favored by Sagart (2006a:211-2) who compares it to the spirantisation of voiceless obstruents in Vietnamese after pre-syllables as outlined by Ferlus (1982:87-98).[206] Later Benedict (1972a:24) proposes the alternative that *w-* simply extruded from an original *p-*; this is favored by Matisoff (2000a:175-82, 2007:438-9) who, concomitantly rejecting his

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[205] There are possible internal examples in Old Burmese like wa^III o wa^III *plump, full vi* and pwa^III ɤ pwa^III *swell, bloat vi*.
[206] This is not restricted to bilabial stops in Vietnamese.

own previous proposal (1997b:33) for an unspecified *p*- prefix on a disproportionately large number of words with initial *w*-, rejects Benedict's former explanation due to insufficient evidence for such prefixes.[207] A difficulty with the extrusional hypothesis is that by attempting to explain the phenomenon via an intrinsic feature of the syllable, rather than an externally applied prefix that may or may not be present, an account for the irregularity of the lenition process can no longer be made. Unfortunately the Northern Chin evidence does not elucidate the issue any further but a tonologically somewhat problematic case possibly supporting the prefixal hypothesis is found below.[208]

[#35] **Bamboo**

[M] *r-pʷa (2000:140-1)
[P&S] *waː (1996:#432)

[NC] *rʊaᴵ *bamboo n*

Weidert (1987:135-6) suggests that the tone of the Northern Chin is irregular when compared with Naga evidence reflecting tone II.

[OB] waᴵᴵ ဝါး waᴵᴵ *bamboo n*

[OC] baᴵᴵ 笆 baɨᴵᴵ < *r-baᴵᴵ *bamboo n*
     baᴵ 笆 paɨᴵ < *r-paᴵ *bamboo basket/fence n*

The tonal variation between Chin and Burmese is attested here also. Schuessler (2007:152) suggests the former may be a loan from Tibeto-Burman due to its first appearance being in the *Guangyun* and it also being glossed there as specifically coming from southwest China.

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[207] Sagart (1999b:87-9) provides some interesting, but sparse, evidence for a *p*- prefix in Old Chinese.
[208] Another possible case of lenition is Matisoff's (2003:402;428-9) and Peiros & Starostin's (1996:#444) comparison of Mizo warᴵ *illuminated, white vi* with pʰuoᵢᵇ 皤 baᴵ < *balᴵ *white, white-haired vi* although Northern Chin parᴵ *white vi* is also possible. A difficulty is that Old Chinese -*l* should correspond to Northern Chin -*l* rather than -*r* but Matisoff's further comparison of fanᵢᵇ 燔 buanᴵ < *'banᴵ *burn, roast* suggests an original -*r* to also be possible. Matisoff's additional comparison of Mizo urᴵ *smoke, heat, warm vt*, as attested in Schuessler (2007:514), appears forced.

4.10 Glottals

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*ʔ-	Ø-	ʔ-	Ø-	Ø-	Ø-	Ø-
*h-	h-	h-	h-	h-	h-	h-

4.10.1 Unshifted ʔ-

Matisoff (1997b:29;34) suggests that a distinction cannot really be made between a glottalic onset and a zero-initial in Tibeto-Burman. When looking at Northern Chin from a purely synchronic perspective Matisoff's comment is well-founded; the distinct glottalic creak in Zahau may be treated as a default onset without necessarily having any diachronic significance. In Inscriptional/Written Burmese, the correspondence of ဢ *ʔi* and ဢၞ *ʔwi* with ယ *ja* or ဝ *wa* suggests the glottal onset အ may simply be a vocalic place-holder,[209] and on the basis of internal evidence alone there is no way of distinguishing whether a word begins with *ʔ-* followed by a medial *-j-*[210] or *-w-*, or whether it instead begins with a root initial *j-* or *w-*. However, the reconstruction of Old Burmese as a two vowel *i/a* system shifts the question regarding glottalic onsets away from a synchronic debate over how syllables beginning with open vowels are articulated to whether or not in diachronic terms an initial glottal can be followed by a glide. Comparisons like Northern Chin *wɔk *pig n* and Old Burmese wɛʔ ဝက် wak *pig n* as opposed to Northern Chin *ʔɔp *brood vi* and Old Burmese wuʔ ဝပ် wap *brood vi* suggest a distinction between initial *w-* for the former[211] and *ʔw-* for the latter. Further evidence for a Sino-Tibetan *ʔ-* comes from Pulleyblank's observation (1984a:64) that Late Middle Chinese tonal developments in syllables for which a glottal may be reconstructed reflect a voiceless initial; in spite of Pulleyblank's attempts (1995c:292-6) to demote *ʔ-* to an obligatory onset for vowels

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[209] There are no cases of ဢ/ဢ *ji* or ၞ/ၞ *wi* in Inscriptional/Written Burmese excluding a handful of adverbial or onomatopoeic words attesting the former and the inscriptional form of wei ဝေ as � wij.

[210] This is no longer attested before *i* due to its derivation from *ja*.

[211] Peiros & Starostin's reconstruction of *wak (1996:#438) is preferable to Matisoff's (2000a:157-60) *pʷak which is influenced by an unlikely comparison with pat 犯 pai < *r-pa *pig n*.

in Old Chinese,[212] Baxter's reconstruction (1992:207) of a distinct phoneme is preferable.[213]

ST	NC	OB	OC
*ʔ-	ʔ-	ʔ-	ʔ-

[#36] **Dumb**

[M]   *ʔa (2003:176)
[P&S] *r-ʔaː (1996:#1977)

[NC] *ʔaᴵᴵ *foolish* vi

The tone in Mizo and Zahau is IIa, rather than the expected IIb,[214] suggesting that onomatopoeia has played a role.

[OB] aᴵᴵᴵ ɜə aᴵᴵᴵ *dumb* vi

Matisoff (1978b:25) suggests the Burmese tone III to be secondary; this is supported by Bradley's (1979:348) and Matisoff's (1998a:235) reconstruction of Loloish tone II.

[OC] iaᴵᴵ 瘂 ʔaïᴵᴵ < *ʔaᴵᴵ *dumb, mute* vi

Whether Pulleyblank's proposal (1995c:294-6, 1998b:212) for long vowels in Old Chinese is accepted or not, it is unlikely that the Middle Chinese vocalism of this form derived from a cluster involving -r- as Peiros & Starostin suggest. Schuessler (2007:550) believes onomatopoeia may have played a role which is most likely the casue of the discrepant Northern Chin and Burmese tones.

4.10.2 *Peiros & Starostin's Uvular Hypothesis*

Benedict (1972a:33, 1988b:20) treats *h*- as a very marginal phoneme in Tibeto-Burman; Matisoff (1997) attempts to fill this lacuna but the correspondences are still

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[212] Pulleyblank's argumentation requires a fair amount of special pleading: an OC initial *j- being treated as a vowel and developing a glottal onset; initial *w- having a redundant voicing prefix *ɢ- before which a glottalic onset could develop; distinctive vowel length in Old Chinese to account for vocalic developments conditioned by medial -r- that would call for initial *ʔr- as in Baxter's system.

[213] This may also be labialised as ʔʷ- but, as with the case of kʷ- and kw-, discussed in 3.1.1, such a distinction is not required in Northern Chin or Old Burmese.

[214] See the discussion in 6.1.

not regular and he prefers (1997:32-3, 2007:439) to attribute the alternations to proto-variation. For Lolo-Burmese, Matisoff (1972a) reconstructs no etyma with *h-* and notes (1997b:31) that many of the *h-* initialled forms in Loloish correspond to complex clusters involving resonants in Burmese.[215] Peiros & Starostin's (1996:V.iii-iv) reconstruction of a uvular series **q-* and **ɢ-* to account for correspondences of Mizo *ʔ-/h-* with Old Burmese *ʔ-/kʰ-* and with Old Chinese velars is queried by Bengtson (1998:170) and strongly repudiated by Benedict (1998:151) on typological grounds.[216] Although Sagart's proposal (2007) for uvulars in Old Chinese is provisionally adopted in 3.5.1, Matisoff's concerns (2007:439) over the lack of regularity when projecting this back to Sino-Tibetan is evident in Peiros & Starostin's inability to pin the reflexes down precisely.

Peiros & Starostin's comparative sets in support of uvulars tend to suffer from a variety of problems: lack of internal Old Chinese evidence for uvulars in cases like Mizo aj^{II} *crab n* and ɕiɛ^{III} 蟹 ɣaij^{II} < **r-gaj^{II} crab n* (1996:#2544) or Mizo ɛn^{IIb} *look vt* and tɕiɛn^{III} 見 kɛn^{III} < **kjan^{III} see vt* (1996:#2537); a demonstrable loanword origin in cases like *Cover* in 6.5.4; associations with sound-symbolism, which Matisoff (1997b:33-4) notes to be a common role of laryngeals, in cases like Mizo ham^{III} *yawn vi* and tɕʰiɛn^{III} 欠 kʰɨam^{III} < **'kʰam^{III} yawn vi* (1996:#2091) or Mizo hak^{IIb} *choke vi*[217] and hɛʔ ဟက် hak *phlegm vi* (1996:#2620). In the particular case of Peiros & Starostin's comparison of Mizo hiŋ^{I} *sour vi* with tɕʰɨʔ ချဉ် kʰjaɲ^{I} *sour, acidic vi* (1996:#2079), Matisoff (1988a:459) queries why his Lolo-Burmese reconstruction **ʔ-kjiŋ^{I}* does not compare with his Lahu data that suggests **ʔ-kjan.^{I}* Nishi's suggestion (1974:26) that that the discrepancy may be triggered by a medial *-j-* that caused a shift of *-n* to *-ɲ* is

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[215] He maintains the possibility of Lolo-Burmese *h-* by reconstructing it for two roots (1988a:220, 2003:58).

[216] They also reconstruct a labialised version in comparisons like Mizo huam^{I} *dare vt*, as attested in Schuessler (2007:335), with Burmese wũ^{III} ဝံ့ wam^{III} *dare vt* (1996:#2086) in which their proposed change of **ɢʷ-* to **hʋ-* in Northern Chin parallels Sagart's proposed change of Old Chinese **ɢʷ-* to Middle Chinese ɣw- quite nicely. They also compare kan^{II} 敢 kam^{II} *dare vt* but this is difficult to reconcile phonologically unless a labiovelar initial is assumed to have dissimilated from the bilabial coda to become a plain velar; Matisoff's further attempt (2003:300) to associate Mizo ŋɛm^{IIb} *dare vt* confronts additional problems with nasality.

[217] Peiros & Starostin suggests a possible association with Mizo kʰak^{IIb} *phlegm vi* but this is actually a form 2 inflection whose velar derives from a suffixal *-s* on form 1 kʰa^{III}. The tonally irregular nominal form kʰak^{IIa} *phlegm n*, which further compares with tonally irregular Zahau kʰak^{I}, is good evidence for the onomatopoeic origin of this root with which Shafer (1952:140) and Schuessler (2003:34) suggest a Mon-Khmer link.

supported by the inscriptional forms for *sour vi* of ရျန့် kʰjanᴵ and ချင့် kʰlaɲᴵ whose variation is suggested by Okell (1971:19) to be associated with the **klj-* clusters discussed in 2.3.2.2:

မြယ်ချဉ်လယ်၄၀၀ *(IB 164.17)*
earth acid paddy-field 400
400 acidic earth paddy-fields.

ပုရဟာဒီပက်ရာကာညောင်ချန့်ပွင့်ဖအဲ *(WK 2.4a)*
Buddha Dīpangkarā SUBJ fig sour open REAL
Dīpangkarā Buddha blossoms at the sour fig-tree.[218]

Another interesting case may be found in the word for *dog n* for which Peiros & Staorstin (1996:#2951) reconstruct uvular **q-* but Matisoff (2003:448-9) reconstructs labiovelar **kʷ-* on the basis of his proposals in Lolo-Burmese (1969:196-7) to account for a Lahu bilabial aspirate *pʰ-* rather than the expected *kw-*. In spite of Matisoff's uncertainty (2003:24) as to whether his labiovelar proposal can be reconstructed back to the Tibeto-Burman level, and additional problems with the Old Chinese coda, the otherwise regular correspondences suggest it may be a very old loanword:

[#37] **Dog**

[M] $*k^w\text{əj-n}$ (2003:448-9)
[P&S] $*q^{hw}\text{i:j/n}$ (1996:#2951)

[NC] **ʔʊjᴵᴵ dog n*

Benedict (1972a:26) supposes the initial velar was reanalysed as a prefix and dropped; Peiros & Starostin account for its lack by reconstructing a uvular initial. The Xôngsai data in Luce (1962c:3; 1985:II.82) suggests an original *-l* coda.

[OB] kʰweɪᴵᴵ ခွေး / ၡယ် kʰwɨjᴵᴵ *dog n*

Matisoff (1969:196-7) originally suggests the velar initial may derive from the Lolo-Burmese velar animal prefix, discussed in Matisoff (1969:190-9), but later (1980:11) follows Benedict in reconstructing an original velar element that was dropped in Northern Chin. Matisoff (1978b:6-7) attempts to bolster

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[218] Based on an original translation by Luce & Whitbread (1971:195).

the evidence for a Lolo-Burmese labiovelar initial *k^w- by adding Lolo-Burmese *k^wəj^I *nest n* which also has a bilabial initial in Lahu. However, Matisoff's other supporting examples are problematic: in spite of Burmese p^hi^II 8: / [§: p^hɨ^II *comb vt*[219] attesting a bilabial initial which Bradley (1979:358-9) reconstructs for Lolo-Burmese, Matisoff, in Benedict (1979:27), reconstructs Lolo-Burmese *ʔ-g^wəj^II *comb vt*[220] to compare a tonologically discrepant Mizo isolate k^hʊjʔ *comb n/vt*; Matisoff (1980:24, 1986:83)[221] adds *ŋ^wat *star n*, due to its *m-* reflex in Lahu but, as noted in Matisoff (1985a:14-5), the rhyme correspondence is not well-supported; Matisoff (1986:84-7) reconstructs *N-g^wa^II *chew vt* due to a Lahu bilabial *b-* reflex but has to insert a medial *-j-* as *N-g^wja^II to account for the Lahu rhyme while acknowledging that the basic root is *wa, as reconstructed by Peiros & Starostin (1996:#431), with the velar initial emerging through reanalysis of its prefixal origin as a root initial.[222]

[OC]   ʨ^hyɛn^II 犬 k^hwɛn^II < *^hk^wjən/l^II *dog n*

Sagart (1999b:190) rejects Benedict's proposal (1972a:158) for an *-n* suffix to instead propose a liquid coda but Old Chinese *-n* would suggest an original *-r* while Northern Chin *-j* would suggest an original *-l*.

The question regarding the specific role of uvulars, if indeed a reconstructible category, remains very much open. Another suggestive case is the follwing:

[#38]   **Steal**

[M]   *ruːk (2003:80); *r-kəw (2003:441)
[P&S]   *r-q^ho: (1996:#2568)

[NC]   *ru^II *steal vt*

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[219] The form without the medial *-r-* is most likely a modern corruption due to the merger in modern pronunciation. Notably Bradley's correspondence tables (1979:181-2) show other Loloish languages differing in whether they reflect an original *-r-* or not.
[220] The reconstruction follows Matisoff (2006:100); Matisoff (2003:434) reconstructs Tibeto-Burman *k^wi-s following Benedict's modification of his original *kwi(j) (1972a:140) to *kwis (1979:13).
[221] See also Matisoff's comments in Benedict (1979:27).
[222] Matisoff (2006:101) also adds a root *k^wu *fist n* due to bilabial initials in some Loloish languages among which Lahu is lacking.

The final -*k* in Matisoff's former root should be derived from suffixal -*s*. Peiros & Starostin suppose that an *r*- prefix replaced the original uvular initial after it developed into Northern Chin Ø-/ʔ-. Further evidence for a uvular initial may possibly be found in Matisoff's reconstruction (1997b:33) of an allofam *hu.

[OB] kʰoʊ^{II} 𐐎: / 𐐎 kʰɨw^{II} *steal vt*

Matisoff's latter form accounts for the Burmese reflex; the *r*- prefix is reconstructed on the basis of Written Tibetan. Weidert (1987:150-1) and Löffler (1966:130) support Peiros & Starostin's association of the Burmese and Northern Chin forms.

[OC] –

Peiros & Starostin compare kʰɔu^{III} 寇 kʰəw^{III} < *kʰaw^{III} *rob vt, robber* n. The derived nature of tone III suggests it may have ousted another tone but following Yakhontov's proposal (1970:65) that wan^{Ib} 完 ɣwan^{I} < *gaw-n^{I} *complete vt* is phonetic the rhymes are difficult to reconcile. Notably Peiros & Starostin (1984:124) suggest an Austronesian link.

Chapter 5: Northern Chin Rhymes

On the basis of internal evidence alone, Northern Chin cannot properly be reduced beyond a basic five vowel system. The only sign that something might be amiss is the synchronically moot point that -*j* and -*w* cannot occur as codas after ɪ/*i* and ʊ/*u* due to the lack of a possible phonetic distinction in Northern Chin between -*i* and -*ɪj/-ij* or -*u* and -*ʊw/-uw*. The problem that this entails diachronically is an inherent contradiction whereby, on the distributional grounds that all vowels can occur with all codas, if -*j* and -*w* must have originally existed after *i* and *u*, they would have disappeared as soon as they appeared. Such vocalic difficulties form an interesting parallel with Benedict's supposition (1972a:58-9, 1973b:7) of a basic Tibeto-Burman three vowel *i*, *u*, *a* system in which only the vowel *a* occurs with any regularity in open syllables that leads Matisoff (2003:159) to characterise it as a single vowel system of *a* with a set of diphthongs.

Excluding those beginning with *e* and *o*, due to Benedict's assumption (1972a:58-9) that the mid-vowels are generally secondarily derived,[223] the diphthongs posited by Benedict are -*ij*, -*uw*, -*a(:)j* and -*a(:)w*. Yet, these are not freely occurring diphthongs to which a consonantal coda may be added, but rather are closed rhymes with a -*j* or -*w* coda that should not really be included in the vowel system. Notably Benedict (1972a:57) suggests modifying the diphthongs -*ij* and -*uw* to -*əj* and -*əw* which according to Matisoff (1985a:20) avoids an implicit length distinction between -*i* and -*ij* or -*u* and -*uw*.[224] This introduces *ə* as a second vowel into the system which, following the regular lowering of Old Chinese *ə* to *a* in Tibeto-Burman, noted by Benedict (1972a:183-4, 1973b:8-9),[225] effectively establishes a vertical *ə/a* vowel system for Sino-Tibetan in open syllables and syllables closed with glides.

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[223] Although Matisoff (1972b:279) concurs with a basic *i/u/a* system, he notes (1972b:280-1) that a demonstrable origin in *ja* and *wa* for all cases of secondarily derived *e* and *o* has not been found such that Benedict's provisional rhymes in *e* and *o* assume a more permanent status in the reconstructions in Matisoff (2003).

[224] Benedict's occasional reconstruction of pure -*i* and -*u* rhymes in contrast with -*ij* and -*uw* is chiefly based on Written Burmese. The former is shown in 2.1.4 to derive from an original lateral coda; the latter is discussed inn 5.2.3.1. Matisoff's proposal (1992:170-3) to add another diphthong *-*uj* to contrast with *-*əj* after a labial feature stems from a confusion of Burmese forms which should be exclusively assigned to *-*əw* but in which the spelling ွ, a combination of ◌ and ◌ represented in modern spoken Burmese as *u* and *i*, has misled him into trying to associate them with a putative *-*uj*.

[225] This correlation specifically refers to *ə* when it is not coloured by surrounding palatal or labial elements. See Baxter (1994a:29-31), who reconstructs *ə* and *a* in his Old Chinese system in the same

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That such an interpretation represents a reanalysis rather than a rejection of the fundamentals of Benedict's system is shown by Matisoff's observation (2003:159) that the Tibeto-Burman vowel system corresponds to the two vowel system proposed by Hockett (1947:266-7) for Mandarin Chinese. While Matisoff seems to be using this analogy to justify his system in terms of phonological reality whereby any given language at a given time could develop into a system that may be analysed in this way, it is this same article by Hockett that Pulleyblank (1984a:46-57, 1984b) uses to justify his proposal for a basic *ə/a* system underlying the roots of Old Chinese.

5.1. *Open Rhymes*

5.1.1 *High vowels -i and -u*

Northern Chin *-i* and *-u* appear to correspond to Sino-Tibetan *ə* before *-j* and *-w* as they are reconstructed for Old Chinese:[226]

ST	NC	OB	OC
*-əj	-i	-ij	-əj
*-əw	-u	-iw	-əw

[#39]   **Slingshot**

[M]   *ləj (2003:192)
[P&S] *lij (1996:#1935)

[NC]   *li^{II} *slingshot n*

[OB]   lei^{II} ဇော: / လေးကွင်း lij^{II} *bow n*[227]

[OC]   ṣ1^{II} 矢 ɕi^{II} < *^{lh}ləj^{II} *arrow n*[228]

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rhymes as Pulleyblank when no coloring is assumed, for some correspondence sets supporting this well-established correlation.

[226] Benedict's comparison (1972a:16;91) of Mizo ^{h}ni^{IIb} *gums n* with ni^{I} ⚬ ni^{I} *red vi* is phonologically and semantically problematic.

[227] Not attested in the inscriptions.

[228] Sagart (2006a:218) rejects Matisoff's comparison (2003:404;422) of Mizo and Tedim t^{h}el^{II} *arrow n* with ṣ1^{II} 矢 ɕi^{II} < *s-'ləj^{II} *arrow n* to propose alternatively t^{h}an^{Ib} 彈 dan^{I} < *dan^{I} *shoot pellets at vt* but the tones and coda are discrepant.

[#40] **Sun**

[M]   *nəj (2003:191;464)
[P&S] *nij (1996:#581)

[NC]   *ni^I *sun, day* n

[OB]   neɪ^I နေ့ / နိဳယ်ဴ nɪj^I *sun* n

> Benedict's proposal (1972a:88) that the tone III in neɪ^{III} နေ့ / နိဳယ့ဲ nɪj^{III} *day* n is grammatically induced does not seem to fit the two areas of usage identified by Allott (1967:159-61): additive and attributive noun phrases; emphatic expressions. However the noun phrase neɪ^{III}jɛʔ နေ့ရက် / နိဳယ့ဲရျက် nɪj^{III}rjak in the inscriptions, which is a compound of neɪ^{III} နေ့ / နိဳယ့ဲ nɪj^{III} *day* n and jɛʔ ရက် / ရျက် rjak *day (of 24 hours)* n, suggests a possible attributive function that may have become lexically established:

> နိဳယ့ဲရျက်မာခွာ *(IB 303.6)*
> day day not separate
> *Every day and night*[229] *without break.*

[C]   ɲɪ^{III} 日 ɲit < *nɵc < *'nəj-k *sun, day* n

> Sagart (1999a:175) observes a similarity in correspondences with *blood* n which leads him to suggest that *sun* n is also a Chinese loanword in Tibeto-Burman. An issue not addressed by Sagart is that here the tonal reflex is I whereas in *blood* n it is II. The development of loanwords is not always consistent but the proposed development of -ək^j > -əc > əjʔ with a glottal catch supports the tone II reflex of *blood* n much better. Bodman (1980:129), who also assumes this for *blood* n, and Baxter (1980:17) suggest that there may have been an original glottal stop in Old Chinese that was lost in Tibeto-Burman, but Baxter notes that this conflicts with the proposal to treat glottal stop as the source of tone II. Starostin (1995:237-8) prefers to assume a -*k* suffix, as he also does in the case of *blood* n, but is unable to assign any specific function. The comparison with the velar suffix in ɕi^{III} 夕 ziajk < *s-

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[229] This gloss follows Luce's (1969-70:I.114) original translation of the inscription.

'lak *evening* n depicting a *moon* n in the earliest inscriptions suggests a similar temporal usage of the suffix.

[#41] **Smoke**

[M]   *kəw (2003:178;451)
[P&S] *giw (1996:#2052)

[NC]   *kʰuᴵᴵ *smoke n/vi*

[OB]   kʰoʊᴵᴵ ၌း / ၌ံ kʰɨwᴵᴵ *smoke, steam vi*

[OC]   –

Benedict's (1972b:30) comparison of ɕynᴵ 熏 xunᴵ < *ˈxwənᴵ *smoke, steam vi* as a possible example of his proposed shift of tone II to I in the environment of an -*n* suffix is queried in 6.5.2.

5.1.2 *Low Vowel -a*

Sino-Tibetan -*ə*, which is still maintained in Old Chinese, has merged with -*a* in Northern Chin in the same way as in Old Burmese:

ST	NC	OB	OC
*-*a*	-*a*	-*a*	-*a*
*-*ə*	-*a*	-*a*	-*ə*

[#42] **Child**

[M]   *tsa ⋈ *za (2003:176;450)
[P&S] *ʣʰəᴵᴵ (1996:#1615)

[NC]   *ʣaᴵᴵ *offspring n*

[OB]   θaᴵᴵ သား saᴵᴵ *son n*

The irregularity of the initial is ignored by Peiros & Starostin; Matisoff (1978a:55, 1995:63) suggests that Lahu reflects allofamic variation in this root with *ʣ*- when occurring as a prefix to boys' names and *z*- with the meaning here. A possible solution is provided by the Chinese evidence below.

[OC]   sı^{III} 巳 zi^{II} < *'zə^{II} *sixth earthly branch n*

Matisoff and Peiros & Starostin compare tsı^{II} 子 tsi^{II} < *'cə^{II} *son, child n* but Sagart (1999b:165) suggests this meaning, as opposed to its use as a calendrical sign, to be internally derived from a verb meaning *bear vt* associated with tsı^{I} 仔 tsi$^{I/II}$ < *'cə$^{I/II}$ *burden n* such that the Tibeto-Burman correlates are Chinese loanwords.[230] Benedict (1972a:27) suggests an association with sı^{III} 巳 zi^{II} < *'zə^{II} *sixth earthly branch n* apparently on the basis of Karlgren's tentative treatment (1957:255) of it as depicting a foetus.[231] There is some palaeographical support to such an interpretation and Xu's similar association (1988:19-20) of sı^{III} 巳 zi^{II} < *'zə^{II} with tsı^{II} 子 tsi^{II} < *'cə^{II} on the basis of their similar inscriptional forms of 𝟛 and 𝟨 is supported by his observation (1988:1575-6) of a graph 𝟛 with an unclear meaning that appears to be an amalgam of the two. The source of Middle Chinese *z-* is also problematic; noting that it only occurs in words derived from Type B syllables, Baxter (1992:206) suggests that Old Chinese *z-* may have merged with *dz-* in Type A syllables. Alternatively, Sagart (1999b:29-30) proposes that Middle Chinese *z-* generally appears to result from an *s-* prefix before non-nasal voiced root initials such that *z-* does not need to be reconstructed for Old Chinese. Sagart's proposal is eminently reasonable but Baxter's suggestion allows Old Burmese *s-* to be treated as a regular derivation from *z-* and allows an explanation for Northern Chin *dz-* to be made along similar lines to the proposed merger in Chinese.

[#43]   **Jaw**

[M]   *ka (2003:486)
[P&S] *g$^{(h)}$a (1996#2037)

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[230] Sagart's concomitant suggestion (1999b:211) that the *xiesheng* graph tsı^{III} 字 dzi^{III} < *'jə^{III} *breed, love vt, writing n* is loaned into Burmese as sa^{I} တ ca^{I} *writing n, sympathise vt* shows a more regular correspondence of initials which may possibly be explained by different loan periods but does slightly mitigate his proposal.

[231] Benedict's further comparison (1972a:158) of tɕʰɪn^{I} 親 tsʰin^{I} < *'-əɲ^{I} *parents, relatives n* is rejected by Sagart (2006a:219) on both phonological and semantic grounds; Benedict's further use (1972b:30) of this comparison in support of his theory that an *-n* suffix caused a tone shift of I to II in Old Chinese is rejected in 6.5.2. See Schuessler (2007:429) regarding the difficulties in reconstructing the initial.

[NC] *kʰaˡˡ *jaw n*

[OB] (də)gaˡˡ (ထ)ဝၣ် (tam)kʰaˡˡ *door n*

[OC] –

The Old Burmese semantics make it tempting to associate huᴵᴵᴵ ♭ ɣɔˡˡ < *gaˡˡ *door n* but other Tibeto-Burman comparanda suggests the root meaning to be *jaw n*. There is a possible association with Northern Chin *kaˡˡ *forked vi* and Old Burmese kaˡˡ ကား kaˡˡ *divaricate vi*,[232] although the etyma under *fork vi* in 6.5.4 suggest Mon-Khmer influence.

5.1.3 *Mid-vowels -e and -o and Diphthongs -ia and -ʊa*

Benedict (1972a:58) supposes ɛ/e and ɔ/o, restricted in open syllables to *-e* and *-o*, to be secondary derivations from *ia* and *ʊa* respectively but makes no attempt to account for cases where the diphthongs remain. Luce (1962a:55;57-9), who transcribes the Northern Chin distinctions ɛ/e and ɔ/o as ĕ/ɛ and ŏ/ɔ (1962a:55) or ɛ/ɛː and ɔ/ɔː (1985:II.70-87), follows a proposal originally made in table II of Luce (1959a), to suggest conversely that the diphthongs derived from the vowel-breaking of original [e] and [o] vowels which he maintains to still be attested in Thado *-oʊ* [oː] and *-eɪ* [eː]. Even without the recourse of Sino-Tibetan evidence favouring Benedict's proposal, a clear association in open syllables of the diphthongs with ɛ/e and ɔ/o is found in the observations of Stern (1963:236), Henderson (1965:24) and Weidert (1975:69-70) that the diphthongs *-ia* and *-ʊa* surface as *-ɛ* and *-ɔ* when forming the short unstressed initial syllable of a disyllabic compound. A similar process occurs in certain verbal inflections as discussed in 1.4.1, and further evidence may be found in the occasional sporadic variation between diphthongs and pure vowels in some morphemes.

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 such a treatment is not acceptable. That the syllable weight in the former part of Sizang *iᵉ* is more likely a secondary development form an original placement in the latter part of the syllable, as in Tedim *ia*, is

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[232] See Benedict (1972a:166).

supported by two pieces of evidence: the secondarily derived Sizang diphthongs εa and ɔa have syllable weight in the latter part; on the basis of the available, albeit sporadic, evidence, the source of the diphthongs appears to be the medials -j- and -w-, attested in Old Burmese and Old Chinese, before the a vowel which before ə simply merged to give ɪ/i and ʊ/u. The source of the distinction between pure mid-vowels and diphthongs is not entirely clear. The limited comparative sets in closed syllables suggest an association of pure vowels with Old Chinese Type A syllables and diphthongs with Type B syllables, but this may well be coincidental. Unfortunately no comparative sets in open syllables have been discovered but the above discussion is supported by the closed syllable examples in 5.2.1.2 and 5.2.1.3 below. Corresponding to Sino-Tibetan -ja and -wa were -jə and -wə. It will be seen below that in closed syllables these generally developed into ɪ/i and ʊ/u. In open syllables the correspondences are hitherto limited to -wə in syllables corresponding to Old Chinese Type B but this has interestingly undergone vowel lowering from ə to a in spite of the preceding labial environment to give the following correlations:[233]

ST	NC	OB	OC
*-wə	-ʊa	-ɨw	-wə

[#44] **Carry**

[M] *ba (2003:24); *bəw (2003:44;178;199)
[P&S] *p(u)ə-k (1996:#220); *pʰəːw (1996:#254)

[NC] *pʊaᴵᴵ *carry on back vt*

Superficially *puᴵ *carry on shoulder vt* appears to be a better comparison with the Burmese and Chinese forms but the tonal contours are tellingly irregular.

[OB] poʊᴵᴵ ၿ: / ၿၥ pɨwᴵᴵ *carry on back vt*[234]

[OC] fuᴵᴵᴵ 負 buwᴵᴵ < *'bwəᴵᴵ *carry on back vt*[235]

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[233] The discovery of correspondence sets is undoubtedly hampered by the difficulty in distinguishing medial -w- in Old Chinese; see the discussion in 3.1.2.
[234] Not attested in the inscriptions.
[235] Baxter (1992:182) suggests this may have had an original velar coda which was lost due to the glottal suffix that gave tone II. In the system here this would reconstruct as *'bəkᴵᴵ supporting Baxter's suggestion of a comparison with pɛiᴵᴵᴵ 背 pəjᴵᴵᴵ < *pəkᴵᴵᴵ *back n*; see the discussion under *Lick* (#13) for another possible example of this.

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Baxter's comparison (1994a:31) of paw[III] 抱 baw[II] < *bəw[II] *embrace, carry in arms vt* concurs well with the Burmese form but fails to account for the Northern Chin vocalism.

[#45] **Village**

[M]   *r/g-wa (2003:127)
[P&S]   *g(^{h})^{w}a (1996:#2068); *q^{hw}ə (1996:#2575)

[NC]   *k^{h}ʋa^l *village n*

Matisoff (1972b:278) reconstructs *grwa with the assumption that the velar initial has been treated like a prefix in Burmese and dropped while in Chin the *r* has disappeared in the environment of the velar; this cannot be the case as Chin would have developed a retroflex initial.

[OB]   –

Matisoff follows Benedict (1972a:109) in comparing jwa^l ရွာ rwa^l *village n* by treating initial *r-* as a prefix and similarly demoting the *k^h-* of Northern Chin to a prefixal status. Luce's observation (1959b:40) that in Old Burmese the word often had a larger sense of *world n* does not in and of itself pose serious semantic difficulties according to the schema in Evans (1992:490), but Lehman's observations (1963:172-3) regarding the distinction between Northern Chin *k^{h}ʋa^l *village n* as the settled area with its semantic extensions of *soul/spirit n* when contrasted with *rɛm^l *forest, territory n*, discussed under *Forest* (#49), as the uncultivated wilderness cast serious doubts on the validity of Benedict's comparison. Phonological issues further compound these difficulties: in addition to the Chinese form below suggesting the initial *k^h-* to be original and calling into question the vocalism, the word is often attested in the inscriptions with a superfluous final *-h* –ဟ် which was also noted in the loanwords for *Buddha* and *Brahmin* in which the *-h* in the latter word is

suggested in footnote 250 to be an artefact of the original Mon spelling.[236] The fact that Bradley (1979:326) cannot find Loloish correlates for the Burmese word suggests an external source to be likely here as well. In what is often held to be the earliest Old Burmese inscription,[237] the word for *village n* is spelled with a curious ေ◌ာ *waw* nucleus as ေရွာဟ် *rwawh*:

ထိဝ်မင်ကာကျောန်သုံေရွာဟ်ေတာဟ်ပါယ်မရာအာဝိယ်ဇအဲ *(MZ A.8-9)*
This king SUBJ slave three village EMPH wife dear[238] to give REAL
This king gave three villages of slaves to his dear wife.[239]

Although the use of ေ◌ာ *aw* to spell words with a nucleus ◌ာ *wa* is shown by Ba Shin (1962:38-9) to be common in the inscriptional language, and may incidentally be observed in the spelling of ကျွန် *slave n* as ကျောန် in the above inscription, it was noted in 2.1.2 that the rhyme *-waw* is not possible in Old Burmese due to phonotactic constraints causing dissimilation to *-aw*. Luce (nd) notes that many Burmese village names preserve Old Mon names, and although the standard Mon word for *village n* bears little resemblance to the Old Burmese form, Shorto (2006:560) notes a Palaung word which he transcribes as *ru*. In this regard, Ba Shin's observation (1962:36-7) that words rhyming in Inscriptional Burmese *-u*, corresponding to Old Burmese as *-wi* in the system used here, were often written with *-aw* makes this a very interesting correspondence.

[OC] tɕʰiou¹ 丘 kʰuw¹ < *'kʰʷə¹ *village, hillock n*

Recognition of the above developments also helps accounts for the relationship between Northern Chin *kʊa¹¹ *nine vi* and Old Chinese tɕiou¹¹ 九 kuw¹¹ < *'kʷəw¹¹ *nine vi*. Matisoff (1980:17, 1997a:107) suggests that *kʊa¹¹ may have developed via an *-a* suffix from *kəw¹¹-a but Weidert (1981:10;12) queries Matisoff's division of the

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[236] Ba Shin (1962:38-9) extends Duroiselle's suggestion (1919:37) concerning *village n* to propose that the *-h* in these words represents tone II. The fact that the word for *village n* is in tone I is already a difficulty here and it seems Ba Shin and Duroiselle are influenced by the transcriptional practice in the Ajāwlat Inscription discussed in 2.4.1.

[237] See the discussion in footnote 8.

[238] Duroiselle (1919:36) and Stewart & Dunn (1940-81:265) note this to represent Written Burmese အတယ်.

[239] Based on an original translation by Duroiselle (1919:25).

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rhyme in this manner. Alternatively Lehman (1973:520-1;544) proposes that it developed from a lost final -*l* but Maran's proposal (1971:38) for final liquids in Old Burmese, upon which Lehman bases his argument, is incorrect.[240] Karlgren's reconstruction (1957:260) of Old Chinese *ki̯ŭg, equivalent to *'kʷə in the system used here, is corrected by Baxter (1994a:30-1) but Karlgren's error actually hints at a solution. Baxter (1992:510) notes that words with labiovelar initials in '-*əw* dissimilated to '-*ə* before undergoing rounding again later unless inhibited by a medial -*r*-. Following Miller's proposal (1988:528), discussed in 6.5.4, that Tibeto-Burman numerals from *two* to *nine* are Old Chinese loanwords, it seems the word for *nine vi* was borrowed across at the time of it rhyming as '-*ə* from which it accordingly dipthongised to -*ʋa* in the manner discussed above; the Burmese form also regularly reflects koʋᴵᴵ ကိုး / ကိုဝ် kɨwᴵᴵ *nine vi*.

5.1.3.1 *Prefix Induced Diphthongs*

A further source of the Northern Chin diphthongs appears to be prefixation before *j*- and *w*- when occurring as initials.[241]

[#46] **Rain**

[M]   *r-wa-s (2003:173;433)
[P&S] *r-qʰʷa (1996:#2579)

[NC] *r-wɐs *rain n*

The original word must have been *r-wɐs in order for Mizo, Zahau and Thado to develop rʋaʔ; an original *rʋas would have given rʋaᴵᴵᴵ.[242]

[OB] (moʋᴵᴵ)jwaᴵ (မိုး/မိုဝ်)ရွာ (mɨwᴵᴵ)rwaᴵ *rain vi*

Weidert (1987:97) notes this as an exception to his correlation of -*s* and Lolo-Burmese tone II. Like its Loloish counterparts, this only occurs as a bound morpheme such that a sandhi shift of tone II to I in the latter syllable seems likely. Further support for this may be found in the association between saᴵᴵ သာ

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[240] See Matisoff (1973b:742).
[241] See also *Bamboo* (#35).
[242] See the discussion in 5.2.7.

ca^{II} *eat vt* and əsa^{I} အစာ əca^{I} *food n* which is plausibly a shortened form of

əsa^{II}əsa^{I} အစာ:အစာ əca^{II}əca^{I} that perhaps underwent the same sandhi change.[243]

[OC] y^{II} 雨 wua̗^{III} < *$^{'}$wa^{III} *rain vi*
       y^{II} 雨 wua̗^{II} < *$^{'}$wa^{II} *rain n*

Both the verbal and nominal senses are attested in the earliest inscriptions. Whether the tone II reflex can be treated as a nominal derivative requires further investigation; see the discussion in 3.3.2.

今十一月其雨 *(HJ 12636)*
this eleven month perhaps rain
In this eleventh month it may rain.[244]

今一月帝令雨 *(HJ 14295)*
this eleven month Di^{245} order rain
In this eleventh month Di (will) order rain.[246]

5.2 *Closed Syllables*

5.2.1 *Unshifted*

When the coda remains unaltered between Sino-Tibetan and Northern Chin,[247] the vocalic alternations appear to be generally what would be expected from the above discussion regarding open syllables. Specific developments conditioned by other codas will be discussed separately below. The discussion of closed syllables is constrained by the paucity of correspondence sets and it is expected that further details will be added to the system as new correspondences are discovered.

5.2.1.1 *Pure Vowel*

ST	NC	OB	OC
-ə-	*-ɐ/a-*	*-a-*	*-ə-*
-a-	*-ɐ/a-*	*-a-*	*-a-*

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[243] Matisoff (2003:440) compares this to Mizo fɐʔ *feed with mouth vt* but Shafer (1952:138) and Shorto (2006:71) note a good Mon-Khmer link.
[244] Based on an original translation by Keightley (2000:44).
[245] Itō, in Itō & Takashima (1996:I.4-7), discusses the role of this supreme deity.
[246] Based on an original translation by Keightley (2000:70).
[247] The backing of the velar coda *-k* to *-ʔ* in Thado and Zo is not significant here.

[#47] **Fathom**

[M]   *la(:)m (2003:251;298)
[P&S] *ləm (1996:#1705); *T-lam (1996:#1703;1887)

[NC]   *lam^I *fathom n*

There is some confusion here with Mizo ^hlɐm^I and Zahau lɐm^I *fathom n* having the syllabic weight on the coda rather than the vowel. It is possible that the Thado, Zo, Tedim and Sizang forms were influenced by *lam^I *dance vi* due to the characteristic Northern Chin dancing style with arms outstretched. The aspiration in Mizo may be a back formation from ^hlɐm^I *fathom vt* which is not attested in the other languages.

[OB]   lã^I ဃ lam^I *fathom n/vt*

[OC]   ɕyn^{Ib}/ɕɪn^{Ib} 尋 zim^I < *s-'ləm^I *measure of length n*

[#48] **Mouth**

[M]   *r-ka(:)m (2003:251;298)
[P&S] *k^həm (1996:#2291); *k^həːm (1996:#2294)

[NC]   *kɐm^I *mouth n*

Matisoff glosses the Mizo form as *bank, shore n* but this is a figurative usage of its root meaning *mouth n*; Peiros & Starostin's reconstruction of the different meanings under separate roots is unnecessary. Matisoff's association of Northern Chin k^ham^{III} *precipice n*, in turn a nominal form 2 of k^ham^I *precipitous vi*, may be valid but it would represent an ablaut variant as attested by his Chinese comparanda k^han^{III} 墈 k^həm^{III} < *k^həm^{III} *cliff, bank n* and tɕ^hin^I 嵌 k^him^I < *r-'k^həm^I *precipitous vi.*[248]

[OB]   k^hə(dwĩ^{II}) အခံ(တွင်း) k^ham^I(twaŋ^{II}) *(inside of) mouth n*

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[248] See Pulleyblank (1984a:173-4) for the necessity of reconstructing *r-* here. Peiros & Starostin (1996:#2055) partially support Matisoff's association by listing 嵌 in the root discussed here but 墈 in a separate root (1996:#2291).

This mostly obsolete compound noun is noted in Luce (1977a:19, 1981:41); the *-m* coda is sometimes omitted in the inscriptional form as the modern pronunciation would attest:[249]

ကိပုန်သာဟ်ခတွင်ှိယ်ပါ *(LK 156)*
parrot Brahmin[250] mouth inside excrement voids[251]
The parrot defecates inside the Brahmin's mouth.[252]

Matisoff and Peiros & Starostin compare the tone II word kã[II] ကမ်း kam[II] *bank, shore n.* As an individual word it appears to have lost its aspirated initial, attested in the inscriptions, which is still maintained in compounds like [h]noʊʔk[h]ã[II] နှုတ်ခမ်း [h]nwɨtk[h]am[II] *lips n* in which [h]noʊʔ နှုတ် [h]nwɨt means *mouth, snout n.* The semantic extension involved parallels that of Mizo above but the concomitant shift to tone II is not attested there.

[OC]   kan[I] 甘 kam[I] < *kam[I] *(sweet vi)*

This now has a meaning of *sweet vi* but it appears in the earliest inscriptions as 甘, a mouth 口 (k[h]ou[II] □ k[h]əw[II]) with a line inside, which, aside from functioning as a place name, is unclear in meaning. Boltz (1992:42) assigns it to a word family meaning *close in/down on* in which he also includes han[I] 含 ɣəm[I] < *gəm[I] *hold in the mouth* as Qiu (2000:218-9) supposes the original sense of 甘 to have been. It is perhaps of no coincidence that Thado, Zo, Tedim and Sizang also use kam[I] *mouth n* in a verbal sense, with a form 2 kam[III], to mean *set a trap vt.* In Mizo and Zahau this occurs as a derived form

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[249] However, note also Mizo and Zahau ka[I] *mouth n* which is only attested in a verbal sense *open (as mouth)* in Thado, Tedim and Sizang.

[250] Hla Pe (1967a:79) notes this to be a Mon loanword; this possibly explains the superfluous final *-h*; see the discussion in under *Village* (#45). It occurs in Written Burmese as ပုဏ္ဏား.

[251] The verb phrase ၵ်ိer[n]pa[I] ချေးပါ / နှုတ်ပါ k[h]lɨj[n]pa[I] is a set compound meaning *defecate vi.* Ba Shin (1962:136) glosses it as *drop dung* for the inscription here; this represents a more literal interpretation in light of the first syllable individually meaning *excrement n* which Matisoff (2003:201) associates with ɕɪ[II] 屎 ɕi[II] < *[lh]ləj[II] *excrement n.* Matisoff's suggestion (1969:198) that the velar initial in Burmese may represent the Lolo-Burmese velar animal prefix is likely, but the Karen forms that he attempts to associate, undoubtedly from the same source as Northern Chin *ʔe[II] *defecate vi,* are shown by Shafer (1952:158), Benedict (1994a:5) and Shorto (2006:238-9) to be Mon-Khmer in origin.

[252] Based on an original translation by Ba Shin (1962:136).

kam[IIb] which suggests the original tone I sense may have been intransitive as the Old Chinese forms would suggest.[253]

[#49] **Forest**

[M]   *ram (2003:299-300)
[P&S] *rəm (1996:#708)

[NC]   *rɐm[I] *forest, territory* n

Shafer (1952:139) and Schuessler (2007:358-9) suggests there may be a Mon-Khmer link; the forms in Shorto (2006:378) suggest the semantic fields to be somewhat different.

[OB]   –

The forms in Shorto (2006:379) show Peiros & Starostin's comparison of jõ[I] 虬 rwɨm[I] *cluster, clump* vi to rather be a Mon-Khmer loanword; this seems to be supported by the comparison in Hla Pe (1967a:85).[254]

[OC]   lın[Ib] 林 lim[I] < *[ʼ]rəm[I] *woods, forest* n
       sən[I] 森 şim[I] < *s-[ʼ]rəm[I] *dense trees, thicket* n

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5.2.1.2 *Medial -j-*

ST	NC	OB	OC
-jə-	-ɪ/i-	-i-	-jə-
-ja-	-ε/e-, -ɪa-	-ja-	-ja-

[#50] **Extinguish**

[M]   *s-miːt/n (2003:519-20)
[P&S] *me(ː)t (1996:#90)

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[253] There also seems to a Mon-Khmer connection here with Shorto (2006:361-2) linking a root meaning *molar tooth, jaw* n with han[III] 頷 ɣəm[II] < *gəm[II] *jaw* n, a *xiesheng* derivative of 含; the Burmese form ã[I] သ am[I] *molar tooth* n compares well with the Shorto's glottalically initialled variant (2006:358).

[254] There is a semantically barely distinguishable word jõ[II] 虬 rwɨm[II] *assemble, gather* vi whose tone II reflex may reflect a peculiarity of the loan process; Hla Pe (1967a:85) and Shorto (2006:213) alternatively propose a link with a Mon-Khmer root with a final -ŋ.

[NC] *mɪt *extinguish vi/t*

[OB] ʰmeɪʔ မှိတ် ʰmɪt *close, extinguish vt*

Benedict (1972a:99) proposes a transitivity distinction with ʰmeɪ̃ˡˡ မှိန်း ʰmɪnˡˡ *have eyes closed, doze vi* via a gloss of ʰmeɪʔ မှိတ် ʰmɪt as *shut (the eye), wink*; Matisoff prefers to simply treat them as allofamic variants in *-t* and *-n*. This meaning in Burmese only occurs when preceded by the word for *eye n*, and Nishi's gloss (1974:4) of *extinguish vt* elsewhere in Lolo-Burmese makes Benedict's comparison appear rather forced.[255]

စိန်စိန်မျက်စိယွှံ့မမှိတ်ကြည့်သော�７ရက်အနိမ္မိသံတော *(WK 1b.2)*
intently eye-seed not close look ATTR 7 days animmisam[256] EMPH
The seven days when he intently stared without closing his eyes is Animmisam.

[OC] miɛˡˡˡ 滅 mjiat < *ˡmjət

The Middle Chinese rhyme of miɛˡˡˡ 滅 mjiat requires an Old Chinese reconstruction of *ˡmjat *extinguish vt*. However in the *Shijing* it appears to rhyme with tɕiɛˡᵇ 結 kɛt < *kəc, and *xiesheng* dervatives like miɛˡˡˡ 蠛 mɛt < *məc *blood n* also attest such a reading. However Pulleyblank (1983:441, 1995b:30, 1996b:55) notes that the semantically very similar miɛˡˡˡ 蔑 mɛt *eliminate vt*, for which Old Chinese *mjat would be expected, is used interchangeably with muɔˡˡˡ 末 mat < *mat as a place name and further notes the similar usages of both of them as grammatical particles. This prompts him to suggest that some kind of prefixal element may have triggered the Middle Chinese front vowel which he suggests (1995b:30) to be a sibilant prefix but there is little evidence for such a development elsewhere in Old Chinese. It seems likely that miɛˡˡˡ 滅 mjiat < *ˡmjət may in some dialects have undergone

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[255] Benedict proposes similar transitivity distinctions between pũˡˡ ဖွန်း pwanˡˡ *abrade vi* and pʊʔ ဖွတ် pwat *abrade, rub vt* as well as pãˡˡ ဝန်း panˡˡ *encircle, outflank vt*[255] and paʔ ဝတ် pat *encircle vt*. The first case looks plausible but Bernot (1978-92:X.135) also notes a transitive sense for pũˡˡ ဖွန်း pwanˡˡ which casts some doubt on the theory. In the second case, lexical alternates like gəbaʔ ခါးဝတ် kʰaˡˡpat *belt n* and gəbã ခါးဝန်း kʰaˡˡpanˡˡ *belt n*, the latter of which Hla Pe (1967:84) notes to have a Mon correlate in its secondary meaning of *baseboard/skirting-board n*, suggest the distinction to be purely phonological with semantic specialisation occurring at a later date

[256] This is a Sanskrit term glossed by Luce & Whitbread (1971:193) as *Unblinking* in their original translation of this inscription.

the same lowering process that affected *name n* and *fire n* to then develop as if from mjàt while in others the medial -*j*- may have palatalised the dental coda to -*c* allowing it to rhyme as **'mjɔc. The situation may be similar to that of tɕiɛ^{Ib} 節 tsɛt < *cɔc < **cjək *joint n* and tɕi^{Ib} 即 tsik < *'cɔk *thereupon* noted in Pulleyblank (1991a: 66).[257]

[#51] **Braid**

[M]   *bjar ⋊ *pjar (2003:360;401)
[P&S] *bɘr (1996:#11)

[NC]   *pʰɛr^I *braid vt*

Mizo and Zahau pʰıar^I *braid vt* appears to have derived from a variant Type B syllable.

[OC]   piɛn^I 編 pɛn^I < *pjar^I *weave, braid vt*

Peiros & Starostin (1996:#188) associate the *xiesheng* character piɛn^II 扁 pɛn^II < *pjar^II *flat and thin vi* with Mizo per^III *flatten vt* which is a transitive derivative of Northern Chin *per^II *flat vi*, under a root *pe:r.

[#52] **Leaf, Flat**[258]

[M]   *lap (2005:9);[259] *s-ljap ⋊ (2003:338); *ljap (2003:339); *s-lep (2003:376-7)
[P&S] *lap (1996:#1718); *ljep (1996:#1776); *le:p (1996:#1906)

[NC]   *ʰlɛp *pare vt*

[OB]   ljap ‌ ljap *thin, fine vi*[260]

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[257] However Pulleyblank suggests that Type A syllable structure may have allowed the palatalisation of the coda that was prevented in Type B syllables.

[258] Possibly related, but not directly, are the words for *butterfly n* in Matisoff (2003:377) and Peiros & Starostin (1996:#1736). The variations in the Northern Chin reflexes are, as noted by Schuessler (2007:281), reflected across Tibeto-Burman.

[259] Matisoff (2005:9) reconstructs an allofam *s-la with a supposed Burmese form la^m; it is actually a reduced form of lɛʔ လက် lak in close juncture in the compound lɘpʰɛʔ လက်ဖက် lakpʰak *tea-leaf n*.

[260] This is more commonly spelled ʰlap ‌ ʰlap; see Stewart & Dunn (1940-81:346).

ʃaʔ �’ ʰljap *flake off vi/t, flash vi*

[OC] tie[lb] 牒 dɛp < *ljap *writing tablet n*

There is a type B *xiesheng* character iɛ[III] 葉 jiap < *'ljap *leaf n*.

5.2.1.3 *Medial -w-*[261]

ST	NC	OB	OC
-wə-	-ʊ/u-	-wɨ-	-wə-
-wa-	-ɔ/o-, -ʊa-	-wa-	-wa-

[#53] **Warm**

[M] *s-lim ⪥ *s-lum (2003:272;275;496)
[P&S] *lɨm (1996:#1835)

[NC] *ʰlʊm[I] *warm vi*

[OB] loũ[I] ’ lwɨm[I] *warm vi*
      ʰloũ[I] ’ ʰlwɨm[I] *warm (oneself) vt*

The transitive tone III derivation ʰloũ[III] ’ ʰlwɨm[III] *reheat vt* compares nicely with Mizo lʊm[IIb] and Zahau ʰlʊm[IIb] from Northern Chin *[(h)]lʊm[III]-s which derives from an -s suffix on the form 2 inflection [(h)]lʊm[III] when used transitively as a form 1 verb.[262]

[OC] rʊŋ[Ib] 融 juwŋ[I] < *'lwəm[I] *warm vt*

The reconstruction of a bilabial coda in the above character which, judging by its phonetic, must have been created after the dissimilation -m to -ŋ in the environment of the labial medial, follows Bodman's comparison (1980:124) of it with ɕyn[Ib]/ɕɪn[Ib] 尋 zim[I] < *s-'ləm[I] *measure of length n* when used as a *jiajie*[263] character to mean *warm vt*; the use of 尋 in this way presumably

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[261] Matisoff's comparison (2003:309-10) of Mizo koŋ[IIb] *waist n* with kaõ[I] ɕɔɔɛ kɨwŋ[I] *body n* and kʊŋ[I] 躬 /躬 kuwŋ[I] < *'kəwŋ[I] *body, self n* is phonologically and semantically problematic. The Mizo form, along with Zahau, also shows irregular syllable weight with its tone IIb contour that would regularly be in IIa to correlate with Thado, Zo, Tedim and Sizang koŋ[II]; this is is suggestive of an external source.
[262] See the discussion in 7.1.5.
[263] A phonographic loan with no semantic relationship.

stems from the lack of distinctiveness of Sino-Tibetan medial -w- after and before labial codas or initials.

[#54] **Round**

[M] *zlum (2003:78;272)
[P&S] *li(:)m (1996:#1839)

[NC] *^{h}lum^{II} *sphericalised vi*

[OB] lou^{II} င္ : lwim^{II} *spherical vi*

[#55] **Swell**

[M] *s-p^{w}am/p (2003:518)
[P&S] *[p^h]uam (1996:#223)

[NC] *puam^I *unripe but swollen vi*

[OB] p^{h}u^{III} / p^{h}wã^{III} ၌. p^{h}wam^{III} *plump vi*

> The tone III is derived and compares with Northern Chin form 2 *puam^{III}. Matisoff (1972a:47) and Bradley (1979:175;364-5) propose a Lolo-Burmese allofam with a -p coda with which Matisoff (2003:381) tries to associate Mizo bɔp *hind-leg n.* Matisoff's association may ultimately prove to be correct but further research is required.[264] Notably, bɔp is the form 2 of bom^{III} *swarm vt* in Thado, Zo, Tedim and Sizang, attested as bɔm^{IIb} in Mizo and Zahau, which makes an interesting parallel with the cases of *Smell* (#96) and *Snot* (#97) discussed in 7.5.1.

5.2.2 Coda -j

Excepting cases derived from Sino-Tibetan -əj to give Northern Chin -i/-i, Sino-Tibetan -j appears to have been maintained regularly. However, while laterals are regularly attested across the six languages here, Luce (1962a:55, 1962c) notes that in

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[264] See also the discussion in 7.5.1.

Xôngsai, a dialect of Thado, -*l* appears often to be in free-variation with -*j* which corresponds to -*j* in the six Northern Chin languages discussed here.[265] Consequently, in spite of a Northern Chin -*l* coda to be discussed below, it appears that the reflexes of Sino-Tibetan *-*l* have also merged with Northern Chin -*j*:[266]

ST	NC	OB	OC
*-*j*	-*j*	-*j*	-*j*
*-*l*	-*j*	-*j*	-*l*

[#56] **Water**

[M]   *twəj (2003:195;451)
[P&S] *tuj (1996:#990)

[NC]   tuj^{II} *water n*

The Xôngsai data in Luce (1962c:3, 1985.II:82) has a variant form tɪl^{II} which is compared in table A of Luce (1962a:59) to a Thado form ti^{II} that is distinct from tɒj^{II} as recorded here. Luce further compares Zahau ti^{IIa} with Thado ti^{II} but the shift of -*ɒj* to -*i* after coronals, discussed in 1.4.2.2, is a regular process in Zahau that is not attested in Thado. Nevertheless, Benedict (1972a:26;45) reconstructs a root *ti(j) *water n* which Matisoff (2003:435) treats as an allofam of *twəj, correlating with *twi(j) in Benedict's original formulation, that supports the -*l* coda in the Old Chinese form below. Luce (1962a:59-60) similarly poses a single source with the suggestion that the shifting in syllable weight from the first part of the diphthong to the second part ultimately caused the loss of the labial feature.[267] Notably, although Benedict's proposal (1939:225) for a semantic link between *tuj^{II} *water n* and *tuj^{I} *egg n* is tentatively queried by Matisoff (2004:387), the Xôngsai form for *egg n* in Luce (1962c:3, 1985.II:72) has the regular reflex tul^{II}.[268]

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[265] Luce's Xôngsai data shows that this variation has also spread to -*l* codas derived from Sino-Tibetan *-*r*, as discussed in 5.2.4.1, which leads him to suggest that all Northern Chin -*j* codas may perhaps be derived from original -*l*. Conversely, the other Northern Chin languages are more conservative here in only attesting forms in -*l*.

[266] See also the discussion in footnote 383 regarding evidence in Southern Chin for an original -*l* coda in Northern Chin *juj^{II} *follow vt*.

[267] Shafer (1952:156) suggests a Mon-Khmer link but this is not well supported.

[268] Although Matisoff (2004:364) suggests a Tibeto-Burman link between *water n* and *testicle n* via the meaning *egg n*, the homophony of the Xôngsai word tɪl^{II} *water n* with tɪl^{II} *testicle n* is entirely coincidental due to *testicle n* being regularly attested with an -*l* coda elsewhere in Northern Chin such

[OB] (tə)dweɪ[II] (ဝဲ)ေဆ့ / (ဝဲ)ခွဲဝ် (tamˡ)tʰwɨj[II] *spittle n*[269]

Matisoff's reconstruction (2003:195) of a separate allofam *dwəj to account for the unaspirated initial in (tə)tweɪ[II] (ဝဲ)ေဆ့ is shown to be unnecessary with the older Written Burmese form, cited in Luce (1981:17), and its corresponding inscriptional forms showing original aspiration that was lost in close juncture.[270] The independent verb tʰweɪ[II] ေဆ့ tʰwɨj[II] *spit out vt* is most likely a back-formation.[271]

[OC] tʂuɛi[II] 林 tɕwi[II] < *ˡtwəl[II] *water n*
ʂuɛi[II] 水 ɕwi[II] < *s-ˡtwəl[II] *water n*

Starostin's suggestion (1995:241) that the doublet forms may be due to dialectal differences suggests the *s-* prefix in the latter should be removed. Sagart (1999b:157-8) prefers to derive the two forms from *^{h}l- and *t-l- respectively on the basis of forms, including Northern Chin *lʊj[III] *river n*, listed by Matisoff (2003:197) under *lwi(j) and Peiros & Starostin (1996:#1832) under *luj.[272] Gong (1995:64) supports such an interpretation but the Northern Chin and Burmese evidence above favours Starostin's proposal.

5.2.2.1 *Rhyme -ɛj*

The regular derivation of ɛ in closed syllables from *ja* would suggest that Northern Chin *-ɛj* should derive from Sino-Tibetan *-jaj or *-jal. This may be very tentatively suggested in the following example, although Sagart's alternative suggestion

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that it must have derived from an original *-r* coda. Benedict's association (1972a:37) of Mizo tɪl[IIa] *testicle n* with a Thado form for *earthworm n* is supported by Matisoff (2004:363-4) but this stems form a faulty transcription of Thado -tel[III] *earthworm n*.

[269] Not attested in the inscriptions.

[270] Matisoff (2003:451) later correctly cites the aspirated form.

[271] Sagart's comparison (2005:163) of Burmese tweɪˡ ေဆ twɨjˡ *flow incessantly vi* with the Chinese form below may well be valid but his reconstruction of *t-l- seems solely motivated to accommodate his Old Chinese reconstruction with a lateral initial that is rejected below.

[272] Sagart (1999b:158) compares tʂuanˡ 川 tɕʰwianˡ < *ˡ-wənˡ *river, stream n* by reconstructing an initial *t-^{h}l- and a tentative liquid coda *-r*; a lateral initial of some kind is supported by *xiesheng* connections but, in addition to difficulties with codas, this makes an association with the *t-* initial in *water n* problematic. Benedict's proposal (1972b:30) that this is an example of Old Chinese tone II shifting to I in the environment of an *-n* coda is rejected in 6.5.2.

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(1995b:353-4) that the Tibeto-Burman forms are Old Chinese borrowings of the word for *tongue* in Hakka and Cantonese remains possible in spite of the fact that the issue of taboo, proposed for the ascendancy of this word, is dismissed by Bauer (1988:152) as a myth:

[#57] **Tongue**

[M] *s-l(j)a-j (1995:71)
[P&S] *laj (1996:#1698)

[NC] *lɛj^I *tongue n*

The Xôngsai data in Luce (1985.II:70) and table B of Luce (1962a) does not attest a variant with *-l*.

[OB] ʃa^I လျှာ ^{h}lja^I *tongue n*

Bradley (1979:302-3) and Matisoff (1994b:50)[273] reconstruct Lolo-Burmese *ʔ-l(j)a^I noting the Loloish languages do not support a medial *-j-*. It is unequivocally attested in the inscriptions:

လျှာတလံထွက်လျက်ခံစေသောတော *(IB 69.21)*
tongue one fathom protrude while suffer may[274] ATTR EMPH
May they (be the ones who)[275] suffer while their tongues protrude one fathom.

There are no cases of *-jaj* in Burmese; on the basis of the merger of *-waw* with *-aw*, it seems likely that *-jaj* would have merged with *-aj*. However, the evidence here suggests that it was rather the coda that was lost through dissimilation; further research is required.[276]

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[273] See Matisoff (1969:177) for discussion.

[274] The gloss of ေသာ as exhortative *may* follows Ohno (2005:289) in his original translation of this inscription.

[275] Yanson (1994:370-1) associates Θa^{III} သ sa^{III} with a Pali pronoun which he further links to the established pronoun marker Θu^{II} သူ su^{II}. Yanson (2002a:41-8, 2005:224-8) extends this to the attributive marker Θo^{II} ေသာ saw^{II} which is the status assigned to Θa^{III} သ sa^{III} in the above inscription. With the emphatic marker tei တေ tij serving as a surrogate copula, as noted in footnote 174, this represents a grammatically more faithful, albeit functionally unnecessary, rendition.

[276] Benedict (1972a:48;64, 1979:24) suggests ʃa^I လျှာ ^{h}lja^I *tongue n* may be derived from ʃã^I လျှံ ^{h}ljam^I *radiate, overflow vi* via a suffixed form like *^{h}ljam-ma > *^{h}lja-ma. Benedict provides no source for the suffix leading Matisoff (1994b:54, 1995:71, 2003:299-300) to simply assume an allofamic variant *s-ljam. In fact such ruminations are unnecessary as Shorto (2006:383-4), supported in Shafer (1952:144), shows the word to be Mon-Khmer in origin. Benedict's proposal (1972a:172) for a polyphonic ʂʏ^{ib} 舌

However, a well-supported alternative source of Northern Chin -ɛj is from Sino-Tibetan *-əl in which the lateral coda seems to have triggered vowel lowering in Northern Chin in order to retain the coda to give -ɛj rather than -i as in the case of *-əj. Old Burmese, not having the luxury of vocalic options available to Northern Chin, simply loses the original coda but retains it in spirit by not undergoing lowering to -a and instead remaining as -ɨ:[277]

ST	NC	OB	OC
*-əl	-ɛj	-ɨ	-əl

The data in Luce (1985.II:82) and table B of Luce (1962a) suggests this also occurred in Xôngsai where no variant in -l is attested for the following words:

[#58] **Fire**

[M]   *mej (2003:206)

[P&S]   *mɜːj (1996:#84)

[NC]   *mɛj[II] *fire n*

[OB]   mi[II] ၈း mɨ[II] *fire n*

Shafer (1952:158) suggests an Austroasiatic link but Starostin's (1995:230) rejection of any solid external links is more likely.

[OC]   huə[II] 火 xwa[II] < *[h]məl[II] *fire n*[278]

ȥiat < *[l]lat *tongue n* due to its occurrence as phonetic in characters like tʰien[II] 舔 tʰem[II] *lick vt*, tʰien[Ib] 甜 dem[I] *sweet vi*, ɕien[I] 銛 siam[I] *sharp vi* and tʰien[Ib] 恬 dem[I] *quiet, tranquil, calm vi* is debatable. The phonetic in 舔 is clearly tʰien[II] 忝 tʰem[II] *shame vi*; the others are somewhat harder to justify but Takashima (2003:II.428-9) notes another word in the *Shuowen* tʰien[III] 囷 tʰem[III] with which, in spite of Qiu's observation (2000:186) that it actually represents a phonologically shifted form of tien[II] 簟 dem[II] *mat n* rather than the *Shuowen* gloss of *tongue n*, there may have been graphic confusion.
[277] This allows the rejection of a couple of tonologically discrepant proposed correspondences: Peiros & Starostin (1996:#1151) and Sagart (2006a:215), via his citation of Matisoff (2003:190), compare Mizo tsi[IIb] *seed n* to tsɿ[I] 粢 tsi[I] < *[c]cəl[I] *sacrificial grain n* and tsɿ[I] 資 dzi[I] < *[j]jəl[I] *granary n* respectively; Matisoff (2003:509) and Peiros & Starostin (1996:#1692) compare Old Burmese mjer[I] ေြ / ့ုဲ mlij[I] *earth, ground n* to Mizo lej[II] *ground n*. In the former case a comparison with Old Burmese sei[III] ေ cij[III] *seed n* remains possible but the lack of initial aspiration and the derived tone III are less than ideal; in the latter case Sagart's tacit rejection (2006a:218) of a previous proposal (1985:215-6) to instead follow Peiros & Starostin (1996:#1692) in comparing ti[III] 地 di[III] < *[l]lal[III] is possible if the ablaut rhyme *[l]-əl[III], rather than the *Shijing* rhyme *[l]-al[III] that gave the Middle Chinese, rhyme is treated as original.
[278] The Middle Chinese reflex reflects a lowering of ə to a.

The bilabial initial is justified internally by Sagart (1999b:158-9) via the variant form huɛi^II 焜 xuj^II < *^lhməl^II *fire n* which has wɛi^II 尾 muj^II < *^Iməl^II *tail n* as phonetic.

[#59] Tail

[M]   *r-mej (1985a:31)
[P&S] *r-məj (1996:#138)

[NC]   *mɛj^II *tail n*

[OB]   mji^II 尾： mrɨ^II *tail n*

[OC]   wɛi^II 尾 muj^II < *^Iməl^II *tail n*

The *r* medial in Old Burmese is not attested in Old Chinese or it would have developed into Middle Chinese mi^II; this suggests it to be prefixal in origin.

[#60] Foot, Leg

[M]   *pej (2003:205-6)
[P&S] *be(:)j (1996:#6)

[NC]   *p^hɛj^III *leg n*

[OB]   p^hə(naʔ) ဖိ(နပ်) / ဖိ(နပ်) p^hɨ^III(nap) *sandal, shoe n*
       p^hə(wa^II) ဖ(ဝါး) / ဖွာ p^h(lwa^II) *sole n*[279]

       မဟာကဿပဝုဇ္ဇာကိုရှိ... *(WK 1.7a)*
       Mahākassapa sole OBJ worship[280]
       Mahākassapa worships the soles (of the Buddha).

The voiced variant ဘိနပ် is a later, and now defunct, corruption; cf. *side n, father n, grandfather n* for similar cases. Hla Pe (1967a:84) suggests it to be a Mon loanword; while this is likely the case for the second syllable, the first syllable fluctuates in Mon between velar and dental articulations suggesting it

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[279] In Modern Burmese this can also mean *palm n* making it indistinguishable from lɛʔwa^II လက်ဝါး lakwa^II *palm n*.

[280] The gloss of ရှိ as *worship* follows Luce & Whitbread (1971:192) in their original translation of this inscription.

to be distinct in origin from the Burmese bilabial. Nishida's proposal (1968:22) that the first syllable of Burmese p^hənaʔ ဖိနပ် $p^h\text{ɨ}^{III}$nap *sandal, shoe n* appears to correspond to velar initials in several other Lolo-Burmese languages is rejected by Matisoff (1978b:30) due to Lahu not also attesting a bilabial initial as it should according to his labiovelar hypothesis discussed in 4.10.2. The expected development of ဖွာ p^hlwa^{II} to Written Burmese would be as ဖြား p^hrwa^{II} or ဖလွား p^həlwa^{II}. The earlier loss of the *i* vocalism than in ဖိနပ် is related to the complex initial cluster; a similar example may be found pəlwei^I ပုလွေ့ pu^{III}lwəj^I *flute n*, nowadays written in a reduced form ပလွေ, which may also be written ပြွေ prwei.[281] The meaning of *palm n* is expressed in the inscriptions solely by lɛʔwa^{II} လက်ဝါး lakwa^{II} *palm n* in which the first syllable means *hand n*. Similarly, the ဖ p^ha^{III} of Written Burmese p^həwa^{II} ဖဝါး p^ha^{III}wa^{II} may be treated as being semantically associated with *foot n* as attested by the several modern compounds in which it occurs. The most likely course of events for the origin of ဖွာ p^hlwa is that it is a reduced form of ဖိလက်ဝါး $p^h\text{ɨ}^{III}$lakwa^{II} in which ဖိ $p^h\text{ɨ}^{III}$ was prefixed to the word လက်ဝါး *palm n* to give a meaning of *sole n* (lit. *foot-palm*). Over time, the association of ဖိ $p^h\text{ɨ}^{III}$ with *foot n* in contrast to လက် with *hand n* must have made လက် lak, or rather its reduced form လ lə, somewhat redundant in the middle of the word such that it was lost due to analogical levelling to leave simply p^həwa^{II} ဖဝါး p^ha^{III}wa^{II}.

5.2.2.2 *Rhyme -aj*

Benedict's proposal (1972a:62) for a length distinction to account for Tibeto-Burman *-a:j* giving Mizo *-aj* and *-aj* and giving *-ɛj* is not supported here with Sino-Tibetan *-aj* regularly deriving Northern Chin *-aj* and vocalic length not playing a role:[282]

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[281] Matisoff (1970:36-7) treats these two Burmese forms for *flute n* as independent but they are undoubtedly the same.

[282] Benedict makes similar proposals for a length distinction involving *u* before *-k* (1972a75-6) and *i* before *-t* (1977:2) on the basis of Burmese reflexes, and for *a* before *-p* on the basis of Garo reflexes (1972a:72). The latter is beyond the scope of this work but the Burmese case with *u* is rejected in 2.1.1 and the extremely limited evidence regarding *i* is directly contradicted by the evidence in *Extinguish*

ST	NC	OB	OC
*-aj	-aj	-aj	-aj

[#61] **Middle**

[M]　　*laːj (1985:28)
[P&S]　*laj (1996:#1877)

[NC]　*laj¹ *middle, navel* n

The homophonous Northern Chin gerundive marker is possibly derived from this.

[OB]　(ə)le¹ (ဢ)ကလစ် (ə)laj¹ *centre, middle* n

5.2.3 *Coda -w*

The derivation of Northern Chin -ʋ/-u from Sino-Tibetan *-əw was discussed above; elsewhere Sino-Tibetan -w appears to have been retained regularly.

5.2.3.1 *Rhyme -əw*

The regular derivation of Sino-Tibetan -wa- to Northern Chin -ə/o- in closed type A syllables would suggest a derivation of -əw from *-waw. Regrettably, no good comparative evidence is forthcoming[283] but, such possible cases aside, Matisoff (2003:224) notes an association of Northern Chin -əw and Old Burmese -wi which interestingly parallels the association of Northern Chin -ɛj with Old Burmese -i, as discussed in 5.2.2.1, on the opposite side of the vowel triangle.[284] Unfortunately no Old Chinese comparanda have been found and, although an avenue for possible research is proposed in 7.2.3, the Sino-Tibetan source remains unclear.

(#50). The assumption in Benedict (1972a:70, 1991:27) that a poorly attested length distinction may be reconstructed for Tibeto-Burman is unlikely.

[283] See the discussion of Northern Chin *kɔwᴵᴵᴵ *call* vt in 5.2.3.3.

[284] Matisoff (2003:227) notes that his comparison of Mizo tu-ᴵᴵᴵ, as the first syllable of a compound noun meaning *hammer* n, with Burmese tuᴵ ၍ twiᴵ *hammer* n is an exception. Evidence from elsewhere in Northern Chin shows the root meaning of the Mizo form to rather be *small-hoe* n with a verbal sense of *chop* vt. In Mizo only the verbal sense is retained in the form 2 inflection tʊk which leads Matisoff (2003:357) to make an otherwise phonologically sound comparison with taʊʔ ကတုဆ် tïwk *fillip* vt; Shorto (2006:143) suggests a Mon-Khmer link with Matisoff's root with the suggestion that it may be onomatopoeic in any case.

ST	NC	OB	OC
-?	-ɔw	-wɨ	-?

[#62] **Boil**

[M]   *tsjow (2003:224;227)
[P&S] *cu (1996:#1170)[285]

[NC]   *sɔwᴵ *boil vi*

[OB]   suᴵ ɔꭓ cʰwɨᴵ *boil vi*

The word suᴵ ɔꭓ cʰwɨᴵ can also mean *thorn n* which Luce (1981:32) does not distinguish from suᴵᴵ ꭓ꞉ cwɨᴵᴵ *awl n, pierce vt*. As a verb, much as in English, its meaning may be extended metaphorically to *seethe with emotion vi* such that it seems highly likely that the nominal form suᴵᴵ ɔꭓ꞉ cʰwɨᴵᴵ *thorn n*, which, unlike suᴵᴵ ꭓ꞉ cwɨᴵᴵ *awl n*, also occurs in a nominalised form əsuᴵᴵ əəɔꭓ꞉ əcʰwɨᴵᴵ, is but a nominalised semantic extension of the concept *prickling with emotion vi*.[286]

[#63] **Soft**

[M]   *now (2003:224)
[P&S] *nu (1996:#611)

[NC]   *nɔwᴵᴵ *young vi*

[OB]   nuᴵᴵ ꭔ꞉ nwɨᴵᴵ *soft vi*
      ʰnuᴵᴵ ꭔ꞉ ʰnwɨᴵᴵ *soften vt*

Matisoff (1978b:27) suggests the tone III word nuᴵᴵᴵ ꭔ nwɨᴵᴵᴵ *soft vi* derived from a vanished prefixal *s-*; this would contradict the evidence in ʰnuᴵᴵ ꭔ꞉ ʰnwɨᴵᴵ *soften vt*. It is distinguishable occasionally by a sense of *fine vi* rather than *tender vi* and probably represents a back-formation of the Pali loan ənuᴵᴵᴵ əəcꭔ

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[285] Peiros & Starostin reconstruct *c- due to a confusion with the Northern Chin forms listed under *Rot* (#28).
[286] Benedict's (1972a:63-4) and Peiros & Starostin's (1996:#1179) comparison of sʰuᴵᴵ ɔꭓ꞉ cʰwɨᴵᴵ *thorn n* and suᴵᴵ ꭓ꞉ cwɨᴵᴵ *awl n, pierce vt* with the tonally discrepant Thado sɔwᴵ *panji n* is therefore unlikely.

ənwɨ[III] used to refer to minute objects; Stewart & Dunn (1940-81:203) note it can also be written ənu[III] အနွဲ့ ənwɨ[III] making it identical with the nominalised form of nu[III] နွဲ့ nwɨ[III] *soft vi*. Both cases appear in the inscriptions where the use of $\frac{1}{\underset{\text{I}}{}}$ as opposed to $\frac{1}{\underset{\text{II}}{}}$ makes an unmarked tone III in the former case unlikely:

သိခွာနွဲ့ *(OBEP 44a)*
cucumber[287] soft
Tender Cucumber.[288]

မြက်နုအိရိယ်ကြည် *(IB 107b.16)*
grass soft water clear
Soft grass and clear water.

[OC]   –

Peiros & Starostin's comparison of ɲu[Ib] 柔 ɲuw[I] < *'nəw[I] *soft vi* and ɲu[III] 揉 ɲuw[III] < *'nəw[III] *soften vt* is tantalizingly close but only the initials correspond regularly. They appear to be ablaut variants of ɲu[Ib] 儒 ɲuạ[I] < *'naw[I] *weak vi* discussed under *Child* (#64) although the Tibeto-Burman forms being Old Chinese loanwords remains a possibility.

5.2.3.2. Rhyme -aw

Benedict's proposal (1972a:62) for a distinction between Tibeto-Burman *-a:w giving Mizo -aw and *-aw giving -ɔw is, like the case with -j above, not supported here where *-aw regularly derives -aw.

ST	NC	OB	OC
*-aw	-aw	-aw	-aw

[#64]   Child

[M]   *na:w (2003:225-6)
[P&S] *nəw (1996:#601)

[NC]   *naw[I] *child n*

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[287] This is an irregular spelling of သခွါ, attested in Written Burmese as သခွါး in which the first syllable, discussed under *Fruit* (#80), has been reduced in close juncture.
[288] Originally translated by Luce (1969-70:II.35).

[OC] ȵu^{Ib/III} 儒 ȵuạ^{III} < *'naw^{III} *child n*

> Schuessler (2007:445) notes that the modern tone I is unexpected; he suggests it may be the same word as ȵu^{Ib} 儒 ȵuạ^{I} < *'naw^{I} *weak vi* that develops the tone III reflex, and graphic alteration, when occurring as an adjective (= *vi*) for 子 *child n*.[289]

5.2.3.3. *Sino-Tibetan -ʁ*

The merger of *-ʁ* with *-w* between Old and Middle Chinese, as discussed in 3.2.5, appears to be paralleled in Northern Chin where Sino-Tibetan *-ʁ* appears to have merged with *-w*:

[#65] Fat

[M]   *saːw (2003:225;227)
[P&S] *tsʰaːw (1996:#1207)

[NC]   *tʰaw^{I} *fat vi, grease n*

[OB]   –

> Peiros & Starostin reconstruct *tsʰ-* to account for a comparison with su^{I} 獀 *cʰwɨ^{I} *fat vi* which was originally proposed by Matisoff (1974:189) but later retracted (2001:14).

[OC]   sau^{I} 臊 saw^{I} < *saʁ^{I} *fat n*

Another possible case is Peiros & Starostin's comparison (1996:#2303) of Mizo kɔw^{III} *call vt* to hau^{Ib} 號 ɣaw^{I} < *-aʁ^{I} *shout, cry out vt* if the Old Chinese forms is reconstructed with *ɡ^{w}-* rather than plain *ɡ-*. Matisoff (2003:225) adds Burmese kʰɔ^{I} ေခါ် / ခေါ် kʰaw^{I} *call vi/t* and ʧaw ကြော် kraw^{I} *shout vi*, but Northern Chin *ʔaw^{I} *shout vi*

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[289] A similar case with this rhyme of a derived tone III in Chinese corresponding to tone I in Northern Chin may perhaps be found in Matisoff's (2003:227) and Peiros & Starostin's comparison of Northern Chin *ŋaw^{I} *monkey n* with y^{III} 禺 ŋuạ^{III} < *'ŋaw^{III} *monkey n*.

may also be added here, suggesting Shafer's proposal (1952:145), supported by the forms in Shorto (2006:474), for a Mon-Khmer association to be valid.

5.2.4 *Liquid Codas*

Benedict (1940:114-27) gives a lengthy treatment to the codas -*r* and -*l* and their confusion with -*n* in Tibeto-Burman but does not manage to clearly disambiguate them.[290] Peiros & Starostin (1996), as discussed in Peiros (1998:215) and Baxter (1995:5), attempt to account for the difference by reconstructing a velarised lateral -*l* coda for cases where Old Chinese -*n* corresponds to Tibeto-Burman -*l* in Benedict's system. Starostin (2004:68) is unable to identify a source for the distinctive -*l* but his choice of phoneme is undoubtedly influenced by his broader ruminations regarding links with Caucasian languages. It seems likely that it is simply a representation in other Sino-Tibetan daughter languages of the dialectal shift of -*r* to Old Chinese -*l* and -*n* proposed by Starostin (1989:338-41) but treated by him as -*j* and -*n*.[291] Matisoff (2003:383) suggests that the Written Burmese reflexes of Tibeto-Burman *-*r* may be conditioned by the preceding vocalism. Unfortunately there is not enough evidence to test such a hypothesis fully but the possibility that the two dialect developments of Sino-Tibetan *-*r* proposed below are not mutually exclusive of one another remains open.[292] At any rate, Old Burmese -*n* appears to be exclusively derived from Sino-Tibetan -*n* with proposed associations with Northern Chin rhotics or laterals being unlikely.

5.2.4.1 *Rhotic -r*

As with initial *r-, discussed in 4.3, occlusion has occurred in the Tedim and Sizang reflexes of -*r* to give -*k* which is by default unreleased and unvoiced in coda position. The Thado and Zo reflex has further developed to -*ʔ*,[293] with Zo showing a further

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[290] See also the brief discussion in Benedict (1972a:14-6).

[291] See the discussion in 3.2.1.

[292] In addition to *illuminate, white vi*, discussed in footnote 208, the following may also be noted: the variation between Mizo ʰmuj[III] *muzzle n* and ʰmur[III] *lips n*, as tentatively associated by Peiros & Starostin (1996:#163), appears to be due to external influences as discussed in 6.5.4; Matisoff's (2003:416;424) and Peiros & Starostin's (1996:#50) comparison of Mizo and Tedim buĺ[II(a)] *base n* with Chinese pən[II] 本 pən[II] < *pən[II] *base, foundation n* has problems with initial voicing and Schuessler (2007:160) questions the validity of an original lateral coda while noting a possible association with fən[I] 分 pun[I] < *ʼpən[II] *divide vt*; Matisoff's (2003:405) and Peiros & Starostin's (1996:#2139) comparison of Mizo and Tedim kɛl[II] *kidney n* with Burmese kʰa[II] ɔl: kʰa[II] *waist, loins n* is semantically slightly tenuous.

[293] This is also the case with the original -*k* series as shown in 1.4.2.

alternation with -a as discussed in 1.4.2.4. Matisoff's (2003:392) and Peiros & Starostin's (1996:#249) comparison of pã[II] oၖ: pan[II] *flower n* with Mizo par[I] *flower n/vi* is supported by Weidert (1987:132), but a Loloish cognate is not attested and Luce's suggested association (1981:52) of pã[I] oၖ pan[I] *adorn vt* is supported by Bernot's glosses (1978-92:X.16;19) of pã[II] oၖ: pan[II] as *floral decoration/motif n* and pã[I] oၖ pan[I] as *wear a flower or jewellery on the head or ear vt.*[294] Removing an association with Old Burmese -n allows the following correspondences to be proposed:[295]

ST	NC	OB	OC
*-r	-r	-∅	-n

[#66] **Nose**

[M]   *s-na ⋇ *s-naːr (2003:103;427)
[P&S] *s-na (1996:#516); *s-naːr (1996:#555)

[NC]   *[h]nar[I/III] *nose n*
         *[h]nar[I] *snore, breathe vi*

The fluctuation in tones of Northern Chin is due to some forms correlating with *[h]nar[I] *snore, breathe vi* and others with its form 2 inflection [h]nar[III] (< *[h]nar[I]-s).[296] Benedict (1988a:260-1) suggests that the -r coda is a suffix, and at the root level a better Chin comparison is Mizo [h]na[III] *source (of stream/river), spring n* which is semantically linked to some of the more figurative uses of *[h]nar[I/III] *nose n.*[297]

[OB]   [h]na[I] ၕၥ [h]na[I] *nose n*

[OC]   t[h]an[III] 嘆 t[h]an[III] < *s-nan[III] *sigh vi*

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[294] See the discussion in 6.4 regarding the association of tones I and II.

[295] Matisoff (2003:396) proposes another possible case with Old Burmese -n in his comparison of Mizo tor[IIb] *urge, give pulsating pain vt* and toõ[I] oၖ *twin[I] tremble vi.* Only Zahau has an associated form in tor[I] *pulsate vi* and, with the irregular Mizo form not showing tor?, an external source should not be ruled out.

[296] See the discussion in 7.3.

[297] Benedict also compares ɲu[III] 泇 ɲia[I/III] < *[ʔ]na[I/III] *marsh n.*

5.2.4.2 Lateral -l

Proposed correspondences of Old Burmese *-n* with Northern Chin *-l* appear unlikely.[298] This allows the following to be proposed in which the dialectal shift of *-r* to *-l* must be assumed to have occurred after the shift of the original lateral coda to *-j* had already taken place:[299]

ST	NC	OB	OC
*-r	-l	-j	-l

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[298] Matisoff (1997a:40) and Peiros & Starostin (1996:#2246) compare koõᴵ ကွင် kwinᴵ *used up vi* with Northern Chin *kʊlᴵ *twenty vi* via the nominalised form koõᴵ ကွင် kwinᴵ *all n*, but the semantic fields are clearly distinct with the Burmese sense of *all n* being derived from a sense of *complete consumption* rather than *abundancy*; Matisoff (2003:417) compares Mizo nulᴵ *wipe vt* with noõᴵᴵ/ᴵᴵᴵ နွင် nwinᴵᴵ/ᴵᴵᴵ *weak vi* but the semantics are very tenuous; Matisoff (2003:516) and Peiros & Starostin (1996:#660) compare jãᴵ ရန် ranᴵ *enmity n* with Mizo ralᴵ and Tedim galᴵ *enemy n* but the Burmese meaning appears to be a semantic extension of its verbal meaning *side by side vi* with Northern Chin *ralᴵᴵᴵ *opposite-side n* showing a similar case of areal semantics rather than root cognacy; Matisoff's addition (2003:418) of a Lai word correlating with Northern Chin *kulᴵᴵᴵ *bend vi* to a comparison of a Lai word correlating with Northern Chin *kunᴵᴵ *bow vi* and koõᴵᴵ ကွင်း kwinᴵᴵ *bend/t vi* seems unnecessary and is suggestive of fortuitous coalescence or external influences; Matisoff (2003:71) compares Tedim kalᴵ *interval n* with tɕienᴵ 間 kəinᴵ < *krjanᴵ *between vi* but the vocalism does not concur and his further association of Mizo karᴵ *between n* ignores its regular attestation in Tedim as kakᴵ *widen, stride vi*.

[299] Matisoff's comparison (1995:85, 2003:203-4) of Mizo pɛʔ *pierce vi/t* with peᴵᴵᴵ ့ pajᴵᴵᴵ *break off vi* / pʰeᴵᴵᴵ ့ pʰajᴵᴵᴵ *break off vt* and pʰuoᴵᴵᴵ 破 pʰaᴵᴵᴵ < *pʰalᴵᴵᴵ *break, smash* is phonologically and semantically unlikely. Two of Matisoff's comparative sets, *bend, coil vi/n* and *scatter vi/t*, suggesting an association between Northern Chin *-il/-il* and Burmese *-wij* (2003:410-1) are rejected in footnote 396. The remaining two are also unlikely: *ʰrilᴵ *choose, inform vt* shows a similar semantic association as English *select vt* and *lecture vt*, while jweiᴵᴵ ချွေး rwijᴵᴵ *choose, ransom vt* parallels English *exempt vt* and *redemption n*; a semantic link between Zahau rilᴵᴵᴵ *roll along vi*, including its derivative ʰrilᴵᴵᴵ *roll along vt*, and jweiᴵᴵᴵ ချွေ rwijᴵᴵᴵ *move vi*, including its derivative ʃweiᴵᴵᴵ ချွေ ʰrwijᴵᴵᴵ *move vt*, is tenuous and Matisoff's further comparison of Northern Chin *jralᴵ ~ *jralᴵᴵᴵ *roll up vt* is phonologically implausible.

[#68] Body-Hair

[M]   *s-mul (2003:419;423)
[P&S] *mul (1996:#158)

[NC]   *^{h}mʊl^{II} *hair (body) n*

[OB]   mweI^{II} ေမွး / �◌ဝ် mwɨj^{II} *hair (body) n*

[OC]   (mɛi^{II} 美 mi^{II} < *r-'mwəl^{II} *beautiful vi*)

Unfortunately this has only been identified in the inscriptions as a place/personal name. Its graphic form 美 consists of a person 人 (大) with head plumage that in many instances appears to have been stylised into ram's horns ⌄ (羊 *sheep n*). The areal semantic association of *feather n* and *fur n*, noted in Matisoff (2004:357-8), makes the graphic confusion of feathered plumage with a woolly sheep not difficult to conceive. A semantic extension to *beautiful vi* is also plausible considering the verbal sense of English *plume* is essentially that of *preen*.[300] Perhaps also of note is the phonologically very similar mɛi^{1b} 眉 mi^I < *r-'mwəl^I *eyebrow n* with which Sagart (2005:163) suggests an Austronesian link supported in Matisoff (1976a:272).

[#69] Snake

[M]   *m-ruːl (2000:169-70)
[P&S] *Pruːl (1996:#407)

[NC]   *rul^I *snake n*

[OB]   mweI^I ေမြ / မြ◌ဝ် mrwɨj^I *snake n*

Matisoff suggests the bilabial prefix may be derived from *bəw *insect, bug, vermin*.[301] It is possible that the prefix was added in Burmese to distinguish it from the word jweI^{II} ေ◌း / ◌ဝ် rwɨj^{II} *creeper n* with which it would otherwise

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[300] Matisoff's (1985:35) and Peiros & Starostin's (1996:#116) comparison of Zahau and Mizo moj^I *beautiful vi* respectively is treated as a Chinese loanword in 6.5.4.

[301] This tacitly rejects his previous suggestion (1969:190) that it may be the same prefix as ones possibly attested in the word for *horse n* discussed in 6.5.4.

have become segmentally homophonous and would only have been distinguishable via tone.

[#70] **Congeal**

[M]   *kal (2003:405-6)
[P&S] *gʰəl (1996:#2049)

[NC]   *kʰɐlᴵᴵ *solid, congeal vi*

Benedict (1972a:15) suggests an alternative comparison of Mizo kʰarᴵᴵᵃ *close shut vi/t* with a gloss of *congeal vi*. This latter gloss is actually a figurative usage of its original sense whose form 1 can occur as a noun meaning *crust, dam, glutinous mass n* in Mizo and Zahau.

[OB]   kʰeᴵᴵ ခဲ / အခဲ kʰajᴵᴵ *congeal, freeze vi*

This can also mean *lead (metal) n*, the soft and coagulated nature of which makes it likely that they reflect the same proto-form. Peiros & Starostin (1996:#2077) and Matisoff (2003:390) attempt to compare it with Mizo harᴵᴵᴵ *pewter, solder n* and Tedim hakᴵᴵᴵ *lead n* respectively but the Burmese form would not then attest the palatal coda.

5.2.5 High Vowel ɪ/i before -k/ŋ and -t/n

It was shown in 5.2.1.2 above that *Sino-Tibetan -jə-* regularly gives Old Burmese *i* and Northern Chin ɪ/i. Very limited evidence suggests an exception in Old Burmese rhymes derived from an original uvular *-q* coda where it may have prevented medial -*j*- from inhibiting the regular lowering of *ə* to *a*:

[#71]   **Eye**

[M]   *mik ≍ *mjak (2003:347;506)
[P&S] *mjVk (1996:#109)

[NC]   *mɪt *eye n*

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The -t coda results from palatalisation of the original -k; this is supported by some Southern Chin data in Luce (1985:II.78-9) where a final -k is still attested.

[OB] mjɛʔ မျက် mjak *eye n*

Nishi (1977:44) notes a very rare spelling with medial -*l*- as မ္လက် mlak but this is most likely due to scribal error with this common inscriptional word being otherwise universally attested with -*j*-:[302]

မျက်စိတစ်ဖက်လောကာန့ဧ *(LK 115)*
eye[303] one side also blind REAL
His eye also becomes[304] blind on one side.

The Burmese vocalism forces Matisoff to suggest allofamic variation which French (1983:280-1;484) is also forced to assume for Northern Naga. Benedict (1976a:179) prefers to reconstruct a single form *mjək *eye n* but the difficulties associated with this are discussed in 7.5.2.[305] What seems to have happened is that the original uvular coda -*q*, that merged with -*k* in Burmese, prevented the schwa from fronting to *i* after the palatal medial such that it lowered to *a* in the regular manner for a non-palatal environment; it appears to have had no such effect in Northern Chin. Shafer (1952:148) and Stewart & Dunn (1940-81:280) suggest a possible relationship with Mon, and Hla Pe (1948:65) notes a semantic connection with Mon in the extension of the meaning *eye n* to *jewel n*. The phonological difficulties in associating the Mon form means Benedict (1967:283) and Starostin (1995:230) are probably correct in dismissing the association.[306]

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[302] Nevertheless Nishi (1977:51) also notes that the lateral in the rare spelling of ʧʰɛʔ ရ္ကk kʰjak *cook vt* as မ္လက် kʰlak is supported by Benedict's comparison (1972a:39) of Mizo tˡɛk *boil vt*; to this may be added Pe Maung Tin's discovery (1933:32) of ကျ္လက် kljak for ʧɛʔ ကျက် kjak *cook vi*.

[303] The superfluous ဧ vowel before မျက် is a peculiarity of the earliest inscriptions which Ba Shin (1962:29) and Yanson (1994:366-7) attribute to Mon scriptural influence.

[304] See Ba Shin's original translation (1962:130) for contextual support for the progressive sense here.

[305] Matisoff (1985a:40) and Pulleyblank (1995:175-9) suggest there may be an association with mien[III] 面 mjian[III] < *ˡmjan[III] *face n/vt* but this is phonologically, and in the case of Pulleyblank's proposal palaeographically, unlikely. Following Benedict (1972a:173), Matisoff associates Northern Chin *ʰmel[I] *visage n*, but the failure of the Northern Chin form to regularly reflect -*iar* suggests an external influence, attributed by Shafer (1952:154) to Mon-Khmer, to be likely.

[306] See Pulleyblank (1996b:45;55) for a tentative proposal linking the Mon form with an alternative Chinese etymon.

[OC] mu^{III} 目 muwk < *^{ʔ}mjəq *eye n*

The reconstruction of a uvular coda follows Pulleyblank (1977-8:200).[307]

The more general source of -ı/i- before -k/ŋ and -t/n appears to be the original Sino-Tibetan palatal codas -k^j and -ŋ^j. Pulleyblank (1979:29) assumes that Old Chinese -c and -ɲ developed a velar articulation after a as Middle Chinese -jk and -jŋ but a coronal articulation after ə as Middle Chinese -t and -n. He later (1991a:47) emends the Old Chinese reconstruction to -k^j and -ŋ^j which gives better symmetry with his reconstruction of labiovelars -k^w and -ŋ^w and conversely suggests that the velar articulation fronted to a coronal one in the environment of the higher vocalic nucleus.[308] The Old Burmese correspondence of -ac and -aɲ with Old Chinese -əc/-ac and -əɲ/-aɲ provides no support for a velar articulation but the Northern Chin reflexes of -ık/-ik and -ıŋ/-iŋ which like Burmese have merged the Old Chinese distinction of ə and a show clear evidence for a velar articulation. Somewhat obfuscating the issue are the Northern Chin reflexes of -ıt and -ın which, unlike in Old Chinese where this represents ə instead of a as the vocalic nucleus, exemplify a steady, but both cross-linguistically and within individual languages, sporadic shift of -ık and -ıŋ to -ıt and -ın in Northern Chin. In a few cases there appears to be no trace of the original velar in the six languages although occasionally it may be confirmed on the basis of Southern evidence.[309] Pending the discovery of correspondence sets, it also remains unclear what effect a preceding labial element in the initial complex had before the codas -k^j and -ŋ^j; it was noted in 2.1.3.3 that the few cases in inscriptional Burmese of medial -w- before -c and -ɲ are only of very limited use in this regard. For the time being the following correspondences may be reconstructed:[310]

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[307] Pulleyblank (1995:175-9) modifies this to *^{ʔ}mjək^w and then further modifies it (2004:158-9) to *^{ʔ}mjək^{ʔ}; neither case is particularly convincing.

[308] Pulleyblank is also motivated by his reconstruction of the labiopalatal velars -k^u and -ŋ^u which, as discussed in footnote 95, are not adopted here.

[309] Matisoff's comparison (2003:291) of Mizo rin^I *delineate* vt with ʃ^I ယှဉ် ^{h}jaɲ^I *put side by side* vt and jeı^I(tu^I) ရှဉ်(တု) raɲ^I(twı^I) *equal* vi superficially appears to be a valid comparison of this type if the irregular comparison with -t in Thado, Zo, Tedim and Sizang is ignored. However, internal phonological issues in Northern Chin aside, the former Burmese etymon was shown to be originally ရန် ^{h}ran^I *put side-by-side* vt in 2.3.1.5 and the latter actually means *quality, attribute* n as a single morpheme and only means *equal* vi when compounded with the latter morpheme meaning *same vi*. Matisoff's alternative comparison (2003:441) with jeı^{II} ေရး / ရှစ် rij^{II} *delineate, write* vt requires him to posit an unidentified -n suffix.

[310] Pulleyblank's Old Chinese reconstructions are retained as -c and -ɲ for the sake of continuity.

ST	NC	OB	OC
-ə́kʲ	*-ɪk(/t) / -ik(/t)*	*-ac*	*-ə́c*
-ákʲ	*-ɪk(/t) / -ik(/t)*	*-ac*	*-ac*
-ə́ŋʲ	*-ɪŋ(/n) / -iŋ(/n)*	*-aɲ*	*-ə́ɲ*
-áŋʲ	*-ɪŋ(/n) / -iŋ(/n)*	*-aɲ*	*-aɲ*

[#72] **Name**

[M]   *r/s-miŋ ✕ *miːn (2003:306-7;529)
[P&S] *miəŋ (1996:#61)

[NC]   *^{h}mɪŋ^I *name* n

[OB]   mji^I ఒ౦౨ిఁ maɲ^I *named vi*
        ^{h}mji^{III} ఛౖౖఁ ^{h}maɲ^{III} *name vt*

[OC]   mɪŋ^{Ib} 名 mjiajŋ^I < *'maɲ^I *name* n

Coblin (1983:186) says the character was used interchangeably with mɪŋ^{III} 命 miajŋ^{III} < *'mrəɲ^{III} in Han times; the *Shijing* rhyme would have been expected to give min^{III} but instead the Middle Chinese rime has developed as if from *'mraɲ^{III}.

[#73] **Tie**

[M]   *gjit/k ✕ *kjit/k (2003:345-6;528)
[P&S] *giːk (1996:#2025)

[NC]   *k^{h}ɪt *tie, bind vt*

[OB]   ʧɪʔ ఐౖఁ kjac *compact vi, twist vt*

An aspirated initial would be expected; it appears the transitive sense has been absorbed into the intransitive sense for which a non-aspirated initial would be expected.

[OC]   tɕie^{Ib} 結 kɛt < *kəc *tie, knot vt*

[#74]   **Nail, Claw**

[M]   *(t)sjen (2003:290)
[P&S]   *sen ≍ siən (1996:#1497)

[NC]   *tɯn[II] *nail, claw n*

An aspirated initial t^h- would be expected. French (1983:190;469) notes that the Northern Naga forms always occur in a compound beginning with *hand n*; this parallels the situation in Burmese and as an original bound morpheme is perhaps the reason for the lack of aspiration in Northern Chin.

[OB]   (lɛʔ)θi[II] (လက်)သည်း (lak)saɲ[II] *nail n*

As in Written Burmese, this only occurs as a compound noun with lɛʔ လက် lak *hand n* in the inscriptions:

လက်သည်ရှိဝတရောက် *(IB 79b.6)*
hand nail poke[311] one person
One chiropodist.[312]

[#75]   **Heavy**

[M]   *s-rəj-t (2003:192;201)
[P&S]   *rit (1996:#756)

[NC]   *rɪk *heavy vi*

[OB]   –

Matisoff reconstructs an allofam *s-ləj-t to account for Burmese lei[II] လေး ləj[II] *heavy vi*; Peiros & Starostin (1996:#1933) wisely reconstruct this under a separate root *T-lij.

[OC]   li[III] 栗 lit < *'rəc *dense, compact vi*

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[311] The word ရှိဝ represents Written Burmese t^ho[II] ထိုး t^hiw[II] *poke, stab vt* with initial voicing due to the close juncture in the compound noun with the preceding voiced coda.
[312] This gloss follows Luce (1977a:55).

5.2.5.1 *Matisoff's Bilabial Coronalisation after ɯ/i*

Matisoff suggests original *-p* and *-m* codas may have fronted to *-t* and *-n* in the following comparisons:[313] Zahau ʔit *sleep* vi[314] and Burmese eiʔ အိပ် ʔjip *sleep, lie down* vi (2003:499-500;533);[315] Mizo ɯn[I] *drink* vt and Chinese in[II] 飲 *ʔim[II] < *'ʔəm[II] *drink* vt (2003:298;300;533); Mizo ɯn[IIa] *house* n and Burmese ʔeiʰ အိမ် ʔjɯm[I] *house* n (2003:273;533).

In the first case, while some Southern Chin evidence in Luce (1985:II.78-9) does suggest an original *-p* coda, Shafer (1952:124;158), whose data is supported in Shorto (2006:239), shows the dental coda in Zahau to have been clearly influenced by Mon-Khmer. Furthermore the correspondence of *-p* and *-t* appears to be inverted in Matisoff's comparison (2003:533) of Mizo ip *bag* n and Burmese eiʔ အိတ် ʔjɯt *bag, sack* n which confronts additional problems with the *d-* initial in Zahau and Thado dip.[316] In the remaining two cases, the tonal correspondences are irregular: Matisoff reconstructs the former under a root *ʔam which supports the regular lowering of Old Chinese *ə* to *a* in Tibeto-Burman but makes no account for the Northern Chin vocalism whose restricted distribution in only Mizo and Zahau suggests its affiliations may lie elsewhere; in the latter, an *-m* coda is attested in some of the Southern Chin languages in Luce (1985:II.82-3) but Weidert (1987:108) notes this root to be unique in an almost clean split between Chin and Naga languages in tone II and Lolo-

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[313] Matisoff (2003:323) also attempts to compare Mizo hɯat[IIb] *scratch at, itch* vt with Burmese jɛʔ ယက် jak *rake in with hands* vt under a root *hjak that follows Benedict's proposal (1972a:46;55) that *-ɯak > -ɯat* on the basis of a purported association between Mizo phɯat[IIb] *sweep* vt and Tibeto-Burman etyma with *-k* meaning *broom* n. Without Old Burmese or Old Chinese comparanda a precise reconstruction of the latter is difficult to make but it should be noted that the Mizo word for *broom* n ends in *-ʔ*, not *-t*, as the form 2 derivative of *sweep* vt. Regarding the former, Zahau ʰɯat[IIb] *scrape, scratch, comb* vt shows an aspirated rhotic initial, and Benedict, in French (1983:521), suggests on the basis of Northern Naga evidence that a reconstruction with *-t* may be preferable in any case.

[314] This is restricted in distribution in Northern Chin; only the form 2 is retained in Tedim while in Thado the form 1 curiously seems to imply an original velar coda although this may have been influenced by Tedim.

[315] Wheatley (1982:31) suggests that Θeiʔ သိပ် sjip *compress, cram, put to sleep* vt is a causative derivative via a semantic connection of *tuck in* vt. Matisoff (2003:114) notes that this causes problems for deriving the Lolo-Burmese glottalised initials from an original *s-* prefix and treats it as a case of sporadic survival. Wheatley (1982:31) suggests a similar case with wɯ̄[I] ဝင် waŋ[I] *enter* vi and Θwɯ̄[II] သွင်း swaŋ[II] *insert* vt while also noting a possible association with wɯ[II] ဝင်း waŋ[II] *enclosure* n; Hla Pe (1967a:85) shows the latter to be a Mon loanword and the tonal discrepancy in the former two is problematic.

[316] There is a possible association with the form 2 of Zo, Tedim and Sizang im[III] ~ ip *retain (secret)* vt whose coda development would then parallel that of *Snot* (#97) as discussed in 7.5.1.

Burmese and Barish languages in tone I which suggests the word may have been loaned from Burmese into Northern Chin later than in the more heavily Burmanised Southern Chin languages during the intermediary -n stage before -m was dropped to leave nasalisation of the preceding vowel.[317]

5.2.6 High Vowel ʊ/u before -k/ŋ

The Sino-Tibetan labiovelar codas -k^w and -$ŋ^w$ appear to have merged as -ʊk/-uk and -ʊŋ/-uŋ in a similar manner to the merger of the palatal codas -k^j and -$ŋ^j$. No comparative sets demonstrating the effect of a preceding palatal element on the rhymes have been proposed such that a definitive statement as to whether Sino-Tibetan -jak^w becomes Northern Chin -ʊk or -ɛk will have to await the discovery of further evidence.

ST	NC	OB	OC
*-$ək^w$	-ʊk / -uk	-wɨk	-$ək^w$
*-ak^w	-ʊk / -uk	-wɨk	-ak^w
*-$əŋ^w$	-ʊŋ / -uŋ	-wɨŋ	-$əŋ^w$
*-$aŋ^w$	-ʊŋ / -uŋ	-wɨŋ	-$aŋ^w$

[#76]   **Maggot**

[M]   *s-luk/ŋ (2003:522)
[P&S] *lok/ŋ (1996:#1841)

[NC]   *lʊŋ[II] *insect, maggot* n

[OB]   laʊʔ ဧကာာင် lɨwk *maggot* n

The hardening of -ŋ to -k in tone II syllables will be discussed in 6.3.

[OC]   jʊŋ[II] 蛹 juawŋ[II] < *'laŋ[WII] *silkworm chrysalis* n

Sagart (2006a:218) compares tʂʰʊŋ[Ib] 蟲 druwŋ[I] < *r-'ləŋ[WI] *insect, worm* n but the tones are discrepant.

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[317] A similar merger of -m with -n occurred between Middle Chinese and Mandarin.

[#77] **Bend, Knee**

[M]   *g/ku(:)k (2003:357-9;362-3)
[P&S] *kuk (1996:#2244)

[NC]   *kʰukⁱⁱ / *kʰupⁱⁱ *knee n*

Wilkins (1996:284) notes a common pan-linguistic semantic link between *knee n* and *bend v*. Regarding the *-p* coda, there may have been a convergence with words under *cover vt*, discussed in 6.5.4, which are possibly Mon-Khmer in origin. However, a *-k/p* interchange after *u* is also reflected in *six vi* and *colugo n* in 6.5.4.

[OB]   kaʊʔ ကောက် kwik *bent vi*
       kʰaʊʔ ခေါက် kʰwik *fold vt*

Matisoff (2003:378) and Peiros & Starostin (1996:#2069) compare the nominalised form of the latter əkʰaʊʔ အခေါက် əkʰwik *fold, layer, tree-bark n* to Mizo kʰɔk *peel up vt* but the vocalism suggests this either to be unrelated or a loanword. Shorto, in Matisoff (1976a:285), suggests Mon-Khmer influence but Shorto (2006:132;178) makes no explicit mention of this.

[OC]   tɕʰuⁱⁱⁱ 曲 kʰuawk < *ˈkʰakʷ *bent, crooked vi*
       tɕuⁱᵇ 局 guawk < *ˈgakʷ *bend, curl up*
       tɕuⁱᵇ 鞠 kuwk < *ˈkəkʷ *bow, bend*

5.2.7 *Final -ʔ / -ⁱⁱⁱ*

An association of Tibeto-Burman *-s* with Mizo *-ʔ* is noted in 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 vowels surfacing as short while developing into tone III after vowels surfacing as long. Rather than treating *-s* purely as a suffix which would presuppose a typologically rare surface vocalic length distinction in open syllables, Ostapirat appears to be proposing a distinction between root final *-s* on open syllables and a suffixal *-s* that could be added to all syllable types. Whether this reading of Ostapirat is correct or not, such a distinction certainly appears possible; the role of suffixal *-s* will be discussed

extensively in Chapter 7. Ostapirat's proposed developments of root final -*s* in Tedim are tabulated below, along with the other five languages, with ɐ/*a* being used for purposes of exemplification only:

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
*-ɐs	-ɐʔ	-ɐʔ	-a^{III}	-a^{III}	-ɐʔ	-a^{III}
*-as	-a^{III}	-a^{III}	-a^{III}	-a^{III}	-a^{III}	-a^{III}

Such a distinction does not appear to be relevant for Old Chinese, but Weidert (1987:83;95-6) occasionally struggles with an apparent flip-flop of Lolo-Burmese tone II and Chinese tone III, and further struggles to reconcile his splitting of tone III into separate -*h* and -*s* categories which he uses to account for a merger of his -*s* category with Lolo-Burmese tone II. On the basis of the correspondence sets below, the following correspondences may be tentatively suggested in want of further evidence:

ST	*NC*	*OB*	*OC*
*-*s*	-ʔ / -^{III}	-^{II}	-^{III}
*-*s*	-^{III}	-^{III}	-^{III}

[#78] **Bone**

[M]   *g-rus (2003:435;465)
[P&S] *rɨ-t/s (1996:#703)

[NC]   *rʊs *bone n*

[OB]   joʊ^{II} ꧁ꩰ / ꧁ꧡ rɨw^{II} *bone n*

[OC]   –

An account for the rhyme in Benedict's comparison of ku^{III} 骨 kwət < *k^{w}ət *bone n* is difficult to make both in terms of initials and rhymes. Furthermore, although later semantic divergences are possible, Hla Pe's observations (1948:65) of a semantic association of the Burmese form with *lineage, stem n* puts it in an entirely different semantic field from Serruys' connection (1982:462) of the Chinese word with *omen n* as characterised by the

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divinations in Shang China. Sagart's proposal (2005:163) for an Austronesian link is preferable.[318]

[#79]   **Palm, Sole**

[M]   *p^wa-k (2000a:155-7)
[P&S]   *Pa (1996:#332)

[NC]   *p^hɐs *splay vt*

In Mizo this means *palm n* or *sole n* when preceded by kʊt *hand n* or ke^lll *foot* respectively.[319]

[OB]   (p^hə)wa^ll (ω)ol̥ /ɕɔ (p^hl)wa^ll *sole, palm n*[320]

Benedict (1972a:100) suggests the initial part of the compound to be the only one of his comparanda that does not mean *hand n* or *foot n*; the discussion under *Foot, Leg n* (#60) identifies such a meaning in Burmese. Matisoff (1972a:34) criticises himself for his earlier accidental conflation of p^hɛʔ ωδ p^hak *leaf n* with p^hɛʔ ωδ p^hak / bɛʔ ɔɔδ b^hak *side n* and prefers (2000a:155) to compare it here by adding a -*k* suffix; ironically it seems his association with *side n* was correct with the voiced variant in the latter being a result of secondary voicing as discussed in 2.2. Matisoff (1969:197) suggests a possible association with k^hwa^l ɡɔ k^hwa^l *hoof n* via a velar animal prefix but an account must be made for the discrepant tone. Sagart's proposal (2005:163) for an Austronesian link may also be noted.

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[318] Starostin's (1995:228) and Peiros & Starostin's (1996:#2248) proposal to associate Mizo kut *hand n* via semantic specialisation from a root meaning *bone of hand n* is unlikely. Notably Starostin (1995:229) accepts Sagart's proposal as a viable alternative.

[319] Tedim uses pek^ll *flat vi* in a similar manner while Thado and Zo use p^haŋ^l *palm, sole n* which in Sizang means *slice n*.

[320] The inscriptional form is discussed under *Foot, Leg* (#60).

Luce's division (1959a:28-9, 1985:I.83) of Chin tones into three categories, with Mizo and Zahau undergoing a later split of tone category II, was noted in 1.6. Löffler's suggestion (2002b:128) that tones I and II are primary fits well with the common association of tone III with derived verbal and nominal forms, to be discussed in Chapter 7, that pertains equally to Old Burmese and Old Chinese. It also bolsters Benedict's proposal (1972b:27, 1973a:129) for a Sino-Tibetan two tone system with a peripheral third tone; the segmental origin of this system will be discussed below.[321] The association of tone II(b) with obstruent codas is discussed in 3.4 and 6.1 with the suggestion that surface vowel length before obstruent codas is a concomitant realisation of the tonal contour and therefore a secondary development. The fact that stopped syllables were originally not able to bear tone suggests that rather than following Weidert (1975:4-8) 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.[322] This approach is prevented by the need to further distinguish verbal inflections in tone III and onomatopoeic words or loanwords in tone I with obstruent codas. Consequently, both vocalic and tonal distinctions are noted before obstruent codas in the reconstructed roots in the word list.

Matisoff (1973a:81-4) finds too many exceptions to Benedict's proposal and prefers to treat Tibeto-Burman tonogenesis as a cyclical process that occurs independently in different languages but along similar principles. A similar opinion is voiced by Weidert (1987:491) who ultimately rejects his own proposal (1979:224) to reconstruct the Sino-Tibetan tonal system back to four phonation types of I voice -$\emptyset$, II creak -$^?$, III breath -^{h}, IV whisper -^{s}. Alternatively, Sagart (2006a:212-3) speculates on purely typological grounds that Benedict's analysis may be correct if tone II is assigned the same glottalic origin as in Old Chinese. Benedict (1988b:7) is reluctant to accept such a proposal due to glottality being attested in tone III in Burmese rather than tone II but does modify (1984:65-6) his original low and high tones I and II to falling and rising

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[321] Peiros (1998:216) suggests that two suffixes, -$?$ and -H, may be reconstructed to account for the Sino-Tibetan tonal system but Peiros & Starostin (1996) only reconstruct -H which appears to have been indiscriminately applied to any series where there is evidence for tone II or III in the data.

[322] Albeit seeming to be only superficially related, vocalic distinctions need to be made before sonorant codas in any case; see the discussion in 3.4.

as an attempt to accommodate the evidence for glottality in the latter; Weidert (1987:83) similarly struggles with the supposed flip-flop in Burmese and Chinese of tones II and III, and further struggles to reconcile his splitting of tone III into separate -*h* (III) and -*s* (IV) categories which, of relevance to the languages discussed here, he uses (1987:95-6) to account for a merger of his tone IV with Lolo-Burmese II. Both these issues were addressed in 2.4.1 and 5.2.7 respectively, but Benedict (1973a:128, 1991:16) explicitly rejects the Old Chinese -*s* hypothesis to instead (1972a:159;169) associate a Tibeto-Burman -*s* coda with Old Chinese -*t* which he further extends (1973b:4, 1979:28, 1987:27-8) to suffixal -*s*.[323] He premises this on three comparative sets of which *bone n* is dismissed under *Bone* (#78), *seven vi* is identified as a Chinese loanword into Tibeto-Burman in 6.5.4,[324] and his comparison of θi^III ɔঙ si^IIII *know vt* with ɕi^I 悉 sit < *ˈsəc *everything n, know vt* is phonologically untenable.[325] With the morphological evidence in 7.1.3 showing a clear association with Old Burmese and Old Chinese, and the comparative sets throughout this work regularly concurring in their tonal categories, a Sino-Tibetan origin of tone II in -*ʔ* and III in -*s*, that may be projected back from Old Chinese, is likely.[326]

ST	NC	OB	OC
*-∅	-*I*	-*I*	-*I*
*-ʔ	-*II*	-*II*	-*II* (-*ʔ*)
*-s	-*III*	-*III* (-*ʔ*)	-*III* (-*s*)

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[323] The improbability of Benedict's alternative proposal (1972b:27) to treat Old Chinese tone III as a sandhi phenomenon, distinct from Old Burmese tone III for which he provides no source, is noted in Weidert (1987:178).

[324] Benedict follows Karlgren's reconstruction (1957:113) of tɕʰi^I 七 tsʰit < *s-ˈʰnəc *seven vi* with a -*t* coda to suggest that it represents the hardening of an original -*s* coda maintained in some Tibeto-Burman languages; Matisoff (1988a:1239) further extends this hardening to Burmese kʰu^IIIIhnıʔ ୧୫ɕ kʰwi^IIIhnac which he reconstructs (1972a:56) with a final -*t*. Although Benedict (1972a:169;185) does not include əɟ^III 二 ɲi^III < *ˈnəc-s *two vi* in his analyses due to Karlgren (1957:150) reconstructing an -*r* coda, Matisoff (1988a:767) makes an assumption of -*s* > -*t* here also to account for his reconstruction of ʰnıʔ ୫ɕ ʰnac *two vi* with final -*t*.

[325] Benedict follows Karlgren (1957:321) in reconstructing an Old Chinese -*t* coda.

[326] Interestingly there is evidence of another kind for Old Chinese -*s* merging with -*t* internally. Pulleyblank (1973b:372, 1998b:205) suggests that -*s* sometimes dialectally shifted to -*t* in words like sı^III 四 si^III *four vi* with its *Jiyun* reading of sit and pi^Ib 鼻 bjit *nose n* with its *Guangyun* reading of bji^III. The phonetic of the latter, pi^III 畀 pji^III < *ˈpəj^III, is reconstructed by Baxter (1992:603) with an original -*t* coda which Matisoff (2000b:365) uses to support Benedict's rather superficial ruminations (1972a:101) of an association between Tibeto-Burman -*t* and Northern Chin -*k* by connecting Northern Chin *pıa^II ~ *pıak^II *give vt*; the rhymes do not correspond and the -*k* in the form 2 inflection is derived from suffixal -*s* as *pıa^II-s.

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The split of Old Chinese tone I in Early-Mandarin, as discussed by Pulleyblank (1978a:192), and the split of Lolo-Burmese tone categories I and II in Lahu and Lisu, as discussed by Matisoff (1970:14), both came about due to different manner features of initials. There is no evidence for such a distinction in the bipartite division of tone category II in Mizo and Zahau.

Luce (1959a:28) suggests that tone IIa and tone I, excepting when an obstruent coda in Thado, Zo, Tedim and Sizang corresponds to an original -*r*, never occur with obstruent codas. Löffler (2002a:129) notes a general association of tone IIb with obstruent codas in Mizo,[327] and Weidert (1975:11) attributes the few cases outside of IIb in Mizo to a mostly phonoaesthetic origin; Ostapirat (1998:235-7) similarly notes an association of tone II with obstruent codas in Tedim. Luce's data (1962a, 1985:II.84-7) also has no cases of tone IIb with final sonorants; there are actually numerous instances but they can generally be attributed to morphologically derived forms, discussed in 7.1, which are not recorded in Luce's word list.[328] In closed syllables, this allows tone IIb to be limited to tone-bearing syllables with obstruent codas and to derived forms. Open syllables appear to be able to bear IIa or IIb but, although Luce (1962a, 1985:I.83;II.82) and Weidert (1979:80;90;114-5) do not treat open rhymes in IIa as aberrant, they both note an abundance with IIb.[329] Cases of IIa in the correspondence sets like *Blood* (#93), *Thin* (#94) and *itch* (#95) suggest them to be loanwords but further evidence may prove otherwise. A couple of possible other cases are the following:

[#80]	**Fruit**
[M]	*sej (1985:24)
[P&S]	*sej (1996:#1496)
[NC]	*tʰɛjʰ *fig, fruit n*

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[327] Löffler (2002b:139) also notes an association of tone II with obstruent codas in Tedim.

[328] The derived nature of tone III excludes it from the discussion.

[329] Luce's tentative proposal that the open rhymes in 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 discussed in 3.2.3. It is likely Luce was influenced in this analysis by the association of tone IIb with obstruent codas.

In spite of previously rejecting the idea (1972b:279), Matisoff (1980:21) compares the final syllable -si^{III} of *star n*; this is phonologically untenable.[330]

[OB] θi^{II} သီး si^{II} *fruit n*

Shorto (2006:257) suggests a Mon-Khmer association.

[#81] **Parrot**

[M] *gjəj^{II} (1988a:506)[331]
[P&S] *k(h)ij (1996:#2314)

[NC] *ki^{II} *parrot n*

[OB] tʃei^{II} ကျေး / ကိုးကယ် kij^{II} *parrot n*

The initial should be aspirated to regularly correspond with the Northern Chin form. The root is of very limited distribution in Tibeto-Burman such that Matisoff only reconstructs a Lolo-Burmese form although Luce (1985:II.95) does suggest some Karen comparanda. The inscriptional evidence shows Matisoff's Lolo-Burmese medial *-j-* to be unnecessary.[332]

For native uninflected tone-bearing syllables the following correspondences may be suggested:

	Mizo	Zahau	Thado	Zo	Tedim	Sizang
open	_IIb	_IIb	_II	_II	_II	_II
stop	_IIb	_IIb	_II	_II	_II	_II
closed	_IIa	_IIa	_II	_II	_II	_II

---

[330] An alternative suggestion by French (1983:559) that it may rather be associated with Burmese θei^{II} သေး səj^{II} *small vi* concurs better in rhyme and tone but the sibilant initial is still a problem.

[331] This is a Lolo-Burmese reconstruction hence the reconstructed tone contour.

[332] A similar argument may be made for tʃʰei^{I} ချိန် / ချိန် kʰin^{I} *weigh vt* which Matisoff (1988a:555) reconstructs as Lolo-Burmese *kji:n^{I}; Matisoff (2003:277) and Peiros & Starostin (1996:#2047) compare Mizo kʰin^{III} *weigh vt* which is not attested in the other five Northern Chin languages discussed here and is probably a Burmese loan.

Weidert (1987:134) suggests that there may be an association in Sino-Tibetan between tone II on velar nasal codas and their hardening to obstruents. In spite of Matisoff's scepticism (1994a:257), this is, albeit inconsistently, borne out by the data here. Baxter (1992:324) notes a similar association in Old Chinese word families suggesting that it may result from a phonological confusion of -ŋʔ and -k[333] which is supported by the discussion in 7.1.3.1 regarding the association of Mizo and Zahau -ŋ^{IIb} with Tedim and Sizang -k via -ŋʔ.

Internally in Northern Chin there appear to be a few examples of such a correlation: *kʰlɛŋ^{II} and *kʰlek^{II} *exchange vt* with later semantic specialisation in Thado as ʰlɛŋ^{II} *substitute vt* and ʰleʔ^{II} *exchange vt*; the irregular Mizo and Zahau forms dɪŋ^{IIb} *straight vi* are undoubtedly related to dɪk *correct, true vi*; Mizo rik^{IIb}- *threaten vt* corresponds to Zahau -rɪŋ^{IIa} *scare vi* while Thado and Zo make a presumably later semantic distinction between the two as gɪŋ^{II} *scare vi* and gɪʔ^{II} *threaten vt*;[334] Mizo tʰlɪŋ^{IIa} and Thado ʰlɪn^{II} *marrow vi* correspond to Zahau tʰlɪk;[335] Mizo ʰŋɔk *elbow vt* and ʰŋɔŋ^{IIb} *elbow, recoil (as gun) vt*; Mizo kɪk *knock vt* and Zahau kɪŋ^{III} ~ kɪŋ^{IIb} *knock vt*. In the comparative sets the phenomenon appears to be generally restricted to Burmese. In addition to the cases of *year n*, discussed in 6.3, and *Tree n* (#84) and *Maggot* (#76), the following may be noted:

[#82]   **Stone**

[M]   *k-luk/ŋ (2003:523-4)
[P&S]   *k-liaːŋ/k (1996:#1922)

[NC]   *loŋ^{II} *stone n*

[OB]   ʧauʔ ကျောက် / ကျောက် klwik *stone n*

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[333] Sagart (1999b:134) notes that in Old Chinese there are also apparent cases in tone I such that no defintive statement can be made.

[334] Tedim and Sizang have an irregular *l-* initial here suggesting a loanword origin.

[335] Matisoff (1983:470-1) compares ʧʰʔ(sʰʔ) ၌ၚ(ၜ) kʰraŋ(cʰjʔ) *marrow n* to the Mizo form but later (1992:170, 2003:293) includes it under a root containing Thado keŋ^{II} *leg n* and Tedim xe^{III} *leg, foot n*; Tedim has both keŋ^{II} *leg n* and xe^{III} *foot n* and Luce (1962a:57) is wary of associating the two. A better association for ʧʰʔ(sʰʔ) ၌ၚ(ၜ) kʰraŋ(cʰjʔ) *marrow n* may be found in Benedict's root for *bone n* (1976a:163;176) which then allows the Burmese form, in which the latter syllable means *fat n*, to be analyzed literally as *bone-fat n* with a velar animal prefix; Zahau raŋᶠ *bones n* may also be added.

အမိမရှယ်ခဖှဟ်သော့ကျောက်စာ *(IB 4.4)*
mother not write REM ever[336] ATTR stone inscription
The stone inscription which mother has never written.[337]

[#83] **Dream**

[M] *maŋ/k (2003:521)
[P&S] *məŋ/k (1996:#71)

[NC] *mɐŋ[II] *dream n*
  *mɐŋ[II] / *mɐn[III] *dream vi*

Mizo mɐŋ[IIa] shows the original derivation from the nominal form which in the other languages has been replaced by the form 2 inflection *mɐn[III] (< *mɐŋ[II]-s).

[OB] mɛʔ မက် mak *dream vi*[338]

A nominal function is reserved to compounds after *sleep vi* only:

မင်ကျွမက်မက်ဇအ် *(LK 104)*
King sleep[339] dream dream REAL
The king dreams a dream.[340]

[OC] məŋ[III] 夢 muwŋ[III] < *'məŋ[III] *dream n*

Although assigned a gerundive sense here, a verbal function for 夢, proposed by Takashima (2003:I.149), in his original translation of the following inscription seems justified in light of the syntax:

乙丑卜馻貞甲子塱乙丑王夢牧麋不隹禍隹又 *(BB 96)*

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[336] The final *-h* corresponds to tone II due to this forming part of the Ajāwlat inscription discussed in 2.4.1.

[337] See the original translations in Pe Maung Tin & Luce (1960:255) and Luce (1969-70:I.111) for the possible context behind this inscription.

[338] Matisoff and Peiros & Starostin compare ʰmîʔ ၏ ʰmaŋ[l] *composure n* due to its appearance in some compounds referring to somnambulism; the glosses in Bernot (1988:XI.196) show it to be unrelated.

[339] The vowel ligature ၍, equivalent to အိ is used for eiʔ အိပ် ʔip *sleep, lie down vi*. It also occurs as eî ၍ ʔim, equivalent to အိမ်, before mɛʔ မက် mak in the inscription noted under *Night* (#31) where it has assimilated the nasal feature of the following segment. In the case here the newly assimilated *-m* coda is simply omitted from the first syllable. Notably in Modern Burmese both eiʔmeʔ and eîmeʔ are acceptable pronunciations.

[340] Originally translated by Ba Shin (1962:129).

Yi Chou divination Nan test Jia Zi cleave[341] Yi Chou king dream herd stone mi-deer not be misfortune be aid.

Yi Chou day divination, Nan tests: When Jia Zi day cleaves Yi Chou day, the king's dreaming of herding stone mi-deer does not mean misfortune but means aid.

This suggests that the nominal tone III reading is a derivation of an original verbal sense.

A somewhat more complicated case may be found in Matisoff's comparison (2003:520-1) of Mizo ^{h}noŋ^I *back (body/direction)* n with ^{h}naʊ̃^{II} ေနာ်း ^{h}nwɨŋ^{II} *late vi*. A tonologically more appropriate comparison is with naʊ̃^{I} ေနာ် nwɨŋ^I *hereafter* n but notably the Burmese word for naʊ̃ʔ ေနာက် nwɨk *back* n, from which is derived ənaʊ̃ʔ အေနာက် ənwɨk *West* n, shows the hardening associated with the tone II contour.

Sagart's suggestion (1999b:61-2) of a common, yet sporadic,[342] shift of *-əŋ^{II}* to *-ə^{II}* in Old Chinese, which he attributes to the glottalic origin of tone II, is probably relevant here. The loss of a velar coda in Old Chinese before *-ʔ*, corresponding to tone II, is discussed in the case of *Lick* (#13) and it may be assumed that a hardening of *-əŋʔ* to *əkʔ* preceded the development to *-ə^{II}* as discussed under *Ear* (#88).[343] This inherent but sporadic incompatibility of tone II with *-ŋ* is nicely paralleled in the discussion in 6.3 below showing a shift of *-jəm^{II}* to *-əɲ^{II}/-əɲ^I* in Old Chinese,

6.3. *Northern Chin -ɯŋ^{II} and Old Chinese -əɲ^I*

Pulleyblank (1991a:56-7) notes that *xiesheng* characters like t^{h}iɛn^I 天 *then^I* < *^{h}ləɲ^I *sky, heaven* n and t^{h}iɛn^{II} 忝 t^{h}ɛm^{II} < *^{h}l(j)əm^{II} *shame vi* suggest that *-m* occasionally fronted to *-ɲ*. Pulleyblank (1995a:178;182) assumes the cause of this to be a medial *-j-* and further proposes an association between niɛn^{Ib} 年 nɛn^I < *nəɲ *year* n and ɹən^{II} 稔 ɲim^{II} < *'nəm^{II} *harvest, year* n which he compares to Burmese ^{h}nɪʔ နှစ် ^{h}nac *year* n.[344] Pulleyblank suggests the word may be a Chinese loan into Burmese after the shift of

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[341] The interpretation of 乴 as 臼, being the original graph for t͡suə 斲 traɨwk *chop, cleave vt*, follows Takashima (1979:54, 2004:8); the sense is that of one day becoming another.

[342] Sagart assumes dialect differences.

[343] See also *you* n in 6.5.4.

[344] Schuessler (2007:441-2) notes a plausible Mon-Khmer connection with the latter Chinese form.

the coda; this would help account for the tonal discrepancy as well, but the phonological regularity of the comparison and the evidence below suggest that an original Sino-Tibetan rhyme *-jam^{II}* has occasionally palatalised to *-əɲ^{I}* very early on causing a concomitant shift to tone I in Old Chinese:

[#84] **Tree**

[M] *siŋ/k (2003:524)
[P&S] *siŋ (1996:#1513)

[NC] *tʰɪŋ^{II} *wood n*

[OB] θɪʔ သစ် sac *tree n*[345]

[OC] ɕɪn^{I} 薪 sin^{I} < *'səɲ^{I} < **'sjəm^{II} *firewood n*

The evidence for an original bilabial coda stems from the oracle-bone form 朔 of the *xiesheng* graph ɕɪn^{I} 新 sin^{I} < *'səɲ^{I} *new vi* whose phonetic component 辛 represents ɕɪn^{I} 辛 sin^{I} < *'səɲ^{I} < **'sjəm^{I} *bitter vi* which is reconstructed with an original bilabial coda under *Liver* (#85). Miller (1974:208) rejects the comparison with the Chinese form on the semantic grounds that a meaning *firewood n* is not attested in any of the proposed Tibeto-Burman comparanda; Matisoff (1975:167, 1978a:174) counters that such a meaning is indeed found. Significantly, Peiros & Starostin (1996:#1511) cite an apparent phonological parallel with θɪʔ ວ စ် sac *new vi* and ɕɪn^{I} 新 sin^{I} < *'səɲ^{I} *new vi*; Beckwith (2002a:137) appears to reject this mainly on the basis of limited distribution outside of Lolo-Burmese, but Matisoff (2003:345) notes a possible supporting form in Qiangic.

[#85] **Liver**

[M] *sin (2003:277;306)
[P&S] *sin (1996:#1512)

[NC] *tʰɪn^{III} *liver n*

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[345] The similarity of the modern Standard Burmese pronunciation of tʰⅈ^{II} ထင်း tʰaŋ^{II} *fuel, firewood* with the Northern Chin form is entirely coincidental.

The derived tone III is most likely a nominalised form of *bitter vi* in tone II. Weidert (1987:36) notes that Bodo-Garo has tone II contrasting with Chin and Naga tone III.

[OB] θiⁱ¹ သည်း saɲ¹¹ *liver n*

The areal semantic association of *liver n* and *heart n*, noted by Wilkins (1996:284), is supported in Burmese with Luce (1981:64) glossing it as *liver, feelings n* and Stewart & Dunn (1940-81:358) as *liver, seat of emotion, heart, mind n*.

သည်ခံသောသခင်အရိယါတို့၌ကိုဝ်ဆွံပန်လုပ်ကျ္ဌည်ရစ်စိမ်အံသောၠ၊ *(IB 73.30-1)*
liver feel ATTR lord saintly PL to alms-flower serve continue in-order-to
In order to continue to serve alms to the patient monks.[346]

[OC] ɕɪn¹ 辛 sin¹ < *¹saɲ¹ < **¹sjəm¹¹ *bitter vi*

Evidence for a bilabial coda here is found in the *xiesheng* derivative inⁱ 音 ʔimⁱ *sound n*. Matisoff's extension (2004:357-8) of the areal relationship between *bile n* and *bitter vi* to *liver n* suggests an entirely different semantic field from Burmese and Northern Chin.[347] The inscriptional form 辛 depicts some kind of pointed instrument suggesting that *liver n* must be a derived sense, as suggested by tone III in Northern Chin, which then underwent further semantic permutations.

6.4. *Tone II Nouns*

A possible association of nouns with tone II when compared with their verbal counterparts was noted for Old Chinese in 3.3.2; a few possible cases in Old Burmese like *flower n* and *yoke n* are noted in 5.2.4.1 and 2.3.1.5 respectively. Although internal evidence in Northern Chin is even more limited,[348] recognition of this

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[346] Based on Than Tun's original translation (1958:46) of this inscription where he glosses ဆွံပန် as *flowers of rice food*.
[347] See the discussion under *Bitter* (#1).
[348] A possible example is *wɪal¹ coil vi* and *wɪal¹¹ times n* but cases like *paj¹ carry on oneself vi* and *paj¹ sheath n* show an inverse relationship.

morphological phenomenon possibly accounts for some mismatches of tones I and II
in Sino-Tibetan:

[#86] **Die**

[M] *səj (2003:189;201)
[P&S] *sij (1996:#1508)

[NC] *tʰ¡ˈ *die vi*

[OB] Θeɪ¹ ေသ / သိသ် sɨj¹ *die vi*

[OC] sɿᴵᴵ 死 siᴵᴵ < *ˈsəjᴵᴵ *die vi*

See Schuessler (2007:47;478), and the discussion in 3.3.2, for the suggestion
that tone II may have been used to reflect its inherently endoactive nature
which is also associated with nominalisation.[349]

[#87] **Fish**

[M] *ŋja (2003:167)
[P&S] *ŋ(j)a (1996:#2501)

[NC] *⁽ʰ⁾ŋaᴵᴵ *fish n*

[OB] ŋaᴵᴵ cɪ: ŋaᴵᴵ *fish n*

It is tempting to associate tãˈŋaˈ ဝံငါ tamˈŋaˈ *fisherman n* which is attested in at
least one case in the inscriptions with an aspirated second syllable as ဝံငှါ
tamˈʰŋaˈ paralleling the alternation between Zahau ŋaᴵᴵᵇ and Mizo ʰŋaᴵᴵᵇ:

ဝံငှါေလလာစ *(LK 95)*
fisherman-star also come REAL
The star of dawn[350] also comes.

However, in spite of the similarity, Hla Pe (1967a:86) treats it as a Mon
loanword. Shafer (1965:5-6) suggests an association of the Northern Chin

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[349] See also the discussion in 6.5.1.
[350] Ba Shin's (1962:96) gloss of *star of dawn n* in his original translation of this inscription is supported
by the modern constellation nomenclature ဝံငါကြယ်စဉ် *Southern Cross n.*

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forms with the Mon-Khmer velar stop initialled word for *fish n* but this is unlikely as the form ka^{III} ∽ ka^{III} is maintained in many piscine loanwords from Mon listed in Hla Pe (1967a:88-9).[351]

[OC]   y^{Ib} 魚 ŋịạ^{I} < *'ŋa^{I} *fish n*

The oracle-bone graph 象, representing y^{Ib} 魚 ŋịạ^{I} < *'ŋa^{I} *fish vi,* appears sometimes to be used instead of 象 and 象 to mean y^{Ib} 漁 ŋịạ^{I} < *'ŋa^{I} *fish vi.* The following is a short but incontrovertible case due to it appearing after the negative 勿 which, following Takashima, in Takashima & Itō (1996:I.370-3), only appears before controllable verbs:[352]

王魚 *(BB 156.16)*
King fish
The king (should) fish

勿魚 *(BB 156.15)*
should-not fish
(The King) should not fish

It seems likely that the verbal form in tone I has ousted a nominal form in a tone II.

[#88]   **Ear**

[M]   *na (2003:162;176)
[P&S] *nə (1996:#521)

[NC]   *^{h}na^{I} *ear n*

[OB]   na^{I} 象 na^{I} *listen vt*
        na^{II} 象: na^{II} *ear n*

[OC]   ə^{II} 耳 ɲị^{II} < *'nə^{II} *ear n*

貞疾耳隹虫 象 *(YZ 271)*
Test ail ear is have mishap

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[351] In certain cases it appears to have been replaced by the native word ŋa^{II} ɔ̌ː ŋa^{II}.
[352] Original translations of these may be found in Takshima (2003:I.248).

Tested: An ailing ear means[353] *there will be mishaps.*[354]

The oracle-bone graph for *ear n* is ⟨. The graphs ⟨ and ⟨, consisting of *ear n* and one or two components for *mouth n* ⨆, are generally treated as t^hɪŋ^I 聽 t^hɛjŋ^I *listen* but the graphic development is unclear and notably Takashima (2003:II.252-3) is non-committal. Qiu (2000:195-6) associates 聖, which is clearly derived from ⟨ with t^hɪŋ^{II} 王 dɛjŋ^I as phonetic, and suggests that later textual confusion of 聖 and 聽 supports this. Qiu's argument can be reversed to suggest that 聽 represents a semantic outgrowth of *sage n* later in the history of language which is particularly likely as it would be curious for the scribes to omit the phonetic component if it really represented ⟨. It seems that the phonetic in was ⟨ simply ⟨ and the graph represented the now disused original verbal form still attested in Burmese.

貞王叩隹禍 *(BB 358)*
Test King hear is misfortune
Tested: The King's hearing things[355] *means misfortune.*[356]

Alternatively, Sagart (1995b:346, 1999b:61-2) suggests -əŋ^{II} to be a dialectal feature of Old Chinese contrasting with a more general shift of -əŋ^{II} to -ə^{II} which, on the basis of its -ŋ coda in the *Jiyun* and some Min dialects, he believes to have happened to 耳. Sagart's associated suggestion (1995b:346-7) that the Tibeto-Burman forms may be be the result of an Old Chinese loan remains a distinct possibility.

6.5 *Loanwords and Tonal Discrepancies*

Weidert (1987:115-34) lists some examples of Lolo-Burmese tones I and II being inverted in relation to other languages but, excluding the recourse of loanwords, is unable to provide any real solutions. Benedict (1972a:28-30;33) notes some similar cases with Old Chinese; in the case of Old Chinese tone I he falls back on a tentative

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[353] The treatment of wɛi^{Ib} 隹 jwi^I as an explanatory copula follows Takashima's proposals in Takashima and Itō (1996:I.460-3).
[354] The functional translation of ⟨ as *mishaps* follows Takashima (2003:II.120-122;286-287).
[355] See Takashima (2003:II.253) for a discussion of this interpretation.
[356] See Serruys (1982:462) for a discussion of this graph.

loanword hypothesis but for tone II cases he suggests conditioning environments based around a root-initial or prefixal *s*- and an -*n* suffix.

6.5.1 Benedict's s- hypothesis

Benedict (1972b:29) notes that the case of *Die* (#86) causes problems for his hypothesis. The only other words proposed by Benedict (1972b:33) that are relevant to the discussion here are *Tree* (#84), *Liver* (#85) and *Fish* (#87) for which alternative accounts have been made. [357] Consequently Matisoff's hesistancy (1999:25) in accepting Benedict's proposal seems well-founded.

6.5.2 Benedict's -n Hypothesis

Here too Benedict (1972b:30) provides a counter-example to his hypothesis by suggesting the word for *Dog* (#37) represents an inverse of his proposal. As it happens, *dog* may perhaps not reflect a nasal suffix, but to his examples under *Bitter* (#1), *Smoke* (#41), *Water* (#56), *Child* (#42) and also *rodent n*, discussed in 6.5.4, that have been dismissed previously as faulty comparisons, may be added the following comparison by Benedict which, in spite of its omission in his supporting evidence, also fits his hypothesis:

[#89]   **Person**

[M]   *r-mi(j)-n (2003:449)
[P&S]   *mi (1996:#101); *miən (ibid:#87)

[NC]   *mi^{II} *person n*

[OB]   mếĩ^{II}(ma^{III}) 𐩽 / 𐩽ꝏ𐩥(ꭴ) mɨj^{II}(ma^{III}) *woman n*

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[357] Also of note are here are the following: Weidert (1987:440-1) suggests that tone I in Northern Chin *^{h}li^{I} *flea n* appears to be the basic Tibeto-Burman reflex but Matisoff (2003:192-3) and Peiros & Starostin (1996:#1932) compare ^{h}lei^{II} 蚤, ^{h}lij^{II} *tiny vi, flea n* which is not attested in the inscriptions and has a nominalised form meaning *insignificant thing, pest n* suggesting that *flea n* is either a semantic extension that happens to coincide phonologically with other words in Tibeto-Burman or alternatively has influenced the tonal development of the word for *flea n*; Mizo ^{h}naŋ^{IIa} *viscous vi* is compared by Matisoff (2003:304) to ɻaŋ^{Ib} 灢 ɲiaŋ^{I} < *^{l}naŋ^{I} *heavy with dew/grain vi* but in the latter sense there is a variant reading in tone II which corresponds tonally; Matisoff (2003:268) and Peiros & Starostin (1996:#2149) compare kĩ^{I} ꝏɛ kaŋ^{I} *roast vt* to Mizo kɐŋ^{I} *fry vt*, kaŋ^{III} *burn vi* and kɐŋ^{nb} *evaporate vi* of which the former is the most appropriate; the tonal discrepancy in Matisoff's (2003:195) and Peiros & Starostin's (1996:#2786) comparison of Mizo ^{h}mɔj^{II} *spindle n* with ^{h}mwei^{III} 曒, ^{h}mwɨj^{III} *twirl vt* may well stem from the different parts of speech with tone III being a derived tone in any case.

မြွယ်မိယ်မကှိ၆ိဝိယ်တှံ့ဧ၁ (IB 175.21)
grandchild woman to give again REAL
It was further given to the granddaughter.[358]

The latter morpheme ω ma^{III} is a female suffix.[359] The modern Burmese spelling is now meñ^{II}ma^{III} မိန့်းမ with a superfluous *-n* coda.[360]

[OC] –

Contrary to Benedict's (1972a:158) comparison of the tonally discrepant mın^{Ib} 民 mjin^{I} < *^{I}məɲ^{I} *people n* via a suffixal *-n*, Pulleyblank (1995a:178-9) and Sagart (1999b:135) suggest a connection with maŋ^{Ib}/məŋ^{Ib} 氓 məiɲ^{I} < *r-maɲ^{I} *people n* which supports an original nasal coda.[361]

6.5.3 Kinship Terms

The tonal alternation between Northern Chin *pa^{II} *father n* and *pa^{III} *male n* correlates perfectly with *nu^{II} *mother n* and *nu^{III} *female n*.[362] On the basis of similar evidence in other Tibeto-Burman languages, Weidert (1987:51;166;213) suggests that a distinction between vocative and referential forms may have induced the tone shifts.[363] The former case has solid external comparanda suggestive of such a shift:

[#90] **Father**

[M]   *p^{w}a (2000a:153-5)
[P&S] *pa (1996:#233); *Pa (ibid:#330); *wa (ibid:#434)

[NC]   *pa^{II} *father n*

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[358] Based on an original translation by Than Tun (1959:181).

[359] See the discussion in footnote 370.

[360] See Nishi (1974:26-7) for a discussion of the evolution of this word.

[361] Pulleyblank actually supports Benedict's comparison by reconstructing a putative *^{I}mjən^{I} in which the medial *-j-* palatalised the coda but this makes his attempted association with maŋ^{Ib}/məŋ^{Ib} 氓 məiɲ^{I} < *mraɲ^{I} somewhat more elliptical.

[362] The superficial phonological correspondence with the modern Mandarin form of ny^{II} 女 nria^{II} < *^{I}r-na^{II} *woman, female, girl n* leads Matisoff (1991a:342) to suggest a possible association; the Old Chinese form shows this not to have been the case.

[363] The discussion in 5.2.7 suggests that *male n* and *female n* should be reconstructed with an original *-s* coda as *pas and *nus respectively, but the special nature of kinship terminology suggests the tonal alternation to be an unrelated secondary development. The irregular form 2 pɐt of pa^{III}, when it occurs as the second part of a compound meaning *elder vi*, is supportive of this interpretation.

*pa^{III} *male n*

[OB] ba^{III} သ / ဖ p^{h}a^{III} *father n*[364]
p^{h}a^{III} ဖ p^{h}a^{III} *male suffix n*

အမိမျို၆အဖမျို၆၇ဆက် *(SIP 63)*
mother type father type 7 connect
7 generations on the mother's side and on the father's side.[365]

Weidert (1987:51;166) suggests that Burmese tone III is morpho-semantically conditioned as a vocative form instead of a referential one.

[OC] fu^{III} 父 bua^{II} < *^{I}ba^{II} *father n*
fu^{II} 父 pua^{II} < *^{I}pa^{II} *honorific suffix*

Weidert (1987:337-8) suggests a similar tone shift between I and II may have occurred in the case of *grandmother n*:

[#91] **Grandmother**

[M] *p^{w}əj (2000a:171-2)
[P&S] *pij (1996:#194;450)

[NC] *pi^I *grandmother n*[366]

[OB] bei^{II} ေား / ၆ယ် p^{h}əj^{II} *great-grandfather, great-grandparent n*

In the following inscription, Pe Maung Tin & Luce (1963:64) gloss this as *great-grandparent(s) n* but Luce's later suggestion (1981:13) of *grandmother n*[367] is supported by the word appearing to be compounded with *grandfather n* in the same way as *mother* and *father*:

ငါမိယာအမိအဖအဖိယ်အဖို၆အဆုယ်အမျို၆... *(IB 6.23)*
I wife mother father grandmother grandfather
My wife's mother, father, grandmother, grandfather...[368]

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[364] Stewart & Dunn (1940-81:267) suggest that əp^{h}e^I အဧဖ / အဧက် əp^{h}əj^I *father n* may perhaps be a later variant form; see the discussion of similar forms under *Mother*.

[365] Based on an original translation in Stewart & Dunn (1940-81:273).

[366] Following his proposal for a semantic link between *big vi* and *mother/female* (1991a:319-20), Matisoff (2000a:172) suggests Mizo pʊj^{IIa} *big (of female animals) vi* and pi^n 牝 bji^n < *^{I}bəj^{II} *female of animals n* may be related here. This proposal is not repeated in Matisoff (2003:448); notably the Mizo form is treated as derived from *pi^{II} in the other five languages without the labialisation.

[367] Luce (1981:13) also suggests a meaning of *ancestor n*.

[368] Based on an original translation in Pe Maung Tin & Luce (1963:64).

[OC]   pi^{II} 妣 pji^{II} < *^{1}pəj^{II} *deceased mother n*

This appears equally applicable to *grandfather n*:

[#92]   **Grandfather**

[M]   *p^{w}əw (2000a:167-8)
[P&S]   *po (1996:#310); *P^{h}əw (1996:#429)

[NC]   *pu^{1} *grandfather n*

[OB]   p^{h}oʊ^{1} ဖို p^{h}ɨw^{I} *masculine suffix n*
        boʊ^{II} ဘိုး / ဖိုး p^{h}ɨw^{II} *grandfather n*

        ဇာလီကုမာရှိကနှာ၏န်အဖိုဒ်အဖိုယ်တာင်ထက်နိုယ်... *(LK 245)*
        Zalikumar Kahnazin grandfather ancestor haunch on stay...
        Jālikumāra and Kaṇhājina rest on the haunches of their grandfather[369] ...

Recognition of such tonal shifts allows an account to be made for Matisoff's comparison (1988a:985) of Burmese əmi^{III} အမိ əmɨ^{III} *mother n* with Lolo-Burmese mi^{II}; the tone II form is still attested in Bradley's comparison (1979:312-3) of θəmi^{II} သမီး səmi^{II} *daughter n* in which the first syllable is a reduced form of θa^{II} သား sa^{II} *child n* allowing a literal gloss of *female child n* as proposed by Pe Maung Tin & Luce (1963:113).[370]

6.5.4 Loanwords

Excluding faulty comparisons, the attribution of the remainder of tonologically irregular comparisons to loanwords appears to be correct. Included in the list below

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[369] The gloss of အဖိုအဖိုယ် as *grandfather n* follows Ba Shin (1962:143) in his original translation of this inscription. The former syllable by itself has this meaning while the latter syllable is glossed as *grandfather n* by Pe Maung Tin & Luce (1963:64) and then *grandmother, ancestor n* by Luce (1981:13); here it is treated as *ancestor n* although it could equally well be treated as *grandmother n* to give a compound sense of *grandparents n* as appears to be the case in the inscription listed under *grandmother n*.

[370] The Burmese female suffix ma^{III} မ ma^{III} corresponds vocalically with Old Chinese mu^{II} 母 məw^{II} < *mə^{II} *mother n*; the vocalism of əmi^{III} အမိ əmɨ^{III} *mother n* is noted by Shorto (2006:100) to be associated with Mon-Khmer. Stewart & Dunn (1940-81:276) suggest əmeɪ^{I} အမေ / အမိဉ် əmɨj^{I} is a later variant; see the similar form under *Father*. Matisoff's comparison (2003:223;227) of mu^{II} 母 məw^{II} < *mə^{II} *mother n* with Northern Chin *məw^{I} *daughter-in-law n* is based on a superficial correspondence of modern pronunciations.

are also cases where the tones happen to coincide but irregular segmental correspondences support an external origin. Following Miller (1988:527-9), the Tibeto-Burman numerals from *two* to *nine* are treated as Chinese loanwords; this is supported by their irregular segmental correspondences within Northern Chin as well as in their comparison with Old Burmese and Old Chinese.[371] In a similar manner to the prefix-runs in Tibeto-Burman numerals noted by Matisoff (1997:100-2), tone-bearing syllables, excluding diphthongs and those with secondarily derived tone IIb with obstruent codas, have all undergone analogical levelling to tone I in Northern Chin and tone II in Burmese; Northern Chin form 2 derivations have also been analogically levelled. Three other comparative sets, *Blood* (#93), *Thin* (#94), *Fruit* (#80) and *Fall* (#8) that suggest loanword influence are not noted below due to their individual treatments elsewhere.

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[371] Miller (1988:525) does not address the numbers *one* and *ten* due to their greater instability, and no cognate sets have been established for the languages here. Matisoff (1997a:17-8) attempts to relate Northern Chin *kʰɐt *one vi* with ɪʔ အ Ɂac *one vi* and iᵗ — Ɂjit < *'Ɂɔc *one vi*, but the Pali origin of the Burmese form is shown by its variant Written Burmese form အက် with a -*k* coda as noted by Stewart & Dunn (1940-81:80) and Hla Pe (1960:74;89), and a phonological association between the Chinese and Northern Chin forms is incredibly unlikely.

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Gloss	NC	OB	OC	Source	Reference
Small-bird n	*ʔarᴵ	–	iɛnᴵᴵᴵ 鷃/鷃 ʔainᴵᴵᴵ < *ʔarᴵᴵ	Mon-Khmer[372]	Schuessler (2007:556)
Hole n	*ʔoŋᴵᴵ	kʰaũᴵᴵ ခေါင်း kʰwiŋᴵᴵ	kʰɤŋᴵ 空 kʰəwŋᴵ < *kʰaŋ^{wt}	Mon-Khmer	Matisoff (1976a:285) Shorto (2006:237)
Cover vt	*ʔop	ဪ ၁ၣ် ʔwɨp[373]	hɤᴵᴵᵇ 合 ɣəp < *gwəp[374]	Mon-Khmer	Shafer (1952:142) Schuessler (2007:274-5)
Bat n	*bakᴵᴵ[375]	–	fuᴵᵇ 蝠 puwk < *'pek[376]	–	–
Bean n	*beᴵᴵ	perᴵᴵ ၁ / ၁၁၃ pajᴵᴵ	–	Mon-Khmer	Luce (1959a:23) Hla Pe (1967a:78) Benedict (1994:3)
Ox n	*boŋᴵ/ᴵᴵᵇ	pjaɛ̃ᴵ ၉ြ၁၃ priwŋᴵ	feŋᴵ 犎 puawŋᴵ < *'praŋ^{wt}	Mon	Hla Pe (1967a:88)

372 See also Shorto (2006:415).
373 Shorto (2006:339–40) makes a specific Mon-Khmer comparison with duᵐkouʔ ၃၈၃ၠ dwɨᵐkwɨt *monk's shawl* n which, in spite of the spelling, Hla Pe (1967:80) derives from a Mon source ending in -p.
374 The evidence for medial -w- comes from huerᴵᴵᴵ 會 ɣwajᴵᴵᴵ < *'gwəjᴵᴵᴵ < **'gwəpᴵᴵᴵ *gather, join* vi which Baxter (1992:544) notes to have originally had 合 as phonetic.
375 The irregular Mizo IIa tonal contour confirms an external origin.
376 This is restricted to the binome pienᴵfuᴵᵇ 蝙蝠 penᴵpuwk.

Bamboo-rat n	*bɔjᴵ	pwerᴵᴵ ೧ೲ: pwejᴵᴵᴵ³⁷⁷	—	Mon-Khmer	Luce (1959a:25) Shafer (1952:156) Shorto (2006:398)
Gobble, bite vt	*hap	haʔ ೲ hap	ɕiaᴵᵇ 呷 ɣap < *Gap	Mon-Khmer	Shorto (2006:356-7)
Armpit n	*jek	dʒɛʔ- ಌ|೧ೲ- / ೧|೧ೲ- kʰjak-³⁷⁸	iᴵᴵᴵ 腋/掖/亦 jiajk < *'lak kɣᴵ 胳 kak < *'klak	Mon-Khmer³⁷⁹	Shorto (2006:128) Schuessler (2003:16)
Flap vi	*japᴵᴵ	jaʔ ೲ jap	—	Mon-Khmer	Shorto (2006:344;349)
Sell vt	*joarᴵ	³⁸⁰	—	Mon-Khmer	Shorto (2006:450) Benedict (1976b:85)
Liquor n	*juᴵ	—	iɣoᴵᴵ 酉/卣 juwᴵᴵ < *'lewᴵᴵ³⁸¹	Chinese	Sagart (1995a:251)
Rodent, weasel n	*juᴵᴵ	—	iɣoᴵᴵᴵ 鼬 juwᴵᴵᴵ < *'lewᴵᴵᴵ	Chinese	³⁸²

³⁷⁷ Matisoff (2000a:179) notes the Lolo-Burmese correspondences to be irregular.

³⁷⁸ This may be a native coinage compounding tʃʰɛʔ ೧|೧ೲ kʰjak *centre, navel n* with kəliᴵᴵᴵ ೲ೧ʒ kəliᴵᴵᴵ *irritate, tickle vt*. The latter sesquisyllable is nowadays almost exclusively found in the compound kəliᴵᴵᴵkʰoᴵᴵ ೲ೧ʒ: *tickle vt* in which the latter syllable means *poke, jab vt*; Matisoff (1976a:273) uses Lahu evidence to show it to be a loanword and further suggests (2003:186) it may be imitative in origin due to similar words in Austronesian and Tai, noted by Shorto (2006:128), Peiros & Starostin (1984:125) and Schuessler (2003:16), to which may be added Zahau kɪ-rɪk *tickle vt*.

³⁷⁹ Sagart (1995a:251) treats the Burmese form as a Chinese loanword; Sagart (2007:4) suggests a uvular initial for both Chinese forms.

³⁸⁰ Matisoff (1988a:1339, 2003:393-4) and Peiros & Starostin (1996:#1461) compare werᴵ ೲ / ೧|೧ʒ wajᴵ *buy vt* but the phonological correspondence is poor.

³⁸¹ Schuessler (2007:96), following Baxter (1992:202), proposes that the alternation of Middle Chinese *j*- with the initial *ts*- in the *xiesheng* derivative tɕiwᴵᴵ 酒 tsuwᴵᴵ < *'cəwᴵᴵ *wine n* suggests an original Old Chinese *j*- rather than *l*- due to the palatal initials being phonetically close enough to overlap in *xiesheng* series. Nevertheless, Bodman's evidence (1980:93) for a liquid initial elsewhere in Tibeto-Burman supports Sagart's reconstruction (1995a:251) of *l*- which leaves the origin of *ts*- unresolved.

Follow vt	*juj[II] [383]	—[384]	sueɪ[Ib] 隨 zwia[I] < *s-ˀlwal[I]	Chinese	Sagart (1995a:251)
Crotch n, clasp vt	*kep	—	tɕia[I] 夾 kɛip < *r-kjap	Mon-Khmer	Shafer (1952:157) Shorto (2006:342)
Fork vi[385]	*ka(k)[II]	kʰɛʔ ခြစ် kʰak	—	Mon-Khmer	Shafer (1952:151-2) Shorto (2006:177)
Sulphur n	*kat[I] / ken[II]	kã[III] ကန့် kan[III]	—	Sanskrit	Matisoff (1985a:149)
Bend, coil vi/n	*koj[II/III] *kɤaj[III]	kweɪ[II] ကွေ့ kwɨj[II] [386] kweɪ[III] ကွေး kwɨj[III]	—	Mon-Khmer	Shafer (1952:145) Shorto (2006:121)
Nine vi	*kɤa[II] [387]	koʊ[II] ကိုး kɨw[II]	tɕiɤʊ[II] 九 kuw[II] < *ˀkʷəw[II]	Chinese	Miller (1988:527-9)

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[382] This follows Sagart's proposal, discussed in 3.5.1, that Tibeto-Burman *j-* stems from from Old Chinese loanwords with a lateral initial. Benedict (1972b:30) suggests an association with joɪ[I] ယုန် jwin[I] *rabbit, hare n* and tɕʰuen[I] 鼢 tsʰwin[I]/tswin[III] < *cʰ⁽ᵇ⁾ən[I]/[III] *hare n* via a tone altering -n suffix rejected in 6.5.2.

[383] Support for an original final -l appears to be found in the form [b]jul noted by Peterson (2003:175-8) in the Southern Chin language Hyow.

[384] Matisoff's comparison (1992:164-5) of θoʊ[III] သို့ siw[III] *to, thus* stems from his overly literal interpretation of ⁱᵢ as ᵢ *u* and ᵒ *i*; which was seen in 2.1.3.2 to represent i, or, more specifically in this case, -iw due to the dropping of the Inscriptional Burmese -w coda in Written Burmese.

[385] Mizo kak[b] *fork of tree n, forked vi* and Zahau kak[a] *spread out, distanced vi* appear to be loanwords; Thado, Zo, Tedim and Sizang ka[II] suggest the Mizo form to be a regular inflection but notably their inflections with kat[II] suggest a later entrance into the language as discussed in 7.1.2.

[386] Thurgood (1981:48-9) suggests a transitivity association with kʰweɪ[I] ကွေ့ kʰwɨj[I] *coil vi/t* but cautions that this may not be a valid derivation; another associated form is kʰweɪ[II] ကွေး kʰwɨj[II] *ferrule, coil n*. In addition to supporting the comparison above (2003:228), the alternative comparison in Matisoff (2003:412) of kweɪ[III] ကွေး kwɨj[III] to a Lai Chin form appearing to correspond to Northern Chin *ki[I] *edge, corner n* and *kil[II] *curl vi* is phonologically unlikely.

[387] See 5.1.3 for a discussion of the rhyme here.

Bee *n*	*kʰʷaj¹	kwe¹¹ ⟨script⟩ kwaj¹¹	kuɔ¹¹ 蜾 kwa¹¹ < *kwa¹¹ [388]	Areal	Schuessler (2007:269)
Pillow, bed	*kʰon/m¹¹¹	kʰoɔˀ ⟨script⟩ kʰwɨm¹ [389]	— [390]	Mon-Khmer	Hla Pe (1967a:83)
Tiger *n*	*kla¹¹	tʃa¹¹ ⟨script⟩ / ⟨script⟩ kla¹¹	hu¹¹ 虎 xɔ¹¹ < *-a¹¹ [391]	Mon-Khmer Austroasiatic	Blagden (1916a:94) Shafer (1952:137) Hla Pe (1967a:87) Norman & Mei (1976:286) Benedict (1994:5-7)
Bosom, chest *n*	*(kr)aŋ¹	jï¹ ⟨script⟩ raŋ¹	—	Austronesian, Tai-Kadai	Matisoff (1976:272)
Distend *v* [392]	*kraŋ¹	tʃï¹¹ ⟨script⟩ kraŋ¹¹¹ [393]	tʂaŋ¹ 張 triaŋ¹ < *ˀr-taŋ¹	Mon-Khmer	Schuessler (2007:605-6)
Scatter *v*	*kraj¹¹ [394]	tʃe¹¹ ⟨script⟩ kraj¹¹ [395]	—	Mon-Khmer [396]	—

[388] This is restricted to the binome kuɔ¹¹luɔ¹¹ 蜾蠃 kwa¹¹wa¹¹.

[389] There is possibly an association with kʰoɔˀ ⟨script⟩: kʰwɨm¹¹ *convex vi*; Matisoff (2003:276) includes this under a separate root with Mizo kɔm¹ *shrug, cup hand vt* but the other Northern Chin languages correspond irregularly in aspiration and syllable weight further suggesting an external source.

[390] Matisoff (2003:308) compares tʂən¹¹/¹¹¹ 枕 tɕim¹¹/¹¹¹ < *ˀkəm¹¹/¹¹¹ *pillow n/vt* but a better comparison is with Northern Chin *kʰəm¹¹¹ *pillow vt* although in Thado this appears to be derived from xam¹ *lie down vi*; the reconstruction of an Old Chinese velar initial follows Bodman (1980:183-4) and Baxter (1992:551).

[391] This is attested in the earliest inscriptions as ⟨script⟩ which leads Norman & Mei (1976:286-8) to suggest that it must have been a very early loanword; Benedict (1994a:5-7) notes that the regularity of the Tibeto-Burman forms also suggests a very early loan. The correct reconstruction of the initial is unclear: Sagart (1999b:41) suggests *ʰr- on the basis of *xiesheng* evidence while the Mon-Khmer forms in Shorto (2006:114) show an original *kl*; Pulleyblank (1983:427-8) notes a 5ᵗʰ century Chinese dialect word for *tiger* yⁱʰtʰu¹¹¹ 於菟兔 tʃat̚ɔ¹¹¹ < *ˀʔa¹¹ᵇlak¹¹¹ which, following Mei & Norman (1976:286-8), he suggests may be a doublet of hu¹¹ 虎 xɔ¹¹.

[392] This may well be associated with the root for *bosom, chest n* below.

[393] Gong (1995:74) compares ʈï¹¹ ⟨script⟩ taŋ¹ *taut vi, tauten vt* to the Chinese form.

[394] This is noted in Weidert (1975:24) and is restricted to Mizo where it occurs in tone IIb.

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					Austroasiatic[397] Peiros & Starostin (1996:#1875)
Exchange vt	*lej^{III}-s	le^{II} ⟨⟩ laj^{II} / ʰle^{II} ⟨⟩ ʰlaj^{II} / ʰle^{II} ⟨⟩ ʰlaj^{I} [398]	—		
Cart n	*leŋ^{II}	ʰle^{II} ⟨⟩ ʰlaŋ^{II} [399]	—[400]	Mon-Khmer, Burmese	Luce (1962a:tableB) Lehman (1963:38)[401]
Buffalo n	*loj^{I}	ʧwe^{II} ⟨⟩ / ⟨⟩ klwaj^{II}	—	Mon, Areal	Benedict (1967:301) Schuessler (2003:32)
Boat n	*loŋ^{III} / loŋ^{III}	lau^{II} ⟨⟩ liwŋ^{II}	—	Mon-Khmer, Burmese	Luce (1940:306) Shafer (1952:145) Hla Pe (1967a:83) Lehman (1963:38)

[395] Matisoff (1980:30-1), rejecting a previous argument (1972b:279) that it is related to Northern Chin *ʔar^{I} *star n* via metathesis of the *a* and *-r* with the unstated implication that the *-j* is a diminutive suffix, relates ʧe^{I} *star n* via a metaphorical association of the scattered appearance of stars in the night sky.

[396] See Shorto (2006:403-4) where the vocalic alternations suggest a further association with ʧwer^{I} ⟨⟩ / ⟨⟩ krwiɲ^{I} *fall, drop vi* and ʧʰwer^{I} ⟨⟩ / ⟨⟩ kʰrwiɲ^{I} *fell, drop vt.* This suggests any association with Mizo ʧi^{III} *drop vi* and Zahau ʧi^{III} *drop vi*, as implied in Matisoff (2003:410) and discussed in footnote 299, to be indirect at best; the syllable weight in Mizo and Zahau is also inconsistent.

[397] See also Shorto (2006:408). Matisoff (2003:216) suggests an allofamic relationship with *leɲ^{II} *buy vt* which Benedict (1967:321-2) believes to be an Austronesian / Tai-Kadai loanword.

[398] See Stewart & Dunn (1940-81:348); Thurgood (1981:36) suggests there may be relics of a lost transitivity distinction here.

[399] There is one instance of a variant spelling ⟨⟩ ʰrɑɲ (WK 3.367), noted by Luce & Whitbread (1971:212), which, if not due to scribal error, may be attributable to an external origin.

[400] Peiros & Starostin (1996:#1768) compare ⟨⟩ zɪŋ^{III} < *^{I}leŋ^{III} *chariot n* but it is a derivation of ʧəŋ^{Ib} ⟨⟩ zɪŋ^{I} < *^{I}leŋ^{I} *mount, ascend, ride vt* which, as noted by Takashima (2003:II.73-4), is a pictograph of a man atop a tree ⟨⟩.

[401] Lehman suggests an association between *leɲ^{II} *cart n* and *loŋ^{II} / loŋ^{III} *boat n* discussed below.

Bridge, stairs n	*(h)lɛj^III [402]	ʰlej^Ika^II ခလောၣ်း ʰlej^Ika^II	Austronesian	tʰᴵᵗ 梯 tʰɛj^I < *ʰləj^I [403]	Benedict (1967:282;311)
Four vi	*li^I	lej^II လေး lej^II	Chinese	sɿ^III 四 sɿ^III < *s-ʰlej^III	Miller (1988:527-9)
Monkey n	*ʰlɔk [404]	mjaʊʔ မျောက် mjwik [405]	Austronesian	—	Benedict (1967:279)
Head n	*lu^I	—	Austronesian	ʂou^II 首 ɕuw^II < *ʰləw^II [406]	Peiros & Starostin (1984:125) Sagart (1999b:155, 2005:163) Schuessler (2003:12;37)
Ink, blackness n	*mɐŋ^II	(h)mi^ᵗ မင်/မှင် (h)maŋ^I [407]	Mon Chinese [409]	muo^III 墨 mək < *mək	Hla Pe (1967a:82) [408] Sagart (1999b:213-4)
Beautiful vi	*moj^I / mɔj^I	—	Chinese	mej^II 美 mi^II < *r-'mwəl^II [410]	Sagart (1995a:251)

[402] Specifically *bridge n* but Mizo and Zahau may be combined with ka^I and ka^Iᵃ respectively to mean *stairs n*.

[403] The -l coda is based on its *xiesheng* associations but at the time of character composition this may have already shifted to -j.

[404] See the discussion under *six vi* for an account of the bilabial coda in Thado lop.

[405] Matisoff (2003:145) notes -r- and -l- medials in Intha Burmese, but Okell (1995:59;64) and Nishi (1999:674) note that -r- and -l- are not contrastive in Intha Burmese. In any case, Okell (1995:66) suggests a liquid medial in the word to be aberrant which is not supported by inscriptional evidence for -j-; the situation is similar to that of *Otter n*.

[406] Matisoff (2003:86;198) attempts to relate tʰou^I 頭 dəw^I < *daw^I *head n* with u^II ဦး wa^II *head n* and Northern Chin *ʔu^I *elder sibling n*. However, Unger, cited in Sagart (1999b:155-6), suggests that the Old Chinese word for *head n* is ʂou^II 首 ɕuw^II < *ʰləw^II which was only later replaced by tʰou^I 頭 dəw^I < *daw^I due to the homophonous development of the original word with ʂou^II 手 ɕuw^II < *ʰnəw^II *hand n*.

[407] Matisoff's proposal that nɛʔ နက် nak *black, deep vi* is related via dentalisation of the labial initial due to the s- prefix is unlikely due to the uniqueness of the case and the true etymology perhaps lying in the nominalised form ənɛʔ အနက် ənak *that which is cram-full n* which, in spite of its treatment in Stewart & Dunn (1940-81:183) as an unaspirated nominalised form of *ʰnɛʔ နှက် *ʰnak *ram/cram down, beat vt*, may simply be a causative derivation of nɛʔ နက် nak *black, deep vi* via a sense of *make deep vi*.

[408] See also Shorto (2006:206) and note the discussion of marʔ မှိုက် mɪk *dark vi* in 2.1.1.

[409] Note also hɛj^I 黑 xək < *ʰmək *black vi*. Sagart's proposal to treat the Burmese form as a Chinese loanword makes no account for the nasalisation of the coda.

Bud n/vi	*ⁿmum^II/mom^II moʊ̌ ɕ̣ mwim^I	—	Mon-Khmer	Shorto (2006:376)
Hold in mouth vt	*ʰmoam^I	an^II 俺 ʔam^II < *ʔem^II	Mon-Khmer	—[411]
Lips n	*ʰmur^III / *ʰmuj^III/ʰmoj^III	uen^II 吻 mun^II < *ˡmwer^II	Austroasiatic[412]	Shafer (1952:142) Schuessler (2007:515)
You n	nĩ^I ṣĉ naɪ^I / *naŋ^II	ȵʉ^II 汝 ȵiɐ̃^II < *ˡna^II naɪ^II 乃 nəj^II < *ne(ɲ)^II[414]	Mon-Khmer	—[413]
Two vi	*ʰnis ʰnĩʔ ṣ̑ⱬ ʰnac[415]	eɪ̯^III 二 ȵi^III < *ˡnec-s	Chinese	Miller (1988:527-9)

[410] See *Body-Hair* (#68) for a possible Sino-Tibetan etymology for this word prior to it being loaned into Tibeto-Burman.

[411] See Shorto (2006:376-7).

[412] See also Matisoff (1976a:270) for possible Austronesian and Tai-Kadai connections.

[413] Sagart (1995a:252) notes the borrowing of pronouns, like numerals, in East Asia to be very common. Matisoff (1993:127) notes the -ŋ coda to be haphazardly attested in Tibeto-Burman; the Mon-Khmer data in Shorto (2006:91), and Hla Pe's observations (1967:89) regarding ɲi^II ... naŋ^II *you n (female term of address)*, suggest external influence to be a source of several Tibeto-Burman forms not attesting -ŋ. Regarding the first-person pronoun, the Northern Chin pronominal prefix ke- superficially concurs with Sagart's Sino-Tibetan pronoun *ka (1999b:145), from which he argues u^b 吾 ŋa^I *I* is an analogical derivation which was loaned into Burmese as ŋa^I ŋa^I; Henderson (1957:325, 1965:32) shows it to be concordant in its development from Northern Chin *kej^I *I n* with the general pronominal prefix ʋ-. Matisoff (1995:76-7) suggests Mizo ŋej^III *self n*, as attested in Schuessler (2007:518), is derived from *ŋa via a palatal suffix; this could plausibly be extended to the relationship of Northern Chin *kej^I with Sino-Tibetan *ka but further research is required; Benedict's comparison (1994b:633) of the Burmese topic marking particle ka^II ∽ ka^III is rejected by Sagart (1999b:145).

[414] See Sagart (1999b:62).

[415] Matisoff (1974:184) suggests ʰnaloi^II ... / ... ʰnaclwim^II *heart n* may be literal physiological description of the heart as *two balls* with its two chambers. However, Matisoff (2003:521-2), supported by Peiros & Starostin (1996:#586), prefers to compare Mizo nŋ^Ia *tired of vt* which is phonologically plausible but semantically difficult; Matisoff's (1978a:205;225-7) and Peiros & Starostin's (1996:#1838) comparison of Northern Chin *ʰtem^III *placenta n* with the latter part of the compound is phonologically untenable and semantically doubtful.

Breast, milk n	*ʰnoꭥ(teᴵᴵ)[416]	noʊᴵᴵᴵ 乳 ɲ̥uaꭥ niwᴵᴵᴵ	ɹuᴵᴵ 乳 ɲuaꭥᴵᴵ < *ˀnawᴵᴵ	Areal	Matisoff (1976:270) Benedict (1994:1) Sagart (2005:163)
Five vi	*ŋaᴵ	ŋaᴵᴵ cꭥ: ŋaᴵᴵ	uᴵᴵ 五 ŋɔᴵᴵ < *ŋaᴵᴵ	Chinese	Miller (1988:527-9)
Silver n	*ŋun^{I/III}	ŋweⁱ 銀 ŋwɨj	inᴵᵇ 銀 ŋinⁱ < *ˀr-ŋənⁱ	—[417]	Benedict (1976b:69)
Horse n	*reŋᴵᴵ[418]	mjⁱᴵᴵ 馬 mraŋᴵᴵ	maᴵᴵ 馬 maɨᴵᴵ < *mraᴵᴵ	Areal	Pulleyblank (1966a:11) Sagart (1999b:196) Shorto (2006:220)
Fruit, rice n	*res	—	lᴵᴵᴵ 穤 l(i)ajᴵᴵᴵ < *(l)ratᴵᴵᴵ[419]	Austronesian[420]	Maspero (1933:69) Peiros & Starostin (1984:124) Matisoff (2003:437) Sagart (2005:165)
Eight vi	*riatᴵᴵ	ʃiʔ 八 ʰrjat[421]	paᴵ 八 pəitⁱ < *p-rjat	Chinese	Miller (1988:527-9)

[416] This is a Mizo form from Luce (1985:II.86).

[417] Sagart (1999b:202) follows Gong (1980:472) in assuming that the lack of labialisation in Old Chinese need not preclude a direct comparison with Tibeto-Burman but Gong's two supporting examples have bilabial initials which account for the rounding.

[418] This is restricted to Zahau. Matisoff (2003:400) suggests that Mizo sæ-korᴵᴵᵃ, reflected in Thado, Zo and Tedim with a lateral coda -l, may be an Indo-Aryan loanword. Luce (1959a:23, 1985:I.85) tentatively suggests that the first syllable in Sizang siᴵᴵᴵpʰuᴵᴵᴵ horse n may be Mon-Khmer in origin; it may alternatively be a loanword variant of the animal prefix.

[419] Note also the Yunjing reading lat.

[420] Benedict (1967:304) rejects the loanword association due to the semantic difference between Northern Chin fruit n and Old Chinese coarse grain n.

[421] Duroiselle (1919:28-9) lists a plethora of variant inscriptional spellings often ending with –oŝ –t showing that the Written Burmese ŝ –c coda was a result of secondary palatalisation; the Old Burmese reconstruction here follows Nishi (1974:18).

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Pheasant n	*⁽ʰ⁾rɪk / lɪk	jiʔ ꞓꞵ̀ rac	diʳᵇ 翟 dɛjk < *ljaq	Chinese	Sagart (1995b:370-1)[422]
Seven vi	*ris / lis[423]	kʰuᵐᵗʰ nɪʔ ... kʰwiᵐᵗʰ nac[424]	tɕʰi̍ 七 tsʰit < *s-[ʰ]nəc	Chinese	Miller (1988:527-9)
Six vi	*rok / lok[425]	tʃʰaʊʔ ... kʰrwik	liɣʊᵐ 六 luwk < *'rəkʷ	Chinese	Miller (1988:527-9)
Otter n	*ʰrem[ᴵᴵ]	pʰja̍ ꞓ̀ pʰjam[ᴵ]	—	—[426]	—
Sharp vi	*ʰriam[ᴵ]	θã̍ ɔ̀ sam[ᴵ]	ɕiɛn[ᴵ] 銛 siam[ᴵ] < *s-[ʰ]lam[ᴵ]	Austroasiatic[427]	Benedict (1994:3-4)[428]
Enclosure n	*ʰrʊaŋ[ᴵᴵ] / hʊaŋ[ᴵ] wĩ[ᴵ] oɕ̀: waŋ[ᴵᴵ]	—		Mon-Khmer	Hla Pe (1967a:85) Shorto (1973:377)
Head-hair n	*sem[ᴵᴵ]	sʰa̍ ɔ̀ cʰam[ᴵ]	ʂan[ᴵ] 髟/彡 ʂaim[ᴵ] < *r-sam[ᴵ] [429]	Austronesian,	Matisoff (1976:271-2)

422 Matisoff (1988a:1141, 2000d:223) also notes the Burmese form to correlate poorly with Lahu.
423 Matisoff (1997a:85) believes that the *r- initial results from an original nasal undergoing rhotacism intervocalically after the sə- prefix. The original palatal coda -c of Old Chinese appears to have been reanalysed as a sibilant -s perhaps via analogy with two vi.
424 This is now written ꞓꞵ̀ without the aspirated nasal although it is still pronounced. Matisoff (1985b:432) suggests the first syllable, kʰuᴵᴵᴵ ə kʰwḭᴵᴵᴵ unit n, may refer to the five fingers of the hand collectively such that when combined with the second morpheme, meaning two vi, it may literally mean five and two vi. He tentatively compares it to Mizo kŏt hand n although Ba Shin (1962:92;108) notes the curious compound tʃʰaʊʔnɪʔ ... kʰrwɪkʰnac for seven vi in the inscriptions which on the surface appears to be a compound of six and two that is most likely the source of the reduced modern form.
425 Matisoff (1997a:83) attributes the -p coda in Thado rup to assimilation of the velar to the preceding rounded vowel. Similar cases may be found in Thado lŏp colugo n
426 The source is obscure but in addition to the tonal discrepancy, Old Burmese, as reconstructed by Luce (1985:II.125), can only support a medial -j- rather than -r-.
427 See also Shorto (2006:385).
428 Benedict (1994:3-4) suggests the loan is from Sino-Tibetan to Austroasiatic but Matisoff's observation (2003:300) of its rarity in Sino-Tibetan suggests the inverse to be the case. Note also lien[ᴵᵇ] 帘/簾 liam[ᴵ] < *k-'lam[ᴵ] sharp vi, sickle n and jan[ᴵᴵ] 剡/覃 jiam[ᴵᴵ] < *'lam[ᴵᴵ] sharp vi.
429 Sagart (1999b:149-52) provides good evidence for a lateral initial in this word.

Mortar n	*somᴵᴵ	sʰouˀ ꩾ cʰimˀ	—	Tai-Kadai / Tai-Kadai	Benedict (1967:295)
Onion n	*soaŋᴵᴵᴵ	-θuˀ-ꩾ-swanˀ [430]	suanᴵᴵᴵ 蒜 swanᴵᴵ < *swanᴵᴵᴵ	Mon-Khmer	Luce (1959a:tableIII) / Hla Pe (1967a:78) / Benedict (1976b:90)
Wash vt[431]	*suᴵᴵ	—	ɕiouᴵᴵ 漫幓 ʂuwᴵᴵ < *r-ˈsəwᴵᴵ	Mon-Khmer	Schuessler (2007:543)
Thousand n	*siŋᴵᴵ [432]	—	tɕʰiɛnᴵ 千 tsʰɛnᴵ < *s-ʰnəŋᴵ	Chinese	[433]
Weave vt	*tek	jɛʔ ꩾ rak	tʂɿᴵ 織 tɕɪk < *ˈtək	Austronesian, Tai-Kadai	Benedict (1967:315-6)
Waist, belt n	*tajᴵᴵ	—	tajᴵᴵᴵ 帶 tajᴵᴵᴵ < *ˈtatᴵᴵᴵ	Chinese	—
Ginger n	*tʰiŋᴵ	tɕʰⁱᴵᴵ ꩾ kʰjaŋᴵᴵ	tɕiaŋᴵ 薑 kiaŋᴵ < *ˈkaŋᴵ	Areal	Luce (1959a:23) / Shafer (1952:157) / Benedict (1967:303) / Matisoff (2003:304)

[430] This occurs in the compound ꩾꩾꩾꩾ ꩾꩾꩾꩾ attested in the inscriptions as ꩾꩾꩾꩾ kaᴵᴵ swanᴵ.

[431] The comparison is from Weidert (1987:366-7) and Peiros & Starostin (1996:#1586).

[432] Restricted to Mizo with the meaning *ten-thousand n*.

[433] The nasal initial is suggested by Pulleyblank (1962:133) and Baxter (1992:223) on the basis of the oracle-bone form 人 having 个, ɹenᵇ 人 ɲinᴵ < *ˈnəŋᴵ *person n*, as phonetic. See Matisoff (1997a:62) for a possible association with Northern Chin *saŋᴵᴵ *thousand n*.

		Burmese			
Thousand n	*tʰoŋ^II [434]	tʰaũ^I ေသာင္ tʰɨwŋ^I	—	Burmese	—
Three vi	*tʰom^I	θoõ^II သုံး swɨm^II	san^I 三 sam^I < *swem^I [435]	Chinese	Miller (1988:527-9)
Sour vi	*tʰur^II	—	suan^I 酸 swan^I < *swar^I	Austroasiatic	Schuessler (2007:484)
Middle, inside n	*tsʰoŋ^I / tsʰuŋ^I	—	tʂɤŋ^I 中 truwŋ^I < *'-əŋ^wt [436]	Mon-Khmer	Schuessler (2007:196;621)
Fluster, wave vi	*wej^III [437]	we^II ဝဲ waj^II	—	Mon-Khmer [438]	Hla Pe (1967a:76)
Circular vi	*wel^II [439]	wũ^II ဝုံး wan^II	yɛn^tb 員 wian^I < *'wan^I	Mon-Khmer	[440]
Left n	*wɛj^II [441]	be^I ဘာဝဲ baj^I / (lɛʔ)we^II (ဘာဝဲ)ဝဲ (lak)waj^II	—	Mon-Khmer [442]	Hla Pe (1967a:89)

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[434] Restricted to Zahau.

[435] Sagart (1999b:151-2) reconstructs initial *s-l- via a proposed association with tsʰan^I 參 *tsʰəm^I triad n which he reconstructs with *s-ʰl-; this is plausible providing the word was loaned to Tibeto-Burman after the shift of the initial to s-.

[436] Baxter (1992:233) reconstructs *k-l- on the basis of Coblin's observation (1983:156) that the word is used as a Han sound gloss for kɤŋ^I 宫 kuwŋ^I < *'-əŋ^wt dwelling house, palace n for which Schuessler (2007:256) notes Mon-Khmer evidence supporting a k-l- cluster. Notably, Bodman (1980:123) also reconstructs 中 with *k-l- on the basis of a possible Tibetan comparandum.

[437] This is likely related to Left n below. Note also *wɛj^I swing vt.

[438] See also Shorto (2006:120).

[439] This is restricted to Mizo, but see also *wɛl^III-s ring-shaped stand n attested irregularly in Mizo as vɛl^I.

[440] See Shorto (1973:379-81).

[441] Matisoff (1985a:42) associates Mizo baj^ʰa and Tedim baj^I lame vi, which has a further irregularity in a Zo variant vaj^I, and Mizo pej^ʰa stagger vi.

[442] See also Shorto (2006:120).

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Elephant	*woj^l	—	uej^{ib} 為 wiạ^l < *'wal^i [443]	Austroasiatic	Schuessler (2007:510)

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[443] The Vietnamese correlate noted in Fowler (1988:45) is tentatively linked by Shorto (2006:494) to a Mon-Khmer source which supports Schuessler's Austroasiatic associations for this word.

Northern Chin words may be classified as either nouns or verbs. Following Osburne (1975:120), this classification also includes the numerals which for the numbers *one* through *nine* may be classified as intransitive verbs on the basis of their, albeit analogically conditioned irregular, inflections in Mizo, Zahau and Thado.

7.1 *Verbal Inflections*

Most Northern Chin verbs have a basic form 1 and an inflected form 2; specific syntactic functions vary between languages.[444] The main form 2 derivations of the six languages from a reconstructed Northern Chin base, of which the *-s* suffix will be discussed further below, may be summarised accordingly:[445]

NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
$*-k\text{-}s$	$-ʔ$	$-ʔ$	$-Ø^{III}$	$-Ø^{III}$	$-ʔ$	$-Ø^{III}$
$*-k^{II}\text{-}s$	$-ʔ$	$-ʔ$	$-Ø^{III}$	$-Ø^{III}$	$-k^{III} / -ʔ$	$-k^{III} / -Ø^{III}$
$*-k^{III}\text{-}s$	$-ʔ$	$-ʔ$	$-Ø^{III}$	$-Ø^{III}$	$-ʔ$	$-Ø^{III}$
$*-t\text{-}s$	$-ʔ$	$-ʔ$	$-Ø^{III}$	$-Ø^{III}$	$-ʔ$	$-Ø^{III}$
$*-t^{II}\text{-}s$	$-ʔ$	$-ʔ$	$-t^{III}$	$-t^{III}$	$-t^{III} / -ʔ$	$-t^{III} / -Ø^{III}$
$*-t^{III}\text{-}s$	$-ʔ$	$-ʔ$	$-Ø^{III}$	$-Ø^{III}$	$-ʔ$	$-Ø^{III}$
$*-p\text{-}s$	$-ʔ$	$-ʔ$	$-Ø^{III}$	$-Ø^{III}$	$-ʔ$	$-Ø^{III}$
$*-p^{II}\text{-}s$	$-ʔ$	$-ʔ$	$-p^{III}$	$-p^{III}$	$-p^{III} / -ʔ$	$-p^{III} / -Ø^{III}$
$*-p^{III}\text{-}s$	$-ʔ$	$-ʔ$	$-Ø^{III}$	$-Ø^{III}$	$-ʔ$	$-Ø^{III}$
$*-Ø^{I}\text{-}s$	$-t$	$-t$	$-t$	$-t$	$-t$	$-t$
$*-Ø^{II}\text{-}s$	$-k^{IIb} / -t^{IIb}$	$-k^{IIb} / -t^{IIb}$	$-ʔ^{II} / -t^{II}$	$-ʔ^{II} / -t^{II}$	$-k^{II} / -t^{II}$	$-k^{II} / -t^{II}$
$*-Ø^{III}\text{-}s$	$-k$	$-k$	$-ʔ$	$-ʔ$	$-k$	$-k$
$*-ŋ^{I/II}\text{-}s$	$-n^{III}$	$-n^{III}$	$-n^{III}$	$-n^{III}$	$-n^{III}$	$-n^{III}$
$*-ŋ^{III}\text{-}s$	$-n^{IIb}$	$-ŋ^{IIb}$	$-k$	$-k$	$-k$	$-k$
$*-n^{I/II}\text{-}s$	$-n^{III}$	$-n^{III}$	$-n^{III}$	$-n^{III}$	$-n^{III}$	$-n^{III}$
$*-n^{III}\text{-}s$	$-n^{IIb}$	$-n^{IIb}$	$-t$	$-t$	$-t$	$-t$
$*-m^{I/II}\text{-}s$	$-m^{III}$	$-m^{III}$	$-m^{III}$	$-m^{III}$	$-m^{III}$	$-m^{III}$
$*-m^{III}\text{-}s$	$-m^{IIb}$	$-m^{IIb}$	$-p$	$-p$	$-p$	$-p$
$*-r^{I}\text{-}s$	$-r^{III}$	$-r^{III}$	$-ʔ^{III}$	$-ʔ^{III} / -a^{III}$	$-k^{III}$	$-k^{III}$
$*-r^{II}\text{-}s$	$-r^{III}$	$-r^{III}$	$-Ø^{III}$	$-Ø^{III} / -a^{III}$	$-k^{III} / -ʔ$	$-k^{III} / -Ø^{III}$
$*-r^{III}\text{-}s$	$-rʔ$	$-rʔ$	$-Ø^{III}$	$-Ø^{III} / -a^{III}$	$-ʔ$	$-Ø^{III}$
$*-l^{I/II}\text{-}s$	$-l^{III}$	$-l^{III}$	$-l^{III}$	$-l^{III}$	$-l^{III}$	$-l^{III}$
$*-l^{III}\text{-}s$	$-lʔ$	$-lʔ$	$-l^{III}$	$-l^{III}$	$-lʔ$	$-l^{III}$
$*-j^{I/II}\text{-}s$	$-j^{III}$	$-j^{III}$	$-j^{III}$	$-j^{III}$	$-j^{III}$	$-j^{III}$
$*-j^{III}\text{-}s$	$-jʔ$	$-jʔ$	$-j^{III}$	$-j^{III}$	$-jʔ$	$-j^{III}$
$*-w^{I/II}\text{-}s$	$-w^{III}$	$-w^{III}$	$-w^{III}$	$-w^{III}$	$-w^{III}$	$-w^{III}$
$*-w^{III}\text{-}s$	$-wʔ$	$-wʔ$	$-w^{III}$	$-w^{III}$	$-wʔ$	$-w^{III}$

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[444] See Henderson (1965:84-9), Stern (1963:243-51) and Lehman (1996) for further information.

[445] Non-native or onomatopoeic syllables with original obstruent codas in tone I, or IIa in Mizo and Zahau, appear to develop tone III in form 2 without loss of the coda.

Mizo and Zahau form 2 derivations in tone IIb may not assign syllable weight to the vowel; there are a handful of exceptions in the word list but their occasional free-variation with regular forms, irregular correspondence across all the languages or loanword status shows this not to be of reconstructional significance. Open syllables with diphthongs develop tone II(b) in form 2 regardless of the original tone due to their patterning as syllables with surface vowel length before obstruent codas that, as discussed in 3.4 and 6.1, have an inherent association with tone II.

7.1.1 *Stopped Syllable Variation in Tedim and Sizang*

The alternative Sizang reflexes of $*-k^{II}$, $*-t^{II}$, $*-p^{II}$ and $*-r^{II}$, due to its occlusion to $-k$,[446] are in free-variation; in Tedim they are only in free-variation after the diphthongs *ia* and *ua* otherwise only the former surfaces.[447] It appears that the former variants in tone 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 $*-k^{II}$, $-t^{II}$, $-p^{II}$ give either $*-k^{III}$, $-t^{III}$, $-p^{III}$ or $-?$ although only reflexes in $-?$ exist in the Zahau recorded here.[448]

7.1.2 *Open Syllable Variation in tone II*

The general form 2 reflex is $-k$ and is derived from regular syllables corresponding to tone 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 tone IIb to tone III; this does not affect the form 2 inflections. Any nominal forms associated with form 1 retain the original tone such that Mizo $k^{h}u^{IIb}$ *smoke n* correlates with $k^{h}u^{III}$ ($< *k^{h}u^{IIb}$) *smoke vi*. The shift to tone III in verbs renders Hillard (1975:12;16-9) unable to separate when Mizo $-k$ develops from original tone III, and when $-k^{IIb}$ develops from secondarily derived tone III.[449] Cases with $-t$ appear in words corresponding to irregular open

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[446] The Zo reflexes in $-a$ from an original rhotic correspond to the preceding vocalism as discussed in 1.4.2.4.

[447] Bhaskararao (1994:338) suggests a form 2 hɔʔ for hok^{II} *skin vt* but it is recorded regularly as hok^{III} in the wordlist here.

[448] The exceptional word $t^{h}uk^{IIb}$ *deep vi*, with a form 2 $t^{h}uk^{III}$, is also irregular in Mizo, Thado and Zo and is clearly external in origin. Matisoff (2003:359) and Peiros & Starostin (1996:#994) compare $t^{h}aiʔt^{h}aiʔ$ ထစ်ထစ် $t^{h}ikt^{h}ik$ *thickly adv* but its rhyme shows it to be a non-native word whose verbal source ထစ် *worthy, suitable vi* is noted by Luce (1977b:3) to be plausibly Mon or Shan in origin.

[449] Hillard's associated proposal that form 2 may therefore be primary is discusssed in 7.1.3.

syllables in IIa discussed in 6.1. The suggestion that such words belong to a more recent layer is supported by Zahau syllables in -i, that are shown in 1.4.2.2 to have developed from -uj after coronal initials, always developing form 2 inflections in -it^{IIb} regardless of tone. Occassional occurrences of -t instead of -k from IIb are most likely further analogical extensions of the -t/-k alternations discussed in 7.2.2 and attributed to mutual influence between languages.[450] Further tentative support for words in IIa being external in origin, but possibly of an old stratum due to regular tonal correspondences, may be found in the following comparative sets:

[#93] **Blood**

[M]   *s-hjwəj-t (2003:194;230)
[P&S] *s-ʔ^{w}iːj (1996:#2017)

[NC]   *tʰ$\underset{.}{i}$^{II} *blood n*

In Mizo and Zahau this may be used as a verb *bleed vi* in which Matisoff's -t suffix derives from an -s suffix in form 2 *tʰit^{II} (< *tʰ$\underset{.}{i}$$^{II(a)}$-s). Excepting Zahau, -uj would be expected instead of -i. Benedict (1972:51) reconstructs *hjw- to account for this.

[OB]   θwer^{II} ော့း / သွေး swij^{II} *blood n*

[OC]   ɕiɛ^{II}/ɕyɛ^{III} 血 xwɛt < *^{h}məc *blood n*[451]

Sagart (1999a:171-3, 1999b:153) reconstructs the initial as *^{h}m- on the basis of correspondences with words like miɛ^{III} 衊 mɛt < *məc *blood n*. The derivation of -əc from an original -ək^j allows for an analysis of the rhyme as -əj with a suffixal -k. Starostin (1995:228) assumes a suffixal origin, but Sagart (1999a:174-7) suggests the velar coda to be evidence that this is a Chinese loan into Tibeto-Burman. The tone IIa contour in Mizo and Zahau combined with the lack of labialisation in Northern Chin supports the idea of

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[450] Mizo unequivocally attests -k except in tsʰıa^{IIb} ~ tsʰıat^{IIb} *ruined, bad vi*, which is also noted by Hillard (1975:10) to be irregular, and possibly also in ʈʰıat^{IIb} ~ ʈʰıaʔ *drop vt* of which the form 1 correlates with a derivative of an open vowel in some of the other languages which interestingly show -t/k variation in any case.

[451] In spite of Matisoff's ingenious comparison (1978a:184, 1992:169) of suer^{II} 髓 swig^{II} < *^{s}-^{h}lwal^{II} *marrow n*, Sagart (1999a:178, 1999b:67) appears correct in his rejection.

an external source, particularly in light of the original bilabial initial in Old Chinese that is not attested in Tibeto-Burman. Sagart (1999a:175) compares this development to 日^{III} 日 ɲit < *'nəc *sun, day n* which he also treats as a Chinese loan. A difficulty with this is that while Sagart's proposal that *ik* > *ic* > *ij?* (*ək^j* > *əc* > *əj?* in the reconstruction used here) is promising in light of the tone II reflex in *blood n*, the Tibeto-Burman correlates of *sun, day n* are in tone I. An alternative proposal for the development of *sun, day n* is discussed under *Sun* (#40).

[#94] **Thin**

[M]   *pa-n/t ⋊ *ba-n/t (2003:440)
[P&S] *paː (1996:#178)

[NC]   *pa^{II} *thin vi*

Matisoff's *-t suffix in the form 2 *pat^{II} (< *pa^{II(a)}-s) derives from an -s suffix. The word is not attested in Mizo and appears to be vying for lexical dominance with *pɛn^{I/II} *thin vi* in the other languages. In Thado and Sizang the form with an -n coda appears to have been semantically specialised as *very thin vi*; according to Henderson (1965:156) and Bhaskararao (1996:78), this may also be extended to Tedim.[452] Table B in Luce (1962a) includes both the open and closed syllables under the same category; the tone IIa in Zahau for the former and the variation between tones I and II in the latter suggests the possibility of external influence.

[B]   pa^{II} ol: pa^{II} *thin vi*

[#95] **Itch**

[M]   *ja (2003:136)
[P&S] *ja *itch* (1996:#1414)

[NC]   *ja^{II(a)} *itch vi*

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[452] The word is not attested in Zo; one informant did produce it but it was retracted by others as a Tedim word.

The irregular vocalism in Tedim zia$^{\text{II}}$ and Sizang ze$^{\text{II}}$ possibly reflects a loan source.

[B]   ja$^{\text{II}}$ ထော: ja$^{\text{II}}$ *itch vi*

7.1.3 *Origin in Suffixal -s*

Although noting a general change to tone III in form 2, the variety of form 2 reflexes leads Weidert (1979:98-107) to reconstruct a suffixal combination -*(s-)d*^{h} whereby the dentalisation triggered by the -*d*^{h} suffix could be modified by glottalisation caused by the -*s*- infix. Matisoff (1982:9-17) criticises Weidert's proposal for being typologically bizarre and phonetically aberrant; preferring to opt out of any all-inclusive hypothesis, he proposes three separate suffixes -*s*, -*t*, and -*k* to which he can identify 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 tone II (tense) give tone III (lax) but syllables in tone III (lax) give -*ʔ* (tense) but then admits that this leaves no account for the derived forms with -*t* and -*k*. In spite of his suggestion that the alternation between form 1 and form 2 is not directly phonologically conditioned (1974:78) and, specifically in reference to Mizo, is largely irregular (1975:1), Hillard (1975:12) suggests an inverse proposal that Mizo form 1 open-rhymes may actually be derived from their form 2 counterparts which retain etymological -*t* and -*k* suffixes, but notes (1975:9) 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 (1975:10) but prefers to assume that the different tonal contours were triggered by the different status of the codas before they were lost. Noting a similar correlation, Löffler (2002b), in essentially a reversion of Hillard's proposal back to a more plausible derivation of form 2 from form 1, believes that all the verbal paradigms may be derived from a single suffix. He tentatively suggests this may be something like -*t* which may also surface as -*k* in open syllables depending on the tone contour (2002b:124) or as a glottal stop 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

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coda (2002b:130).[453] Löffler succeeds in identifying most of the main derivational patterns outlined above but the phonological development of his -*t* coda is rather arbitrary. Significantly Löffler (2002a:128), following his own proposals cited in Henderson (1976:16), notes that the Tibetan equivalent of his final -*t* appears to be final -*s*, but excludes this from consideration on the basis that Northern Chin root final -*s* becomes -*ʔ* as discussed in 5.2.7. 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 tone 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 tone III as attested in Old Burmese and Old Chinese, and the loss of original stop codas before -*s* which is noted in 3.2.3 to also occur in Old Chinese, the following developments remain to be discussed:

7.1.3.1 *Glottality*

An association of -*s* with glottality in the development of tone III in Old Burmese and Old Chinese is noted in 2.4.1; this renders its development here under the conditioning environments noted above phonologically possible. The association of root final -*s* with glottality, discussed in 5.2.7, may also be noted here. The attestation of glottalised nasals in Lai Chin where Mizo and Zahau have nasals in tone IIb corresponding to obstruents in Thado, Zo, Tedim and Sizang suggests a glottalic development here also that parallels the glottalised liquids and glides in Lai Chin that are still maintained in Mizo, Zahau and Tedim. The typological naturalness of a development of -*p/t/k* from -*mʔ/-nʔ/-ŋʔ* is noted in Matisoff (1982:49) as well as in 6.2. The alternative emergence of tone IIb after nasals in Mizo and Zahau is suggestive of the glottalic origin of tone II; this is supported by the occasional occurrence of laterals and glides in tone IIb that tend to be in free-variation with their glottalised counterparts such that they are of no reconstructional significance.[454] The further

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[453] Löffler's proposal (2002b:129-30) 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.

[454] Löffler (2002b:132) notes this variation exclusively Mizo laterals but attempts no explanation. The following cases may be noted: Mizo tolʔ / tol^{IIb} *slide vi*, tʰɔlʔ / tʰɔl^{IIb} *slide vt*; Mizo pʰulʔ / pʰul^{IIb} *sprinkle*

development of -ŋʔ to Mizo -n[IIb] and Tedim -t appears to be the result of the spreading of the coronal feature of suffixal -s.[455]

7.1.3.2 *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 footnote 326 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 5.2.4.1, via an intermediary uvular or velar fricative articulation, discussed in 4.3, 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.

7.1.4 *Superadded -s Suffixation*

An issue with the -s hypothesis is that words in tone 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 tone III this seems to indeed have been the case. However, if a form 2 derivation could be lexically reanalysed in form 1 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 (1978a:200) notes a similarity with Henderson's observation (1952:169-70) that the

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vt; Mizo bɛl[IIb], Zahau bɛlʔ *stick vt*; Mizo mɔl[IIb], Laizo mɔlʔ *forget vt*; Mizo rɔl[IIb], Tedim gɔlʔ *stiff vi*; Mizo [h]nɔjʔ *murky vi*, Zahau [h]nɔj[IIb] *breast, milk n* as a nominalisation of *murky vi*; Mizo tsɔl[IIb], Zahau tsɔlʔ *yeast n* for which Tedim tone II suggests external influence. Occasionally a semantic distinction appears to have emerged or the variant forms have been reanalysed via analogy as inflectional derivatives: Mizo pɪlʔ *peel-off vi*, pɪl[IIb] *rind n*; Mizo sʊj[IIb] ~ sʊjʔ *whittle vt*; Zahau vɛj[IIb] ~ vɛjʔ *wave vt*.
[455] See also the discussion in 7.2.2.

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 -η^{III} which should all be attested as -n^{III} if derived from an original -$\eta^{I/II}$ with suffixal -*s* causing coronalisation of velar. The situation is similar to that of η^{III}-*s* becoming -n^{IIb} or -*t* in Mizo or Tedim respectively but -η^{IIb}, -*k* or -*ʔ* in Zahau, Sizang or Thado/Zo respectively.[456]

7.1.5 *Causativity Paradigms*

The cases of superadded -*s* suffixation tend to mark an interesting process of causativisation in Northern Chin. Henderson (1965:83) shows a few examples of Tedim paradigms whereby form 2 inflections of intransitive verbs may be used as transitive verbs in form 1 while the form 2 inflections of transitive verbs may be used as benefactive verbs in form 1 which may also manifest a distinct form 2. The general loss of the intermediate stage in Mizo and Zahau, as well as in Lai, such that only the form 2 inflection of the derived form 1 remains, has led Osburne (1975:114), Peterson (1998:93-4) and Matisoff (2003:472-3) to suggest a distinctive form 3 inflection.[457] That these isolated Mizo, Zahau and Lai third forms are rather simply evidence of the gradual reduction in verbal inflections, that Hartmann (2002:81) shows has already occurred on a massive scale in Southern Chin languages, 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.[458] The loss of the derived form 1 in Zahau may be seen in a comparison of the Zahau and Thado reflexes of *$klo\eta^{II}$ *arrive* v below:

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[456] See the discussion in 7.2.2.

[457] Nevertheless there are a few examples in the data-set of Mizo and Zahau maintaining the full paradigm and also cases where Thado, Zo, Tedim and Sizang retain only the further derived form.

[458] In a select few cases, such as *$d\zeta aj^{II}$ *clean* v, Thado, Zo, Tedim and Sizang pattern as Mizo and Zahau in not attesting the derived form 1

	Form 1		Form 2		Form 1		Form 2	
Zahau	tʰʊŋ^{II}	~	tʰʊn^{III}	*return vi*[459]	-		tʰʊn^{IIb}	*return vt*
Thado	ʰlʊŋ^{II}	~	ʰlʊn^{III}	*arrive vi*	ʰlʊn^{III}	~	ʰlʊt	*bring vt*

The ascendancy of benefactive and causative particles in Northern Chin[460] seems to have been a major contributor in the reduction of verbal forms such that evidence of these paradigms is now sporadic. Inspite of the better rentention of the intermediate derived from 1 in Thado, Zo, Tedim and Sizang, examples of such causativity paradigms are rare and the best evidence comes mainly from Zahau and sometimes Mizo. Significantly, 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 1.

There are also several cases where the form 2 of the derived transitive or benefactive form 1 is not attested. In some cases this can be attributed to phonological convergence preventing verbs from inflecting any further: Thado, Zo and Sizang have -^{III} where Mizo, Zahau and Tedim distinguish -ʔ and -^{III} such that Zo kʊej^{III} *bend vt* is the regular phonological correlate of both Tedim form 1 kʊaj^{III} and form 2 kʊajʔ *bend vt*; the form 1 codas -*p*, -*t*, -*k* universally become -ʔ in in Mizo and Zahau form 2 inflections[461] but are sometimes retained in Thado, Zo, Tedim and Sizang[462] such that the nominal derivative pʰiɐ^{III} (< *pʰɪat^{II}-s) *broom n* of Sizang pʰiɐt^{II} ~ pʰiɐt^{III} *sweep vt* is not distinguished in Mizo pʰɪaʔ *broom n* from the form 2 in pʰɪat^{IIb} ~ pʰɪaʔ *sweep vt*.[463] Sizang has a variant form 2 pʰiɐ^{III} which is homophonous with *broom n* but the word for *broom n* is fixed and cannot be attested as pʰiɐt^{III};[464] in purely verbal terms, this may be compared to Mizo tsʰʊak^{IIb} ~ tsʰʊaʔ *emerge vi*, tsʰʊaʔ *produce vt* and Sizang suɐk^{II} ~ suɐk^{III} / suɐ^{III} *emerge vi*, suɐ^{III} *produce, unload vt* which similarly does not show the variation in the transitive form. The situation supports the discussion in 7.1.1

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[459] Literally *arrive back vi.*
[460] See Peterson (1998:94-7) for a discussion of this in Lai.
[461] This excludes any irregular cases of tone I with obstruent codas; see the discussion in 6.1.
[462] This is dependent on the conditioning environments discussed in 7.1.1.
[463] The word for *broom n* actually forms the second part of a compound noun.
[464] See the discussion in 7.3 concerning the link between verbal inflections and nominalisation.

where it is suggested that the variants with the obstruent codas and tone III represent the earlier state of affairs.[465]

The table lists all the verbs, excluding cases also attesting variations in initial aspiration to be discussed in 7.3, in the word list for which grammatically distinguishable causativity paradigms are still extant. Cases like Zahau *na^I ~ *nɐt *hurt vi* and *nɐt *hurt vt*, where the possible form 2 of the derived transitive or benefactive form 1 is not attested, are not noted here due to their playing no role in morphological distinctions.[466] It should be noted that in cases where no intermediary form 1 is listed the form 2 occurs undifferentiated in form 1. There is also a notable preponderance of verbs in form 1 with sonorant codas.

Form 1	Form 2			Form 1	Form 2	
*ʔaw^I	*ʔaw^{III}	(< *ʔaw^I-s)	*shout vi*	*ʔaw^{III}	*ʔaw^{III}-s	*shout at vt*
*ʔɛm^I	*ʔɛm^{III}	(< *ʔɛm^I-s)	*dry out vi*	-	*ʔɛm^{III}-s	*dry out vt*
*ʔɪn^I	*ʔɪn^{III}	(< *ʔɪn^I-s)	*drink vt*	-	*ʔɪn^{III}-s	*drink vb*
*ʔoŋ^{II}	*ʔon^{III}	(< *ʔoŋ^{II}-s)	*vacant vi*	*ʔon^{III}	*ʔon^{III}-s	*vacate vt*
*ʔol^{II}	*ʔol^{III}	(< *ʔol^{II}-s)	*unengaged vi*	-	*ʔol^{III}-s	*unengage vt*
*bar^I	*bar^{III}	(< *bar^I-s)	*gorge vt*	*bar^{III}	*bar^{III}-s	*gorge vb*
*bor^I	*bor^{III}	(< *bor^I-s)	*swarm vi*	*bor^{III}	*bor^{III}-s	*swarm vt*
*dɐm^I	*dɐm^{III}	(< *dɐm^I-s)	*heal vi*	-	*dɐm^{III}-s	*heal vt*
*dɐŋ^{II}	*den^{III}	(< *dɐŋ^{II}-s)	*different vi*	*den^{III}	*den^{III}-s	*differentiate vt*
*deŋ^I	*den^{III}	(< *deŋ^I-s)	*throw vt*	-	*den^{III}-s	*throw vb*
*dɪm^{II}	*dɪm^{III}	(< *dɪm^{II}-s)	*full vi*	-	*dɪm^{III}-s	*fill vt*
*dɪŋ^I	*dɪn^{III}	(< *dɪŋ^I-s)	*stand-up vi*	-	*dɪn^{III}-s	*stand-up vt*
*dʊm^I	*dʊm^{III}	(< *dʊm^I-s)	*black vi*	-	*dʊm^{III}-s	*blacken vt*
*dʑaj^{II}	*dʑaj^{III}	(< *dʑaj^{II}-s)	*clean vi*	-	*dʑaj^{III}-s	*clean vt*
*dzun^{II}	*dzun^{III}	(< *dzun^{II}-s)	*wrap vt*	-	*dzun^{III}-s	*wrap vb*
*haw^I	*haw^{III}	(< *haw^I-s)	*quarrel vt*	-	*haw^{III}-s	*bespeak vt*[467]
*hɛr^I	*hɛr^{III}	(< *hɛr^I-s)	*revolve vi*	-	*hɛr^I-s	*revolve vt*
*hew$^{I/II}$	*hew^{III}	(< *hew$^{I/II}$-s)	*deplete vi*	-	*hew^{III}-s	*deplete vt*
*hem^I	*hem^{III}	(< *hem^I-s)	*move aside vi*	*hem^{III}	*hem^{III}-s	*move aside vt*
*hɔj^I	*hɔj^{III}	(< *hɔj^I-s)	*face vi*	-	*hɔj^{III}-s	*turn to face vt*
*hɔŋ^I	*hon^{III}	(< *hɔŋ^I-s)	*open vt*	*hon^{III}	*hon^{III}-s	*open vb*
*hol^I	*hol^{III}	(< *hol^I-s)	*brandish vi*	-	*hol^{III}-s	*prod vt*

[465] These situations where a secondary grammatical distinction is made between two variant forms of the same inflection are reconstructed in the wordlist as *-p/t/k$^{II(I)}$-s with the variation between tones II and III acknowledging this distinction at the surface level but not as individual forms at the underlying level.

[466] Cases like *kɐm^I ~ *kɐm^{III} *set a trap* and *kɐm^{III}-s *set a trap vt*, where any possible grammatical distinction is completely obscure, are also not noted.

[467] The benefactive sense is no longer clear.

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*hol^{II}	*hol^{III}	(< *hol^{II}-s)	*seek vt*	–	*hol^{III}-s	*seek vb*
*jɐl^I	*jɐl^{III}	(< *jɐl^I-s)	*spread out vi*	–	*jɐl^{III}-s	*spread out vt*
*jɐm^I	*jɐm^{III}	(< *jɐm^I-s)	*spread vi*	*jɐm^{III}	*jɐm^{III}-s	*spread vt*
*jar^I	*jar^{III}	(< *jar^I-s)	*spread vt*	–	*jar^{III}-s	*spread vb*
*jɪr^I	*jɪr^{III}	(< *jɪr^I-s)	*learn vt*	–	*jɪr^{III}-s	*teach vt*[468]
*jɪal^I	*jɪal^{III}	(< *jɪal^I-s)	*roll vt*	–	*jɪal^{III}-s	*roll vb*
*jʊar^I	*jʊar^{III}	(< *jʊar^I-s)	*sell vt*	–	*jʊar^{III}-s	*sell vb*
*jʊm^I	*jʊm^{III}	(< *jʊm^I-s)	*taper vi*	*jʊm^{III}	*jʊm^{III}-s	*taper vt*
*kɛŋ^I	*kɛn^{III}	(< *kɛŋ^I-s)	*bring vt*	–	*kɛn^{III}-s	*bring vb*
*kʊaj^I	*kʊaj^{III}	(< *kʊaj^I-s)	*bend vi*	*kʊaj^{III}	*kʊaj^{III}-s	*bend vt*
*kʰɐm^I	*kʰɐm^{III}	(< *kʰɐm^I-s)	*lie down vi*	*kʰɐm^{III}	*kʰɐm^{III}-s	*pillow vt*
*kʰaj^I	*kʰaj^{III}	(< *kʰaj^I-s)	*carry vi*	–	*kʰaj^{III}-s	*carry vb*
*kʰeŋ^I	*kʰen^{III}	(< *kʰeŋ^I-s)	*resound vi*	*kʰen^{III}	*kʰen^{III}-s	*hammer vt*
*klɪŋ^I	*klɪn^{III}	(< *klɪŋ^I-s)	*complete vi*	*klɪn^{III}	*klɪn^{III}-s	*complete vt*
*klʊŋ^{II}	*klʊn^{III}	(< *klʊŋ^{II}-s)	*arrive vi*	*klʊn^{III}	*klʊn^{III}-s	*bring vt*
*kʰlaj^I	*kʰlaj^{III}	(< *kʰlaj^I-s)	*hang vt*	–	*kʰlaj^{III}-s	*hang vb*
*kʰlʊm^I	*kʰlʊm^{III}	(< *kʰlʊm^I-s)	*sweet vi*	–	*kʰlʊm^{III}-s	*sweeten vt*
*kʰlɛŋ^I	*kʰlɛn^{III}	(< *kʰlɛŋ^I-s)	*arrive vi*	–	*kʰlɛn^{III}-s	*arrive vt*
*kʰlɪm^I	*kʰlɪm^{III}	(< *kʰlɪm^I-s)	*stealthy vi*	–	*kʰlɪm^{III}-s	*put to sleep vt*
*(k)rɪal^I	*(k)rɪal^{III}	(< *(k)rɪal^I-s)	*striped vi*	*(k)rɪal^{III}	*(k)rɪal^I-s	*stripe vt*
*krom^I	*krom^{III}	(< *krom^I-s)	*borrow vt*	*krom^{III}	*krom^{III}-s	*lend vt*[469]
*kʰrɛn^I	*kʰrɛn^{III}	(< *kʰrɛn^I-s)	*separate vt*	*kʰrɛn^{III}	*kʰrɛn^{III}-s	*separate vb*
*lam^I	*lam^{III}	(< *lam^I-s)	*dance vi*	*lam^{III}	*lam^{III}-s	*dance vt*
*lɛj^{II}	*lɛj^{III}	(< *lɛj^{II}-s)	*buy vt*	–	*lɛj^{III}-s	*buy vb*
*lɛm^I	*lɛm^{III}	(< *lɛm^I-s)	*peaceful vi*	*lɛm^{III}	*lɛm^{III}-s	*pacify vt*
*lom^{II}	*lom^{III}	(< *lom^I-s)	*rejoice vi*	*lom^{III}	*lom^{III}-s	*rejoice vt*
*lʊaŋ^I	*lʊan^{III}	(< *lʊaŋ^I-s)	*flow vi*	–	*lʊan^{III}-s	*carry in flow vt*
*^(h)lon^I	*^(h)lon^{III}	(< *^(h)lon^I-s)	*throw vt*	^(h)lon^{III}	*^(h)lon^{III}-s	*throw vb*
*^(h)lʊm^I	*^(h)lʊm^{III}	(< *^(h)lʊm^I-s)	*warm vi*	–	*^(h)lʊm^{III}-s	*warm vt*
*^hlum^{II}	*^hlum^{III}	(< *^hlum^{II}-s)	*coil up vt*	–	*^hlum^{III}-s	*coil-up vb*
*mɛŋ^I	*mɛn^{III}	(< *mɛŋ^I-s)	*awake vi*	–	*mɛn^{III}-s	*awake with vt*
*mol^I	*mol^{III}	(< *mol^I-s)	*stupid vi*	–	*mol^{III}-s	*forget vt*
*^hmɐj^{II}	*^hmɐj^{III}	(< *^hmɐj^{II}-s)	*fumble vi*	–	*^hmɐj^{III}-s	*smear vt*
*^hmɪn^I	*^hmɪn^{III}	(< *^hmɪn^I-s)	*ripe vi*	–	*^hmɪn^{III}-s	*ripen vt*
*^hmʊam^I	*^hmʊam^{III}	(< *^hmʊam^I-s)	*hold in mouth vt*	*^hmʊam^{III}	*^hmʊam^{III}-s	*mouth feed vb*
*^(h)naj^{II}	*^hnaj^{III}	(< *^hnaj^I-s)	*near vi*	*^(h)naj^{III}	*^(h)naj^{III}-s	*approach vt*
*^hnɔŋ^I	*^hnɔn^{III}	(< *^hnɔŋ^I-s)	*reject vi*	–	*^hnɔn^{III}-s	*reject vt*
*^hnoj^{II}	*^hnoj^{III}	(< *^hnoj^{II}-s)	*murky vi*	*^hnoj^{III}	*^hnoj^{III}-s	*smear vt*
*^(h)nuj^I	*^(h)nuj^{III}	(< *^(h)nuj^I-s)	*laugh vi*	–	*^(h)nuj^{III}-s	*laugh at vt*
*ŋɐm^I	*ŋɐm^{III}	(< *ŋɐm^I-s)	*tame vi*	–	*ŋɐm^{III}-s	*dare vt*
*par^I	*par^{III}	(< *par^I-s)	*flower vi*	–	*par^{III}-s	*unfurl vi*[470]

[468] Literally *make learn* vt hence the benefactive sense.

[469] Compare modern Chinese tɕiɛ^{III}kɛi^{II} 借給 *lend* vt or Standard Burmese çɔːɡʊː ^hŋa^{II}beɪ^{II} *lend* vt as compounds of tɕiɛ^{III} 借 *borrow* vt and kɛi^{II} 給 *give* vt or çɔː ^hŋa^{II} *borrow* vt and peɪ^{II} ɡʊː *give* vt respectively.

[470] The aspirated derivative *pʰar^{III}-s *unfurl* vt appears to have rendered this derivative intransitive; see 7.4 below regarding the association of aspiration and transitivity.

*pɛr^I	*pɛr^III	(< *pɛr^I -s)	catapult vi	-	*pɛr^III-s	catapault vt
*pem^I	*pem^III	(< *pem^I-s)	migrate vi	*pem^III	*pem^III-s	extend house vt
*per^II	*per^III	(< *per^II-s)	flat vi	*per^III	*per^III-s	flatten vt
*pol^I	*pol^III	(< *pol^I-s)	associate vi	-	*pol^III-s	associate vt
*pom^II	*pom^III	(< *pom^II-s)	swell vi	*pom^III	*pom^III-s	exaggerate vt
*pʰɛn^II	*pʰɛn^III	(< *pʰɛn^II-s)	divaricate vt	-	*pʰɛn^III-s	divaricate vb
*pʰit^II	*pʰit^II-s		spew vi	-	*pʰit^II(f)-s	spew at vt
*raj^I	*raj^III	(< *raj^I-s)	pregnant vi	*raj^III	*raj^III-s	impregnate vt
*rɛm^I	*rɛm^III	(< *rɛm^III-s)	harmonise vi	-	*rɛm^III-s	harmonise vt
*rɔw^I	*rɔw^III	(< *rɔw^I-s)	dry vi[471]	*rɔw^I	*rɔw^III-s	roast vt
*ʰɹɪam^I	*ʰɹɪam^III	(< *ʰɹɪam^I-s)	sharp vi	*ʰɹɪam^III	*ʰɹɪam^III-s	sharpen vt
*ʰɹɪl^I	*ʰɹɪl^III	(< *ʰɹɪl^I-s)	choose vt	-	*ʰɹɪl^III-s	choose vb
*ʰɹɪŋ^I	*ʰɹɪn^III	(< *ʰɹɪŋ^I-s)	beget vt	-	*ʰɹɪn^III-s	beget vb
*sɔw^I	*sɔw^III	(< *sɔw^I-s)	boil vi	-	*sɔw^III-s	boil vt
*sɛn^I	*sɛn^III	(< *sɛn^I-s)	red vi	-	*sɛn^III-s	redden vt
*sʊan^II	*sʊan^III	(< *sʊan^II-s)	usurp vt	*sʊan^III	*sʊan^III-s	entrust vt[472]
*sur^I	*sur^III	(< *sur^I-s)	rain vi	-	*sur^III-s	rain on vt
*tar^I	*tar^III	(< *tar^I-s)	display vt	-	*tar^III-s	bait vt[473]
*tʊr^I	*tʊr^III	(< *tʊr^I-s)	pulsate vi	-	*tʊr^III-s	pulsate vt
*tɔw^I	*tɔw^III	(< *tɔw^I-s)	sit vi	-	*tɔw^III-s	seat vt
*tɛl^II	*tɛl^III	(< *tɛl^II-s)	include vi	-	*tɛl^III-s	include vt
*tʰɐŋ^I	*tʰɐn^III	(< *tʰɐŋ^I-s)	famous vi	-	*tʰɐn^III-s	broadcast vt
*tʰew^I	*tʰew^III	(< *tʰew^II-s)	diminish vi	-	*tʰew^III-s	plane vt
*tʰim^I	*tʰim^III	(< *tʰim^I-s)	quiet vi	-	*tʰim^III-s	quieten vt
*tʰʊr^I	*tʰʊr^III	(< *tʰʊr^I-s)	ladle vt	-	*tʰʊr^III-s	ladle vb
*tsil^I	*tsil^III	(< *tsɪl^I-s)	throng vi	-	*tsɪl^III-s	squash vt
*tsiŋ^II	*tsin^III	(< *tsiŋ^II-s)	short vi	-	*tsin^III-s	shorten vt
*tsum^II	*tsum^III	(< *tsum^II-s) flood vi		*tsum^III	*tsum^III-s	flood vt
*tsʰaŋ^I	*tsʰan^III	(< *tsʰaŋ^I-s)	borrow vt	*tsʰan^III	*tsʰan^III-s	lend vt[474]
*tsʰɪa^II	*tsʰɪat^II	(< *tsʰɪa^II-s)	ruin vi	*tsʰɪat^II	*tsʰɪat^II-s	ruin vt
*tsʰʊaŋ^II	*tsʰʊan^III	(< *tsʰʊaŋ^I-s)boil vi		-	*tsʰʊan^III-s	boil vt
*tsʰʊak^II	*tsʰʊak^II-s		emerge vi	*tsʰʊak^II-s	*tsʰʊak^II(f)-s	produce vt
*waŋ^II	*wan^III	(< *wɐŋ^II-s)	illuminate vi	-	*wan^III-s	illuminate vt
*weŋ^I	*wen^III	(< *weŋ^I-s)	gird vt	-	*wen^III-s	gird vb
*wɪal^I/II	*wɪal^III	(< *wɪal^I/II-s)coil vi		*wɪal^III	*wɪal^III-s	coil vt
*wɔn^I	*wɔn^III	(< *wɔn^I-s)	pregnant vi	-	*wɔn^III-s	impregnate vt
*wor^I	*wor^III	(< *wor^I-s)	sing vi	-	*wor^III-s	sow vt

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[471] Listed in the wordlist under its variant *ro^I.

[472] Literally *usurp to someone else* vt hence the benefactive sense.

[473] Literally *display for* vt.

[474] See *krom^I *borrow* vt.

7.2 *Superficial Irregularities*

7.2.1. *Reduction of Causativity Paradigms*

The ousting of original secondarily derived form 1 inflections by their form 2 counterparts in Mizo and Zahau provides clues towards the source of verbal inflections that appear not to fit the above correspondences. Almost all of these inflections are phonological relics, sometimes as alternative forms, of these further inflections that have now lost their distinctive function. In some cases comparative evidence maintains the grammatical distinction.

a. Mizo

deŋ^I	~ den^{III}	/ dɛn^{IIb}	*throw vt*	(Zahau dɛn^{IIb} *throw vb*)
haw^I	~ haw^{III}	/ hɛw^I	*reprove vt*	(Mizo hɛw^I *reprove vt*)
kʰeŋ^I	~ kʰen^{III}	/ kʰɛn^{IIb}	*hammer vt*	(Thado xen^{III} ~ xɛt *hammer vt*)
lʊm^I	~ lʊm^{III}	/ lʊm^{IIb}	*warm vi*	(Zahau ^{h}lʊm^{IIb} *warm vt*)^{475}
^{h}lum^{III}	~ ^{h}lum^{III}	/ ^{h}lʊm^{IIb}	*coil-up vt*	(Zahau ^{h}lʊm^{IIb}*coil-up vb*)
mɛŋ^{IIa}	~ -	/ mɛn^{IIb}	*dream vt*	(Tedim mɛn^{III} ~ mɛt *dream vt*)^{476}
^{h}mɛŋ^I	~ ^{h}mɛn^{III}	/ ^{h}mɛn^{IIb}	*utilise vt*	
nʊj^I	~ nʊj^{III}	/ nʊjʔ	*laugh vi*	(Mizo nʊjʔ *laugh at vt*)
ŋaj^I	~ ŋaj^{III}	/ ŋɛjʔ	*love vt*^{477}	
tsɔj^{III}	~ tsɔj^{III}	/ tsɔjʔ	*heft vt*	
tsʰem^I	~ tsʰem^{III}	/ tsʰɛm^{IIb}	*blow vt*	
zul^I	~ zul^{III}	/ zʊlʔ	*trace vt*	

b. Zahau

sɪm^I	~ -	/ sɪm^{IIb}	*say, tell vt*	(Te sɪm^I ~ sɪm^{III} *count, read vt*)
sʊaŋ^I	~ -	/ sɔn^{IIb}	*put above vt*	(Te sʊaŋ^I ~ sʊan^{III} *put above vt*)
tʰɔw^{II}	~ -	/ tʰɔʔ	*arise vi*	(Zahau tʰɔʔ *arise vt*)
zɪr^I	~ -	/ zɪrʔ	*learn vt*	(Mizo zɪr^I ~ zɪr^{III} *learn vt*)^{478}

c. Thado

dɔm^{II}	~ dɔm^{III}	/ dɔp	*support vt*
hom^I	~ hom^{III}	/ hɔp	*distribute vt*
lom^I	~ lom^{III}	/ lɔp	*suitable vi*

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^{475} Mizo also has lʊm^{IIb} *warm vt*.

^{476} The noun mɛŋ^{II} *dream n* is attested in all six languages.

^{477} This also means *listen vt* in Thado, Zo and Tedim; Mizo makes a secondary semantic distinction with ŋaj^I- ~ ŋɛjʔ- *listen vt* not reflecting the original form 2 ŋaj^{III}. The two glosses *love vt* and *listen vt* seem to be connected by a meaning *pay close attention vt*. Matisoff's comparison (1985a:43) of ai^{III} 愛 ʔɔj^{III} < *ʔɔt^{III} *love vt* is based on a superficial modern phonological correspondence.

^{478} Note also Zahau zɪrʔ *teach vt*.

ʰlem^{II}	~	ʰlem^{III} / ʰlɛp	deceive vt	
noʊm^{II}	~	noʊm^{III} / nɔp	happy vi	
ŋaj^{I}	~ -	/ ŋɐj^{III}	love, listen vt	(Zahau ŋaj^{I} ~ ŋaj^{III} *love vt*)
teɪm^{II}	~	teɪm^{III} / tʰeɪp	promise vt	
tʰeɪm^{II}	~	tʰeɪm^{III} / tʰeɪp	know vt	
ʧɔm^{I}	~	ʧɔm^{III} / ʧɔp	gather vt[479]	
xɐm^{I}	~ -	/ xɐp	block vt	(Tedim xɐm^{I} ~ xɐm^{III} / xɐp *block vt*)

d. Zo

hom^{I}	~	hom^{III} / hɔp	distribute vt	
lam^{I}	~ -	/ lɛp	float vi	(Tedim lam^{I} ~ lam^{III} *dance, float vi*)[480]
nʊom^{II}	~	nʊom^{III} / nɔp	happy vi	
ŋaj^{I}	~ -	/ ŋɐj^{III}	love, listen vt	(Zahau ŋaj^{I} ~ ŋaj^{III} *love vt*)

e. Tedim:

dɔm^{II}	~ -	/ dɔp	support vt	(Thado dɔm^{II} ~ dɔm^{III} / dɔp *support vt*)
hom^{I}	~	hom^{III} / hɔp	distribute vt	
ŋaj^{I}	~ -	/ ŋɐjʔ	love, listen vt	(Zahau ŋaj^{I} ~ ŋaj^{III} *love vt*)
sɐm^{II}	~ -	/ sɐp	call over vt	(Sizang sɐm^{II} ~ sɐm^{III} / sɐp *call over vt*)
xɐm^{I}	~	xɐm^{III} / xɐp	block vt	

f. Sizang:

kʰɐm^{I}	~	kʰɐm^{III} / kʰɐp	block vt	
lam^{I}	~	lam^{III} / lɛp	dance vi	(Mizo lɐm^{IIb}, Tedim lɛp *dance vt*)
nuɔm^{II}	~	nuɔm^{III} / nɔp	happy vi	
ŋaj^{I}	~ -	/ ŋɐj^{III}	love, listen vt	(Zahau ŋaj^{I} ~ ŋaj^{III} *love vt*)
sɐm^{II}	~	sɐm^{III} / sɐp	call over vt	

g. Northern Chin:

Occasionally every language reflects the same *vb/t* derivation that has ousted the original form 2 from which it was derived:

*ʔɛn^{II}	~ -	/ *ʔɛn^{III}-s	look vt	
*mɐn^{I}	~ -	/ *mɐn^{III}-s *catch vt, sticky vi*		(Zahau mɛn^{I} ~ mɛn^{III} *sticky vi*)[481]
*ʰmu^{III}	~ -	/ *ʰmʊk-s	see vt	
*ti^{III}	~ -	/ *tɪk-s	say vt	
*tʰị^{I}	~ -	/ *tʰɪt-s	die vi	

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[479] Perhaps also confusion with xam^{m} ~ xap *pillow vt* so should be included in other section

[480] Zo makes a secondary grammatical distinction between lam^{I} ~ lam^{III} *dance vi* and lam^{I} ~ lɛp *float vi*.

[481] Zahau has mɐn^{I} *catch up with vt*; the vocalic ablaut of ɐ/a and ɛ/e will be discussed in 7.5.2.1.

7.2.2. *Alternations of -k and -t*

Zo and Sizang occassionally reflect *-t* instead of *-k* or *-ʔ* respectively in their derivations of *ŋ^{III}-s* > *-ŋʔ* > *-k* (> *-ʔ*). In most cases the two are in free-variation; the explanation lies in the dominance of Tedim, discussed in 1.2, whose shift of *-ŋ^{III}-s* > *-nʔ* > *-t* appears to have been adopted by Thado and Sizang in some items. The following cases are noted in the data set:

a. Zo:

oŋ^{III}	~	ɔʔ	/	ɔt	*shout vi*
ʋoŋ^{III}	~	-	/	ʋot	*boast, exaggerate vi*
dɔŋ^{III}	~	dɔʔ	/	dɔt	*reply vt*
pʰɔŋ^{III}	~	pʰɔʔ	/	pʰɔt	*arise vt*
ʧɪŋ^{III}	~	ʧɪʔ	/	ʧɪt	*wise vi*
zeŋ^{III}	~	zeʔ	/	zet	*use vt*
hiŋ^{III}	~	-	/	hɪt	*ferment vi*

b. Sizang:

beŋ^{III}	~	bɛk	/	bɛt	*clap vt*
dɔŋ^{III}	~	dɔk	/	dɔt	*reply vt*
neŋ^{III}	~	nɛk	/	net	*ill, sluggish vi*
pʰɔŋ^{III}	~	pʰɔk	/	pʰɔt	*arise vt*
zeŋ^{III}	~	zɛk	/	zet	*use vt*
kaŋ^{III}	~	-	/	kɛt	*scorch vi*
leŋ^{III}	~	lɛk	/	lat	*appear vi*

Sizang makes a secondary semantic distinction in the last example of neŋ^{III} ~ nɛk *sluggish vi* and neŋ^{III} ~ net ill vi. The use of *-t* and *-k* variation to make a secondary semantic distinction in Sizang is also noted in ŋat^{II} ~ ŋat^{III} / ŋa^{III} *tight vi* and ŋak^{II} ~ ŋak^{III} / ŋa^{III} *tighten vt*; Stern (1963:245) notes a similar distinction in the form 2 of ta^{II} ~ tat^{II} / tak^{II} *scare vi* 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 7.1.2 where it was suggested to be isolated and not of reconstructional significance.[482]

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[482] Another example may be found in the Thado and Zo reflexes of *sɪak^{II} *cockspur n* as seɪt^{II} and sieɪt^{II} respectively.

7.2.3 Alternation of -ɔʔ/-o^{III} and -ɔwʔ/-ɔw^{III}

The following six entries in the wordlist have developed form 2 reflexes in -ɔʔ in Mizo, Zahau and Tedim or -o^{III} in Thado, Zo and Sizang: *t^{h}ɔw^{II} *arise v*; *lɔw^{II} *pick (flowers/fruit) vt*; *jɔw^{II} *finish, win vt*; *tsɔw^{II} *dig vt*; *k^{h}lɔw^{II} *weed vt*. The expected form 2 reflex would be -ɔw^{III} which even if ousted by a further derived form would be reflected as -ɔwʔ in Mizo, Zahau and Tedim or still as -ɔw^{III} in Thado, Zo and Tedim. Some words with the rhyme -ɔw/-ow have developed form 2 reflexes in -ɔʔ in Mizo, Zahau and Tedim or -o^{III} in Thado, Zo and Sizang instead of the regular derivation of -ɔwʔ or -ɔw^{III} respectively. Weidert's failure to acknowledge the discrepancy (1979:100), and Löffler's observation that this does not occur in the Southern Chin language Maraa (2002b:132-3), suggests that the distinction must have been a subtle one. Of note is a similar confusion in the case of *ro^I *dry v* for which Mizo and Zahau suggest *rɔw^I and Thado possibly reflects both variants. An explanation may possibly be found in the association of Northern Chin -ɔw with Old Burmese -wɨ, discussed in 5.2.3.1, which may perhaps tie in with Matisoff's observation (1972b:280) that Tangkhul Naga -uj, as opposed to -ow,[483] sometimes correlates with Northern Chin -ɔw/-ow.

7.3 Nominalisation

Sporadic cases of denominal verbalisation with nouns being used as uninflected verbs in form 1 are attested throughout the word list. More significant to a morphological study of Northern Chin are cases of nominalisation of form 2 inflections as noted by Henderson (1976:9). The nominalising function of the -s suffix in Old Burmese and Old Chinese was discussed in 2.4.2 and 3.3.1 respectively and brings it into alignment with its function in Northern Chin. Three nouns *hu^{III} (< *hus) *steam n*, *k^{h}a^{III} (< *k^{h}as) *bile n*, *t^{h}u^{III} (< *t^{h}us) *rotten discharge* show an association of root final -s with their corresponding verbal counterparts *hu^{II} *steam vi*, *k^{h}a^{II} *bitter vi*, and *t^{h}u^{II} *rot vi*. Whether this has any connection with the establishment of -s as a derivational suffix, requires further investigation. The following cases of nominalisation via suffixal -s are attested in the word list:

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[483] See French (1983:336).

Verbal Forms 1 ~ 2			Nominalised Form 2	
$*bem^{II}$	~	bem^{II} *circular vi*	$*bem^{III}$	*basket n*
$*bʊal^{I}$	~	$bʊal^{III}$ *wallow vi*	$*bʊal^{III}$	*wallow n*
$*dal^{II}$	~	dal^{III} *defend vt*	$*dal^{III}$	*fence n*
$*doj^{I}$	~	doj^{III} *give trouble (indirectly) vt*	$*doj^{III}$	*spirit n*
$*jaj^{I}$	~	jaj^{III} *sing vi*	$*jaj^{III}$	*temperament n*
$*jaw^{I}$	~	jaw^{III} *wide, sprawl vi*	$*jaw^{III}$	*surroundings n*
$*jɪal^{I}$	~	$jɪal^{III}$ *roll vt*	$*jɪal^{III}$	*roll n*
$*jʊŋ^{I}$	~	$jʊn^{III}$ *urinate vt*	$*jʊn^{III}$	*urine n*
$*kʊaj^{III}$	~	$kɔjʔ$ *bend vt*	$*kɔjʔ$	*bend n*
$*kʊam^{II}$	~	$kʊam^{II}$ *indented vi*	$*kʊam^{III}$	*valley n*
$*kʰa^{II}$	~	$kʰak^{II}$ *phlegm vi*	$*kʰak^{II}$	*phlegm n*
$*kʰaj^{III}$	~	$kʰaj^{III}$ *hang, carry vt*	$*kʰaj^{III}$	*unspecifed mass n*
$*kʰam^{I}$	~	$kʰam^{III}$ *precipitous vi*	$*kʰam^{III}$	*precipice n*
$*kʰɔn^{I}$	~	$kʰɔn^{III}$ *collect vt*	$*kʰɔn^{III}$	*pile of lumber n*
$*ɬak^{II}$	~	$ɬak^{II}\text{-s}$ *lick vt*	$*ɬak^{II}\text{-s}$	*lick n*
$*lʊa^{III}$	~	$lʊak^{II}$ *vomit vi*	$*lʊak^{II}$	*vomit n*
$*mɐn^{I}$	~	$mɐt$ *catch vt*	$*mɐt$	*captive n*
$*{}^{h}noj^{III}$	~	$^{h}noj^{III}\text{-s}$ *smear vt*	$*{}^{h}noj^{III}\text{-s}$	*milk, breast n*
$*pʊm^{II}$	~	$pʊm^{III}$ *spherical vi*	$*pʊm^{III}$	*belly, body n*
$*pʰɛl^{I}$	~	$pʰɛl^{III}$ *share-out vt*	$*pʰɛl^{III}$	*piece n*
$*pʰɪat^{II}$	~	$pʰɪat^{II}\text{-s}$ *sweep vt*	$*pʰɪat^{(I)II}\text{-s}$	*broom n*
$*rin^{I}$	~	rin^{III} *delineate vt*	$*rin^{III}$	*line n*
$*rol^{I}$	~	rol^{III} *withhold vt*	$*rol^{III}$	*fence n*
$*som^{I}$	~	som^{III} *invite, bind-together vt*	$*som^{III}$	*ten n*
$*sum^{I}$	~	sum^{III} *withhold vt*	$*sum^{III}$	*fist-measure n*
$*tɔm^{I}$	~	$tɔm^{III}$ *tie hair-bob v*	$*tɔm^{III}$	*hair-bob n*
$*tʰaw^{I}$	~	$tʰaw^{I}$ *fat vi*	$*tʰaw^{III}$	*fat n*
$*tsɐn^{II}$	~	$tsɐn^{III}$ *slice vt*	$*tsɐn^{III}$	*slice n*
$*wɛj^{I}$	~	$wɛj^{III}$ *swing vt*	$*wɛj^{III}$	*times n*
$*wɔn^{II}$	~	$wɔn^{III}$ *wear vt*	$*wɔn^{III}$	*load, clothes n*

There are a handful of examples where some languages have a nominal form 1 rather than form 2. In the case of *nose n* they appear to be in free-variation in Mizo, although Weidert, in Benedict (1988a:263), makes a distinction of $^{h}nar^{I}$ *nose n* and $^{h}nar^{III}$ *trunk (of elephant) n* which is not noted here.

$*{}^{h}nar^{I}$	~	$*{}^{h}nar^{III}$ *breathe, snore vi*	$*{}^{h}nar^{I}$ / $^{h}nar^{III}$	*nose n*
$*par^{I}$	~	$*par^{III}$ *flower vi*	$*par^{I}$ / par^{III}	*flower n*
$*{}^{h}rɐm^{II}$	~	$*{}^{h}rɐm^{III}$ *weedy vi*	$*{}^{h}rɐm^{II}$ / $^{h}rɐm^{III}$	*weed n*
$*tel^{I}$	~	$*tel^{III}$ *bundled, bunched vi*	$*tel^{I}$ / tel^{III}	*bundle, bunch n*
$*tʊm^{I}$	~	$*tʊm^{III}$ *make fist v*	$*tʊm^{I}$ / $tʊm^{III}$	*fist n*

7.4 Initial Aspiration

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That a prefixal *s-* may have caused initial aspiration in Northern Chin transitive inflections is proposed by Wolfenden (1929:185-6) who also makes a comparison with Burmese. As with the Burmese cases, mentioned in 2.2, the process is no longer productive but a few more isolated examples in Tedim and Sizang are provided by Henderson (1965:22) and Stern (1963:251) respectively. Although the original functions of the *s-* prefix and the *-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 7.1.5. The following cases are attested in the word list:

Intransitive (*vi*)		Transitive (*vt*)	
*kin^{II}	*move vi*	**k^{h}in^{II}*	*move vt*
*kaj^I	*hang vi*	**k^{h}aj^I*	*hang vt*
*kaŋ^{II}	*rise vi*	**k^{h}aŋ^{II}*	*raise vt*
*kɔk	*peel up vi*	**k^{h}ɔk*	*peel up vt*
*kɪa^{III}	*drop vi*	**k^{h}ɪa^{III}*	*drop vi*
*krɐŋ^I	*distend vi/t*	**k^{h}rɐŋ^I*	*increase vi*[484]
*krɪl^{III}	*drop vi*	**k^{h}rɪl^{III}*	*drop vt*
*krɪs	*scare vi*	**k^{h}rɪs*	*scare vt*
*krʊm^{II}	*decrease vi*	**k^{h}rʊm^{II}*	*decrease vt*
*krɛt	*tear, tatty vi*	**k^{h}rɛt*	*tear, make tatty vt*
*kla^{II}	*drop vi*	**k^{h}la^{II}*	*drop vi*
*klɛp	*fold vi*	**k^{h}lɛp*	*fold vt*
*klɪak^{IIb}	*snap vi*	**k^{h}lɪak^{IIb}*	*snap vt*
*klaj^I	*hang vi*	**k^{h}laj^I*	*hang vt*
*lʊm^{III}	*lie vi*	**^{h}lʊm^{III}*	*lay vt*
*par^{III}-s	*unfurl vi*	**p^{h}ar^{III}-s*	*unfurl vt*
*pur^{II}	*fall vi*	**p^{h}ur^{II}*	*fall vt*
*pɔk	*put on end vi*	**p^{h}ɔk*	*put on end vt*
*pɛl^{II}	*detach vi*	**p^{h}ɛl^{II}*	*detach vt*
*pʊaŋ^I	*divulge vi*	**p^{h}ʊaŋ^I*	*divulge vt*
*pɪl^I	*sink vi*	**p^{h}ɪl^I*	*depose vt*
*pɛs	*pierce vi*	**p^{h}ɛs*	*pierce vt*
*ril^{III}	*roll along/down vi*	**^{h}ril^{III}*	*roll along/down vt*
*tɔl^{III}-s	*slide vi*	**t^{h}ɔl^{III}-s*	*slide vt*

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[484] The transitivity distinction appears to have been lost in favour of a semantic one.

In the discussion of -*s* suffixation above, some cases with concomitant aspiration via *s*- prefixation were noted; this parallels the situation in Burmese, discussed in 2.4.2, perfectly. The following cases are attested in the word list:

Intransitive (*vi*)		Transitive (*vt*)	
**kɪamᴵᴵ	decrease vi	*kʰɪamᴵᴵᴵ (<*kɪamᴵᴵ-s)	decrease vt
*kirᴵᴵ	return vi	*kʰirᴵᴵᴵ-s	return vt
*krɪakᴵᴵ	disperse vi	*kʰrɪakᴵᴵ-s	disperse vt
*nemᴵ	soft vi	*ʰnemᴵᴵᴵ (< *ʰnemᴵ-s)	comfort vt
*nɐmᴵ	smell vi	*ʰnɐmᴵᴵᴵ (< *ʰnɐmᴵ-s)	smell vt
*tʊamᴵᴵ	wrap vt	*tʰʊamᴵᴵᴵ (< *tʰʊamᴵ-s)	put on vt[485]
*tsajᴵᴵ	play vi	*tsʰajᴵᴵᴵ-s	tease vt

7.5 *Allofamy*

Matisoff (1978a:16-7) coins the term *allofam* to account for words in separate Tibeto-Burman languages[486] which appear to be derived from the same root but which violate regularly assumed sound-laws. Such lexical variations are noted by Benedict but he prefers to attribute it to unclearly defined phonological/morphological alternations. Peiros (1998:206-7) suggests that Matisoff's approach demonstrates a lack of methodological rigor and Sagart (2006a:210-1) specifically criticises Matisoff for disregarding Benedict's observation (1972a:124) of an association in initial position of voicing with intransitivity and voicelessness with transitivity as discussed in 3.5.2.3. Peiros' and Sagart's criticisms are partially warranted but the discussion in 8.1 of neogrammarian versus lexical diffusional hypotheses for sound change provides some support for Matisoff's approach providing it is not applied as a wildcard.

7.5.1 *Consonants*

The complexity of correspondences between initials was discussed in the introduction to Chapter 4. In the development of codas, the derivation of -*ʔ*, -*t* and -*k* from the same -*s* suffix in Northern Chin helps remove some of Matisoff's allofamic variations, yet in certain cases the evidence is less conclusive. The word *nɐp *snot n* is homophonous with the form 2 of *smell vt* in Thado, Zo, Tedim and Sizang and appears to be a regular nominal derivation from nɐmᴵᴵᴵ-s > nɐmʔ; the Mizo and Zahau form 2 of *smell vt* is predictably ʰnɐmᴵᴵᵇ but the word for *snot n* occurs with an

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[485] The transitivity distinction appears to have been lost.
[486] Matisoff also posits allofamy within one language; see *left n* in 6.5.4.

obstruent coda as [h]nɐp.[487] A cross-linguistic semantic link of *nose n* and *snot n* is supported in Wilkins (1996:284) but, notwithstanding the partial phonological similarity, the Northern Chin word for *nose n*, *[h]nar[I/III], has an -*r* coda and it is unclear whether the semantic link with *snot n* can be extended to *smell vt*.[488] With Burmese also attesting a nasal in the verbal form and an obstruent in the nominal form, for the time being the tantalizing close yet insurmountable phonological and semantic difficulties must keep the two roots apart:[489]

[#96] **Smell**

[M]   *nam (2003:250-1)
[P&S] *nam (1996:#535)

[NC]   *nɐm[I] *smell vi*

The transitive form *[h]nɐm[III] *smell vt* in tone III has concomitant initial aspiration.

[OB]   nã[I] န္ nam[I] *smell vi*

Stewart & Dunn (1940-81:192-3) noted the tone III derivation, nã[III] န္ nam[III] *smell n/vt*, to not always be precisely differentiated after a nominalising prefix. The transitive sense of tone III is generally now only reflected in nã[II] န္ဒ္း nam[II] *smell vt* which is curiously reflected in the Loloish forms in Bradley (1979:342-3) as intransitive. The attestation of a verbal sense of *smell* in all three tones in Burmese suggests there has been some confusion.[490]

[#97] **Snot**

[M]   *s-nap (2003:336)

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[487] The initial aspiration is regularly lost outside of Mizo and Zahau and is of no significance here.

[488] Benedict (1988a:259-60) suggests an alternative link with Mizo nem[I] *soft vi* but the vocalism does not correspond.

[489] See also the discussion of Zo, Tedim and Sizang ɪp *bag n* in 5.2.5.1 and Mizo bɔp *hind-leg n* under *Swell* (#55). Perhaps also of note is the Tedim form 2 inflection dɐp of dam[III] *shaded vi* which is homophonous with dɐp *cold (weather) vi* in Zahau, Thado, Zo and Sizang.

[490] Benedict (1991:19) suggests there may be a correlation between tone I with intransitivity and tone II with transitivity but does not note the tone III form and his supporting evidence is not strong.

[P&S] *s-nap (1996:#553)

[NC] *ʰnɐp *snot* n

[OB] ʰnaʔ ⟨ᰍᰍᰍ⟩ ʰnap *mucus, snot* n

7.5.2 *Vowels*

Benedict appears reluctant to commute vocalic variation back to Tibeto-Burman but is forced to admit it for apparent alternations between *i* and *u* (1972a:80), *i* and *ja* (1972a:84), and the secondarily derived vowels *e/o* with the primary vowels *i/u/a* (1972a:68-9). In the first case Benedict notes that the alternation is predominantly associated with Garo; Burling (2004:26-7) more recently associates this with features of labiality.[491] Benedict (1976a:178-9) attempts to remove the alternation between *i* and *ja* in two roots: in the case of *Eye* n (#71), Matisoff (1978a:240-1) queries Benedict's setting up of a ə vowel before a non-glide coda[492] but it appears that the curious vocalism may rather be attributed to a specific feature of the coda; in the case of *pheasant* n, the allofamic variations pertain to languages beyond the scope of this paper but the Northern Chin and Old Burmese forms are noted as loanwords in 6.5.4. Two of the three cases of alternations with secondary vowels relevant to the work here, *thorn* n and *hammer* n, are discussed in 5.2.3.1 and appear to stem from faulty comparisons. In the third instance, Benedict appears to be hitting on the basic ə/a vocalic alternation underlying Sino-Tibetan as a whole:

[#98] **Near**

[M] *s-nej ✖ *s-naːj (2003:215;220)
[P&S] *nəj (1996:#560)

[NC] *ʰnajᴵᴵ *near* vi

The rhyme correlates with Loloish *najᴵᴵ from an original *-al* as opposed to the Burmese form representing an ablaut with *-əl*.

[OB] niᴵᴵ ⟨ᰍᰍ⟩ː niᴵᴵ *near, intimate* vi

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[491] Burling (2004:80-1) further notes that speakers are generally consistent for each word but that individual idiosyncracy also plays a role.
[492] See the discussion in the introduction to Chapter 5.

Matisoff (1998:#21305) reconstructs Loloish *naj^{II} noting that this does not concur with the Burmese reflex *vi*; the Loloish form appears to represent the Old Chinese ablaut in *^{ʔ}nal^{II}.

[C]   ə^{II} 邇 ɲiạ^{II} < *^{ʔ}nəl^{II} *near vi, approach vt*

The *Shijng* rhyming suggests *^{ʔ}nəl^{II} but the Middle Chinese form suggests *^{ʔ}nal^{II}; the former corresponds to the Burmese form while the latter to the Northern Chin etyma.

Another case of *ə/a* variation may perhaps be found below:

[#99]   **Low, soft**

[M]   *s-njam (2003:290;299)
[P&S] *nem (1996:#575)

[NC]   *^{h}nɪam^{II} *low vi*

Matisoff associates *nem^{I} *soft vi*, with which Benedict (1983:15) further associates *^{h}nem^{III} *comfort vt* via an original meaning *soften vt*, but an account also needs to be made for the tonal distinction.[493]

[OB]   ɲã^{III} ညံ ɲam^{III} *soft, inferior, subside (as pain/fever) vi vi*

Matisoff reconstructs a separate allofam *nem to compare neĩ^{III} နိမ့် nɪm^{III} *low, low-lying, inferior vi* which also has a transitive derivative ^{h}neĩ^{III} နှိမ့် ^{h}nɪm^{III} *lower vt*.[494] Alternatively an ablaut variation of *njam and *njəm could be

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[493] Zahau has *nem^{II} *soft area between the hips and ribs n* which is reflected in tone I elsewhere but this is possibly a tone II nominal derivation; Peiros & Starostin (1996:#568) compare nã^{I} 翼 nam^{I} *flank n*, which Sagart (2004:71) convincingly associates with nan^{Ib} 南 nəm^{I} < *nəm^{I} *south n*, but the Northern Chin vocalism is discrepant.

[494] The latter also appears to form part of a much larger word family consisting of ^{h}neĩ^{III} နှ ^{h}nɪm^{III} *lower vt* as well as neĩ^{I} နိ nɪm^{I} *subside vi* and ^{h}neĩ^{I} နှ ^{h}nɪm^{I} *suppress vt*; see the discussion in 2.4.2. The words neɪʔ နိ nɪp *subside vi* and ^{h}neɪʔ နှ ^{h}nɪp *press vt* seem allofamically related to the latter pair but the Pali/Sanskrit loanword neɪʔ နိ nɪc *low, inferior, humble vi*, identified by Hla Pe (1960:83), is noted by Stewart & Dunn (1940-81:198;200) to have been respelled as neɪʔ နိ nɪp which they further associate with neĩ^{III} နိ nɪm^{III} *low, low-lying, inferior vi*. An association with Northern Chin *^{h}nip *malleable vi* may also be possible here.

proposed in which the derived palatal nasal *ɲ-* of ɲã^III ꤫ꩳ ɲam^III remained as *n-* in nei^III 㖩 nɨm^III due to *-jə-* merging to *-ɨ-* before initial palatalisation could occur.

[OC] ȶan^II 染 ɲiam^II/III < *'njam^II/III *soft vi*

The proposed Burmese ablaut with *ə* is perhaps also attested in ȶən^III 荏 ɲim^II < *'njəm^II *soft vi*.

In addition to cases where *ə* appears to have shifted to *a* between Old Chinese and Middle Chinese,[495] Pulleyblank (1963:220-1, 1965a:238-9) believes a morphological ablaut can be set up for Old Chinese and further suggests (1965a:237-40) that this can be extended back to Sino-Tibetan as a whole.[496] The idea of a morphological ablaut in Tibeto-Burman is first proposed by Miller who, in his study of Burmese (1956:47-9), suggests two systems of ablaut based on three different vowels in each. His work is strongly criticised by Nishida (1957:57-8), Benedict (1972a:69-70) and Matisoff (1975:166) who note that little attention has been paid to semantics.[497] Miller (1957:42-3) further proposes that vocalic mismatches between early Inscriptional Burmese, as attested in the Myazedi Inscription, and Written Burmese are evidence for an original ablaut, but this is unlikely; Duroiselle (1919:15) proposes that these variations represent a language in transition but Ba Shin's study (1962:36-9) of the regularities behind the alternations shows them to represent little more than orthographic variation before the script was standardised. Returning to Pulleyblank's proposal, he is unable to find any examples in Burmese (1965a:239) and his examples in Tibetan (1965a:233-7) are strongly contested;[498] Benedict (1972a:69-70) does not

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[495] This is to be kept distinct from the regular lowering of *ə* to *a* between Sino-Tibetan and Tibeto-Burman when not affected by labializing or palatalizing elements.

[496] Pulleyblank (1986a:9, 1989:8-14) proposes the *a* vowel to be a result of infixation; this will be discussed further in 8.2.3.

[497] A similar criticism may be made of Miller's proposal (1958) for a Tibeto-Burman infix system; see the comments by Benedict (1972a:124).

[498] Pulleyblank believes the Tibetan verbal alternations represent this primitive ablaut; this is also argued by Miller (1956:44-7). The lack of verbal inflections elsewhere, except in Chin where it has no such effect on vocalism, leads Matisoff (2003:493) to treat view them as a Tibetan peculiarity that cannot be reconstructed back to Tibeto-Burman. Pulleyblank's proposal has also been rejected by Róna-Tas (1985:178-179) on more specific morphological grounds due to it often requiring his derived forms to be treated as the root forms and vice-versa. Pulleyblank (1965a:234) does actually address this issue with the argument that the derived form could become lexically encoded to no longer appear

reject Pulleyblank's handful of possible Old Chinese examples but notes much more evidence is required before any meaningful conclusions can be drawn; this seems to be a fair assessment. Whatever the diachronic status of vowel ablaut in Sino-Tibetan may be, there are several cases of synchronic alternation in Northern Chin. The extent to which these can be commuted back to phonological conditioning environments remains to be clearly established.

7.5.2.1 *The ɐ/a and ɛ/e Ablaut*

Noting the variation between Tedim sɐn[I] and Mizo/Thado sɛn[I] *red vi*, Benedict (1972a:17-8) suggests that both derived from an original palatal medial -*j*- that fronted the Mizo and Thado vocalism but left Tedim unchanged. The free-variation of sɐn[I] and sɛn[I] in Thado is not noted by Benedict who appears unaware of the sporadic ɐ/a and e/ɛ ablaut across Northern Chin which suggests synchronic euphony to be as likely a cause as diachronic phonology. Nevertheless, although it seems that in most cases ɐ/a was original, in a select few cases it seems e/ɛ may have been original with ɐ/a emerging via analogy. This in fact seems to be the case with *red vi*:

[#100] **Red**

[M]   *t(s)ja-n (1995:54-5)
[P&S]   *tsʰeːn (1996:#1210)

[NC]   *sɛn[I] *red vi*

[OB]   –

> Matisoff compares an old literary form န်ကြံ nìˈtəjaˈ of nìˈtaˈ န်ကြ *very red vi* on the assumption that ကြံ təja means *very red vi*. Nishi's rejection (1974:19;43) of the use of such forms in Lolo-Burmese reconstruction was discussed in 2.3.1.4 but equally vitiating are the forms listed by Bernot (1978-92:VII:56-7) that show such a meaning to be only attested when preceded by nìˈ န် nìˈ *red vi*.[499] This concomitantly nullifies Matisoff's proposed

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derived. A comparison may be drawn here with the Northern Chin verbal inflections in spite of their different processes of inflection, but the issues addressed here are beyond the scope of this work.

[499] Matisoff (2003:507-8) attempts another comparison with the anomalous Burmese *tj*- combination in the variant spelling ကျက်ကျက် tjaktjak of the adverb teʔteʔ တက်တက် taktak *completely* which he compares

association, also suggested by Peiros & Starostin (1996:#918) and Sagart (2006a:220), with tan¹ 丹 tan¹ *red vi, cinnabar n.*[500]

[OC]   tɕʰiɛn¹¹¹ 倩/綪 tsʰɛn¹¹¹ < *cʰjan¹¹¹ *red vi*

The following cases are also attested in the wordlist:

*ʔɐn¹¹ / ʔɛn¹¹	*food n*	*pʰɐl¹ / pʰɛl¹	*share-out, permit vt*
*ʔaw¹ / ʔew¹	*noisy vi*	*pʰeŋ¹ / pʰaŋ¹	*flat vi*
*hɐl¹¹ / hɛl¹¹	*mix vi*	*rek¹¹ / rak¹¹	*tighten vt*
*jɐk / jɛk	*ashamed vi*	*ʰrɐm¹¹ / ʰrɛm¹¹	*otter n*
*kɐk / kɛk	*crack vi*	*tɐl¹ / tɛl¹	*muscle n*
*kʰɐl-s / kʰɛl-s	*overtake vt*	*tɐr¹ / tɛr¹	*elderly, firm vi*
*kʰlɐŋ¹ / kʰlɛŋ¹	*choose vt*	*tʰaŋ¹/¹¹ / tʰeŋ¹¹	*reek vi*[501]
*laŋ¹ / leŋ¹	*visit, fly, epidemic vi*	*tsɐl¹ / tsɛl¹	*male n*
*mɐn¹ / mɛn¹	*catch, sticky vi*	*tsɐl¹¹¹ / tsɛl¹¹¹	*forehead n*
*pɐj¹ / pɛj¹¹	*go vi*	*tsɐn¹¹ / tsɛn¹¹	*slice vt*
*pɐn¹ / pɛn¹	*thin vi*	*tsɐt / tsɛt	*snap vi*

In certain cases an ablaut variation appears to have been exploited to create a new semantic distinction or more explicitly define an already existing one: Zahau kɐk *crack vi* and kɛk *crack vt*; Thado *tɐr¹ *hard vi* and tɛr¹ *elderly vi.*[502]

7.5.2.2 *Other Cases*

Disambiguating phonoaesthetics from alternations of true phonological import needs to be addressed on an individual basis. There is sporadic evidence of secondary vowel rounding in words originally with initial *w-* as shown under *Bear* (#29), where *wɐm¹ has uniformally rounded to vɔm¹, while *leech n* is attested as vɐt in Mizo and Zahau but vɔt elsewhere:

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with Northern Chin *tɐk *real vi, right-side n*; Nishi's rejection (1974:19;43) of the validity of this Burmese comparison is discussed in 2.3.1.4.
[500] Schuessler (2003:43) proposes an external source for this.
[501] Peiros & Starostin's comparison (1996:#1505) of Өî¹¹ ɔɔɛ̀ saŋ¹¹ *aromatic vi* suggests the *a* vocalism with tone II to be original. There is also an irregular tonal correspondence in *pɐj¹ / pɛj¹¹ *go vi* and a plausible association between *tsɐl¹ / tsɛl¹ *male n* *tsɐl¹ / tsɛl¹ *forehead n*. In addition to the two cases discussed in footnote 348, there are a few other tonally differentiated semantic alternations in the word list which sometimes also show differences in syllabic weight: *ban¹ *arm n*, *ban¹¹¹ *reach for vt*; *ral¹ *enemy n*, *ral¹¹¹ *opposite n*; *daj¹¹ *shallow vi*, *daj¹ *shallow (as vessel) vi*; *hom¹ *hollow vi*, *hom¹¹ *empty vi*; *dɔŋ¹ *solicit, intercept vt*, *dɔŋ¹¹¹ *ask vt*; *ʔol¹ *easy vi*, *ʔol¹¹ *unengaged vi*; *ʔeŋ¹ *green vi*, *ʔeŋ¹¹ *envy vi.*
[502] See the specific entries in the word list for further examples.

[#101] **Leech**

[M]   *k-r-pʷat (2000:150-3)
[P&S] *wat (1996:#446)

[NC] *wɔt / *wɐt *leech* n

[OB] ʧuʔ လွယ်ချင် / ကြွချင် krwat *land-leech* n

> The modern spelling with medial -*j*- is a corrupted form; see Nishi (1977:46-7) for further discussion. Matisoff (1972a:65) notes the Loloish forms to reflect *wat and treats the Burmese form as attesting the velar animal prefix followed by an unspecified -*r*-.

Another possible case is *wɐnᴵᴵᴵ / wɔnᴵᴵᴵ *load* n which is treated in the word list as a nominalisation of *wɔnᴵᴵ *wear* vt but may alternatively be associated with *wɔnᴵ *pregnant* v, *offspring* n via a semantic link like *bear* vt and *bairn* n that would also suggest a link with Burmese wũᴵ ဝန် wanᴵ *load, burden* n.[503]

Several other cases appear to be loans or onomatopoeic words: *k⁽ʰ⁾laᴵᴵᵇ *drop* v and *k⁽ʰ⁾luᴵᴵᵇ *fall* v are discussed under *Fall* (#8) where Mon-Khmer influence is suggested to have played a role; *klaᴵᴵ / kloᴵᴵ *tiger* n is discussed in 6.5.4; *dotᴵ / dutᴵ *drink* vt and *hupᴵ / hopᴵ / hipᴵ *slurp* vt have non-native tone I with a stop coda; *tʰɐŋᴵ / tʰoŋᴵᴵ *echo, resound* vi, *jʊŋᴵ / jɪŋᴵᴵᴵ *segmentor* n, *talᴵ / tulᴵ / dilᴵᴵ *heel* n and *tsin/ŋᴵᴵ / tsen/ŋᴵᴵ *downpour* vi all have additional irregularities. The following cases are also attested in the wordlist where they are listed under their first alternant:

*ʔɪrᴵ / ʔɔrᴵ	*neck* n	*kʰlɛp / kʰlɪp	*fold* vt
*bɪlᴵᴵ / bɔlᴵᴵ	*blunt* vi	*ʰlemᴵ / ʰlimᴵ	*strip* vt
*bʊŋᴵ/ᴵᴵᴵ / *bɪŋᴵᴵᴵ	*container* n	*ʰlumᴵᴵ/ ʰlimᴵᴵ/ ʰlɔmᴵᴵ	*ball* n, *sphericalise* v
*bukᴵᴵ / bokᴵᴵ	*hut* n	*monᴵᴵᴵ / menᴵᴵᴵ	*clitoris* n
*dɔŋᴵᴵ / dɐŋᴵᴵ	*hinder* vt	*nɐmᴵᴵ / nɔmᴵᴵ	*push* vt
*ʤɐrᴵ / ʤɔrᴵ	*drip* n/vi	*nokᴵ / nekᴵ	*jostle* vi

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[503] Matisoff (2000a:141-2) assigns a meaning *belly* n rather than *load* to the first syllable of an old Mizo word vɔnᴵᴵᴵsorᴵ *have diarrhoea* vi, but his comparison of Burmese wũᴵᴵ ဝန်း wamᴵᴵ *belly* n does not concur in rhyme or tone. The Mizo compound may nonetheless be a loan from Burmese wũᴵᴵʃoᴵᴵ ဝန်းဆော့ *have diarrhoea* vi.

*dʑopᴵᴵ / dʑepᴵᴵ	*suck vt*	*ʰnemᴵᴵᴵ / ʰnimᴵᴵᴵ	*smell vt*
*dʑʊk / dʑɔk	*erect vi*	*ŋeŋᴵ / ŋoŋᴵ	*dawdle vi*
*hajᴵᴵ / hojᴵᴵ	*skim off vt*	*pajᴵᴵ / pojᴵᴵ	*carry on oneself vt*
*heŋᴵ / hoŋᴵ	*hollow vi*	*putᴵᴵ / potᴵᴵ	*emerge vi*
*hɔŋᴵᴵ/hʊŋᴵᴵ/hɪŋᴵᴵ	*come vi*	*pʰilᴵᴵ / pʰulᴵᴵ	*snout, butt vt*
*jalᴵ / jolᴵ	*beam n, recline vi*	*tʊmᴵᴵᴵ / tɔmᴵᴵᴵ	*fist, block, hair-bob n*
*jɪalᴵ / jʊalᴵ	*roll v/n*	*tʰʊlᴵ / tʰɪlᴵ	*thread vt*
*jʊŋᴵ / jɪŋᴵ	*urinate vt, urine n*[504]	*welᴵᴵᴵ-s / wɔlᴵᴵᴵ-s	*swallow vt*
*kʊŋᴵ / keŋᴵ	*rod n*	*wʊt / wɪt	*pierce vt*
*kunᴵᴵ / konᴵᴵ	*bow vi*	*wʊt / wɔt	*ash n*
*kʰeŋᴵ / kʰoŋᴵ	*resound, hammer v*	*wojᴵ / wɛjᴵ	*swing vt, times n*[505]
*kʰɪmᴵᴵᴵ / kʰʊmᴵᴵᴵ	*put on head vt*	*wɛjᴵᴵᴵ-s / wojᴵᴵᴵ-s	*fart n*
*klomᴵ / klemᴵ	*few vi*		

As with the *ɐ/a and ɛ/e* ablaut, semantic specialisation may occasionally be noted: Zahau *?ɪrᴵ *front of neck (animals) n* and *?ɔrᴵ *front of neck (humans) n*, tᴵaᴵᴵᵇ *drop vi* and tᴵuᴵᴵᵇ *fall vi*.[506] It is also possible that certain words like *ʰnʊŋᴵ *back n* and ʰnɔŋᴵ *rejected vi* or zʊŋᴵᴵ *finger, root n* and zaŋᴵᴵ *penis n* may be associated but there is no confirmatory evidence.

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[504] This alternation only occurs in the nominal form 2 Laizo derivative zɪnᴵᴵᴵ.

[505] This alternation only occurs in the nominal form 2 derivative *wojᴵᴵᴵ / wɛjᴵᴵᴵ.

[506] See the specific entries in the word list for further examples.

Chapter 8: Concluding Remarks

The establishment in the preceding chapters of regular sounds laws, both segmental and suprasegmental, as well as morphological associations, including an elucidation of the intricate Northern chin verbal paradigms, attempts to provide greater legitimacy to the Sino-Tibetan hypothesis. Nevertheless, the work raises questions regarding two intractable linguistic issues: the interaction between Neogrammarian sound laws and lexical diffusion; the nature of the dichotomy between vowels and consonants.

8.1 Lexical Diffusion

Under the rubric of *lexical diffusion*, Wang (1969:12-8) suggests that exceptions to regularly defined sound laws makes it more reasonable to assume that individual words, rather than individual phonemes, are the units of change. His proposal that sound change progresses gradually throughout the lexicon causing abrupt phonological changes in affected words represents an inversion of the Neogrammarian approach where sound change is treated as phonologically gradual but lexically abrupt. Pulleyblank (1978b:183-5;190, 1982c:397-401) suggests that the idea that a group of speakers would simultaneously alter a single word as opposed to a class of words is equally unlikely, and suggests that external sociological influences may have more influence than Wang concedes. Developing proposals made in Chen & Wang (1975) for a distinction between actuation and implementation, and acknowledging Egerod's concerns (1976, 1982) regarding over-application of the theory, Wang & Lien (1993:381-2) respond that Pulleyblank's rejection is too dogmatic and that in addition to internal factors, external sociological influences may actuate a sound change which is then implemented by lexical diffusion. Although Wang & Lien are accommodating of some of the criticisms levelled against them, they still retain the idea that lexical diffusion should replace the Neogrammarian approach and it is unlikely that this would appease Pulleyblank, or indeed Egerod (1982:169) who prefers to follow Labov's belief (1981) that the Neogrammarian hypothesis and lexical diffusion are not mutually incompatible.

Labov (1981:303-4) suggests that the distinction may lie in degrees of abstractness of the phonetic realisation from the original underlying phoneme which occurs to a greater degree in changes involving lexical diffusion. While this is an interesting

theory which should be tested further, it does little to address the actual cause. This is addressed more clearly by Labov (1994:542) with the suggestion that sound change according to the Neogrammarian hypothesis occurs internally by causing incremental phonetic shifts in phonemes which eventually may realign themselves with a different phoneme, while sound change according to lexical diffusion reflects more abrupt phonemic differentiation triggered by external sociological factors or internal lexical or grammatical conditioning affecting the later stages of what was originally an internal change. Although not entirely explicit, Labov's assumption appears to be that underlying all cases of lexical diffusion are regular Neogrammarian sound laws which are allowed to progress their course, equally affecting all phonemes in the same environment, until other processes intervene. The relevance of this to the Northern Chin cases will be discussed below.[507]

8.1.1 *External Conditioning*

At the present stage, Thado ʒ- and z-, discussed in 1.5.4, appear to be allophones in free-variation which a purely internal and synchronic analysis would exclude from any discussion regarding sound change. However, Peterson's proposal (2000:80), noted in 4.8.2, that a shift of original *j- to z- first occurred in languages like Mizo and Zahau and then spread north, supports the fact that Thado, as the furthest north of the six languages discussed, is the only one that does not uniquely attest z-. Although the expected development for Thado would be the eventual loss of the ʒ- allophone, its retention of this intermediate stage suggests that interaction with its more southerly neighbours has allowed the introduction of z- into the phonemic inventory before the original shift has completed its course. Although only free-variation is attested here, future research may perhaps unearth cases of lexical diffusion as is possibly the case in a similar situation concerning the Zo dialectal distinction, discussed in 1.5.3, between ʰl- and h- from original *kʰl-. The development to h- appears to be a further development from ʰl- but in the case of one speaker, a lexical distinction appears to have been made distinguishing ʰl- and h- which, having no phonological conditioning environment, appears to be a result of lexical diffusion via the contact of an ʰl- dialect with an h- dialect. A clear case of mutual influence among Northern Chin languages

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[507] The cases of vowel ablaut discussed in 7.5.2 will not be discussed any further here, suffice to say that the complex situation appears to be a combination of regular Neogrammarian sound shifts, phonoaesthetics, borrowing and analogy; the case of analogy as it relates to lexical diffusion will be discussed in 8.1.2 below.

was discussed in 7.2.2 where Tedim morphological alternations were shown to have been adopted by Zo and Sizang.

8.1.2 *Internal Conditioning*

Wang & Lien (1993:353-5) suggest that lexical diffusion resolves the antinomy between the Neogrammarian hypothesis and analogy by rescuing the latter, along with borrowing, from serving as a catch-all account for irregularities. Within the parameters of Labov's interpretation, analogy may be added to grammatical or lexical conditioning as an internal actuator of lexical diffusion. This creates an ironic situation whereby the regularity caused by analogical levelling may be treated as lexical diffusion in spite of the concept of lexical diffusion being devised by Wang to account for cases of irregularity. A good example of analogical levelling as lexical diffusion is the verbal paradigms discussed in 7.1.4 where analogy is assumed to have derived the rest of the lexicon after the derivational -s suffix had disappeared.[508] Notably, grammatical conditioning appears to have been able to disrupt this regularity as attested in the development of $-\eta^{III}$ that does not show the coronalisation otherwise attested in the change $-\eta^{I/II}-s > -n^{III}$. Nevertheless, a pitting of analogical conditioning against grammatical conditioning in terms of regularity appears untenable due to apparent de-regularising effects of analogy: the evidence for a shift $-s > -\Omega > -^{IIb}$ after nasal codas in Mizo and Zahau suggests that the occasional occurrence of tone IIb instead of -ʔ after liquid and glide codas is an analogical extension. The above alternations have sometimes ousted the original, are sometimes in free-variation, but occasionally show evidence for secondary grammatical conditioning in verbal inflections or in subtle shifts in semantics. In this regard it may be suggested that while the irregularities appear to be analogically derived, the real actuator is grammatical conditioning with the alternations simply being the ones to which the language is most amenable due to similar instances elsewhere.

8.2 *Vowelless Languages*

Although languages attesting vertical vowel systems have been accorded some legitimacy by Ladefoged and Maddieson (1995:286), Colarusso's treatment

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[508] Pulleyblank's suggestion (1973b:371) that the sporadic process of change of Old Chinese -s to Middle Chinese -h was conditioned by the rhymes involved is in accordance with the Neogrammarian hypothesis; the variability suggests this not to be the case in Northern Chin although grammatical conditioning may have been an influence.

(1997:122-3) of them as rare developments from original triangular systems only mildly tempers Szemerényi's charges (1967:74-5) of statistical insignificance.[509] The reconstruction of a Sino-Tibetan ə/a vowel system suggests that rather than being left languishing in a linguistic hinterland, vertical vowel systems are representative of a more primordial situation underlying the very phonological foundations of language. It is unlikely mere coincidence that the Indo-European language family, upon which the whole enterprise of historical linguistics was founded, is also suggestive of such a system.

8.2.1 Indo-European

Under the premise that *i* and *u* pattern as glides[510] and *a* is too insignificant to be a primary vowel, Saussure (1879:70-1;135) reduces the Indo-European vowel system to a single vowel a_1 with an ablaut variant a_2 for which he acknowledges a correlation with *e* and *o* in other analyses. The typological peculiarity of the remaining *e/o* vowel system leads Allen (1956:172-4, 1965), Pulleyblank (1965b:91-2, 1993b:68-74), and Colarusso (1981:499-501) to suggest that this may actually reflect a vertical ə/a system. It is ironic that this reanalysis represents an attempt to make the Indo-European vowel system typologically more reasonable by appealing to a construct generally dismissed as typologically anomalous. Interestingly, reconstructing *a* for *o* allows an account for the sporadic *a* vowel in Sausurre'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) who further adds (1993:148) 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*.[511] An association of *e* with ə is questioned by Villar (1993:157-8) due to a lack of direct evidence, but Allen (1965:116) and Colarusso (1981:499-500) note the salient features behind the vowel to be one that is neither back nor maximally open and that a shift from of ə to *e* nicely parallels that of *a* to *o*; Pulleyblank (1993b:74) further proposes that the phonological reanalysis of *j* and *w* as *i* and *u* would have triggered a

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[509] See Kuipers (1968:78-80) for a criticism of Szemerényi's position.

[510] Note also the observation in 1.4.1 that the distinction between sonorant consonants and vowels in Northern Chin is blurred.

[511] Pulleyblank (1993b:83) notes solid evidence in the evolution of Chinese.

shift from ə to e in accordance with the proposals in Crothers (1978:109) that the common vowel system *i, u, e, a* derived from an original and *i, u, ə, a.*[512]

8.2.2 *Northwest Caucasian*

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

8.2.2.2 *Kabardian*

In his ə/a analysis of Kabardian, Kuipers (1960:50-1) takes Allen's approach one step further by suggesting that the vowel *a* should be reanalysed as a feature of openness rather than a vowel due to it having no other vocalic elements with which to compare. Halle, who is accepting (1970:99) of Kuipers' ə/a analysis, dismisses both the analyses of ə by Allen and Kuipers as well as Kuipers' further analysis of *a* on the following grounds: the symbols for stress and juncture required to dispense with ə are

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[512] Crothers' analysis is also noted by Villar (1993:157-8) whose preference (1993:144) 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.*

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merely notational distinctions (1970:100-3);[513] treating *a* as a specific feature instead of a vowel represents a terminological readjustment that could be applied to any vowel phoneme (1970:103). Kuipers responds accordingly: if ə is predictable in environments that are unequivocally identifiable as stress and juncture then marking an underlying ə violates basic phonemic principles (1976:106-7;111-2;114); 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 (1976:119-20). 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 denunciation (1967:75-9) of Kuipers on typological grounds is countered by Kuipers' response (1968:74-7) that this represents a confusion of the phonetic with the phonemic and a lack of familiarity with Northwest Caucasian languages, Szemerényi's observation (1967:81) that the ə/*a* systems proposed for Indo-European and Kabardian are fundamentally incomparable is valid.[514] While Kuipers' vowelless analysis, upon which Pulleyblank's similar proposal (1984a:57, 1984b) for Mandarin is based, superficially appears to parallel the Indo-European evidence, this cannot be projected back to the Indo-European level where *a* is an apophonic derivative of ə that cannot be compared with *j* and *w* due to it being able to function as a syllabic base like ə; this differs from Kuipers' and Pulleyblank's synchronic analyses of Kabardian and Mandarin respectively where *a* is allowed to pattern as a feature of openness in the same way that *j* and *w* pattern as features of palatility and labiality that only become vocalised when occupying the requisite slot in the syllable.[515] A similar situation exists in the Sino-Tibetan reconstruction proposed here where ə and *a*, albeit with the former being underlyingly *zero*, represent the two basic building blocks for the syllable.

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

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

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

8.2.3 *Indo-European versus Sino-Tibetan*

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

Appendix: Northern Chin Word List

*ʔ-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
salty vi	*ʔel^{I} *ʔel^{III} (< *ʔel^{I}-s)	el^{I} el^{III}	ʔel^{I} ʔel^{III}	el^{I} el^{III}	el^{I} el^{III}	el^{I} el^{III}	el^{I} el^{III}
red-hot vi, flame vi/n[1]	*ʔel^{III}-s	elʔ	ʔelʔ	el^{III}	el^{III}	elʔ	el^{III}
food, vegetable n[2]	*ʔen^{II}	en^{IIa}	ʔen^{IIa}-	en^{II} / ɛn^{II}	en^{II}	en^{II}	en^{II}
foolish vi	*ʔa^{II} *ʔat^{II} (< *ʔa^{II}-s)	a^{IIa} at^{IIb}	ʔa^{IIa} ʔat^{IIb}				
crab n	*ʔaj^{II}	aj^{IIa}	ʔaj^{IIa}	aj^{II}	aj^{II}	aj^{II}	aj^{II}-
crow n[3]	*ʔak^{II}	-ak^{IIb}	-ʔak^{IIb}	-aʔ^{II} / -ŋaʔ^{II}	-aʔ^{III}	-ak^{III}	-ak^{II}
greedy vi[4]	*ʔam^{II} *ʔam^{III} (< *ʔam^{II}-s)	am^{IIa} am^{III}	-ʔam^{IIa} -ʔam^{III}	am^{II} am^{III}	am^{II} am^{III}	am^{II} am^{III}	am^{II} am^{III}
glow (as embers) vi[5]	*ʔam^{III} *ʔam^{III}-s	am^{III}		am^{III} ɐp	am^{III} ɐp	am^{III} ɐp	am^{III} ɐp

[1] Mi *flame vi/n*, Za *flame vi*; Th/Te *red-hot vi*; Zo *whiteness on red-hot charcoal n*; Si *red-hot vi*.
[2] Mi/Za *vegetable n*; Th/Zo/Te/Si *food n*.
[3] Zo and Tedim tone III is due to sandhi.
[4] Th/Zo *in adulation vi*.
[5] Thado has em^{II} ~ em^{III} *glow (as lump of charcoal) vi*.

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fowl n	*ʔar$^{\mathrm{I}}$	ar$^{\mathrm{I}}$	ʔar$^{\mathrm{I}}$	aʔ$^{\mathrm{I}}$	a$^{\mathrm{I}}$	ak$^{\mathrm{I}}$	ak$^{\mathrm{I}}$
star n [6]	*ʔar$^{\mathrm{I}}$-	ar$^{\mathrm{I}}$-	ʔar$^{\mathrm{I}}$-	aʔ$^{\mathrm{H}}$-	a$^{\mathrm{I}}$-	ak$^{\mathrm{I}}$-	ak-
cut vt [7]	*ʔat$^{\mathrm{I}}$ / *ʔat$^{\mathrm{II}}$-s	at$^{\mathrm{IIb}}$ / eʔ	ʔat$^{\mathrm{IIb}}$ / ʔeʔ	at$^{\mathrm{II}}$ / at$^{\mathrm{III}}$	at$^{\mathrm{II}}$ / at$^{\mathrm{III}}$	at$^{\mathrm{II}}$ / at$^{\mathrm{III}}$	at$^{\mathrm{II}}$ / at$^{\mathrm{III}}$ / a$^{\mathrm{II}}$
shout v [8]	*ʔaw$^{\mathrm{I}}$ / *ʔaw$^{\mathrm{III}}$ (< *ʔaw$^{\mathrm{I}}$-s) / *ʔεw$^{\mathrm{III}}$-s	aw$^{\mathrm{I}}$ / aw$^{\mathrm{III}}$ / εwʔ	ʔaw$^{\mathrm{I}}$ / ʔaw$^{\mathrm{III}}$ / ʔεwʔ	aw$^{\mathrm{I}}$ / ew$^{\mathrm{I}}$ / aw$^{\mathrm{III}}$ / ew$^{\mathrm{III}}$	aw$^{\mathrm{I}}$ / aw$^{\mathrm{III}}$		aw$^{\mathrm{I}}$ / aw$^{\mathrm{III}}$
eat vt	*ʔεj$^{\mathrm{I}}$ / *ʔεj$^{\mathrm{III}}$ (< *ʔεj$^{\mathrm{I}}$-s)	εj$^{\mathrm{I}}$ / εj$^{\mathrm{III}}$	ʔεj$^{\mathrm{I}}$ / ʔi$^{\mathrm{I}}$ / ʔεj$^{\mathrm{III}}$ / ʔi$^{\mathrm{III}}$				
chop vt [9]	*ʔεk / *ʔεk-s	εk / εʔ	ʔεk / ʔεʔ	εʔ / e$^{\mathrm{III}}$	εʔ / e$^{\mathrm{III}}$	εk / εʔ	εk / e$^{\mathrm{III}}$
counter v [10]	*ʔεl$^{\mathrm{II}}$ / *ʔεl$^{\mathrm{III}}$ (< *ʔεl$^{\mathrm{II}}$-s)	εl$^{\mathrm{II}}$ / εl$^{\mathrm{III}}$	e$^{\mathrm{IIa}}$ / e$^{\mathrm{III}}$	εl$^{\mathrm{II}}$ / εl$^{\mathrm{III}}$	εl$^{\mathrm{II}}$-	εl$^{\mathrm{II}}$ / εl$^{\mathrm{III}}$	
dry out v [11]	*ʔεm$^{\mathrm{I}}$	εm$^{\mathrm{I}}$	ʔεm$^{\mathrm{I}}$	εm$^{\mathrm{I}}$	εm$^{\mathrm{I}}$	εm$^{\mathrm{I}}$	εm$^{\mathrm{I}}$

[6] Thado tone H is due to sandhi.

[7] Mi *cut, reap* vt; Za *reap* vt; Th/Zo/Te *cut-into, notch* vt; Si *cut lengthwise* vt. Henderson (1965:146) has Tedim at$^{\mathrm{III}}$ *cut vb.*

[8] Mi aw$^{\mathrm{I}}$ ~ aw$^{\mathrm{III}}$ *shout* vi; εwʔ *shout at* vt; Za ʔaw$^{\mathrm{I}}$ ~ ʔaw$^{\mathrm{III}}$ *shout* vi, ʔεwʔ *shout at* vt; Th/Zo *noisy (as voices)* vi; Si *shout* vi.

[9] Za *pluck a banana* vt; Th/Si *chop* vt, *tear* vt; Zo *tear* vi/t.

[10] Za/Th *contradict* vt; Zo/Te *contemptuous* vi. Zo, Tedim and Sizang have εl$^{\mathrm{I}}$ ~ εl$^{\mathrm{III}}$ *clash (personality)* vi.

[11] Mi *scorch (as sun/fire)* vt; Za ʔem$^{\mathrm{I}}$ ~ ʔem$^{\mathrm{III}}$ *dry-out over fire* vt, ʔem$^{\mathrm{Ib}}$ *heat (as fire)* vt; Zo/Te/Si *roast* vt. Osburne (1975:111) has Zahau ʔem$^{\mathrm{I}}$ *dry out near fire* vi and ʔem$^{\mathrm{Ib}}$ *make dry near fire* vt.

	Proto	Mi	Za	Th	Zo	Te	Si
	*ʔɛm^{III}, *ʔɛm^{III}-s	εm^{III}	ʔɛm^{III}, ʔɛm^{IIb}		εm^{III}	εm^{III}	εm^{III}
look vt	*ʔɛn^{II}, *ʔɛn^{III} (< *ʔɛn^{II}-s), *ʔɛn^{III}-s	εn^{IIb}				εn^{II}	εn^{II}
						εt	εt
yellow, green vi[12]	*ʔɛŋ^{I}, *ʔɛn^{III} (< *ʔɛŋ^{I}-s)	εŋ^{I}, εn^{III}	ʔɛŋ^{I}, ʔɛn^{III}	εŋ^{I}, εn^{III}	εŋ^{I}, εn^{III}	εŋ^{I}, εn^{III}	εŋ^{I}, εn^{III}
defecate vt, faeces n[13]	*ʔe^{II}, *ʔek^{IIb} (< *ʔe^{II}-s)	e^{III}, ek^{IIb}	ʔek^{IIb}	eʔ^{II}	eʔ^{II}	ek^{II}	e^{II}, εak^{II}
dorsum n[14]	*ʔel^{I}	el^{I}	el^{I}		el^{I}	el^{I}	el^{I}
envy vt[15]	*ʔɛŋ^{II}, *ʔɛn^{III} (< *ʔɛŋ^{II}-s)	εŋ^{IIa}, en^{III}		εŋ^{II}, en^{III}	εŋ^{II}, en^{III}	εŋ^{II}, en^{III}	εaŋ^{II}, en^{III}
drink v[16]	*ʔɯm^{I}, *ʔɯm^{III} (< *ʔɯm^{I}-s), *ʔɯm^{III}-s	ɯm^{I}, ɯm^{III}	ʔɯm^{I}, ʔɯm^{III}, ʔɯm^{IIb}				
house n	*ʔɯn^{II}	ɯn^{IIa}	ʔɯn^{IIa}	ɯn^{II}	ɯn^{II}	ɯn^{II}	ɯn^{II}

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[12] Mi/Za/Th *yellow vi*; Zo/Te *green vi*; Si *yellow, green, blue vi*. See *ʔeŋ^{II} *envy vt*.
[13] Mi e^{III} ~ ek^{IIb} *defecate vt*, ek^{IIb} *faeces n*; Za *defecate vt, faeces n*; Th/Zo/Te *faeces n*; Si e^{II} ~ eak^{II} *defecate vt*, eak^{II} *faeces n*.
[14] Mi/Za/Si *lower-back n*
[15] Te *idolize and emulate someone vt*. See *ʔeŋ^{I} *yellow, green vi*.
[16] Mi *drink vt*; Za ʔɯm^{I} ~ ʔɯm^{III} *drink vt*, ʔɯm^{IIb} *drink vb*.

	*proto	rp	ḏɪp	ḏɪp	rp	rp	rp
bag n	*ʔip				rp	rp	rp
neck n[17]	*ʔɪr^{I} / *ʔɔr^{I}	ɪr^{I} / ɔr^{I}	ʔɪr^{I} / ʔɔr^{I}				
sleep vi	*ʔɪt / *ʔɪt-s		ʔɪt / ʔɪʔ	ɪʔ / i^{III}	ɪʔ		
retain (secret) vt[18]	*ʔim^{II} / *ʔim^{III}-s (< *ʔim^{II}-s) / *ʔim^{III}-s		im^{II} / im^{III} / rp	im^{III} / rp	im^{III} / rp	im^{III} / rp
shrug vi	*ʔiŋ^{III} / *ʔiŋ^{III}-s			iŋ^{III} / ɪʔ	iŋ^{III} / ɪʔ	iŋ^{III}	iŋ^{III} / ik
retain (urine/laughter) vt[19]	*ʔip$^{I/II}$ / *ʔip^{III} (< *ʔip$^{I/II}$-s)	ip^{IIa} / ip^{III}		ip^{II} / ip^{III}	ip^{I} / ip^{III}	ip^{I} / ip^{III}	ip^{I} / ip^{III}
easy vi[20]	*ʔɔl^{I} / *ʔɔl^{III} (< *ʔɔl^{I}-s)	ɔl^{I} / ɔl^{III}	ʔɔl^{I} / ʔɔl^{III}	ɔl^{I} / ɔl^{III}	ɔl^{I} / ɔl^{III}	ɔl^{I} / ɔl^{III}	ɔl^{I} / ɔl^{III}
exist vi	*ʔɔm^{II} / *ʔɔm^{III} (< *ʔɔm^{II}-s)	ɔm^{IIa} / ɔm^{II}	ʔɔm^{IIa} / ʔɔm^{II}	ɔm^{II} / ɔm^{III}	ɔm^{II} / ɔm^{III}	ɔm^{II} / ɔm^{III}	ɔm^{II} / ɔm^{III}

[17] Mi ɪr^{I} *throat above the sternum n,* ɔr^{I} *front of neck n;* Za ʔɪr^{I} *front of neck (animal) n,* ʔɔr^{I} *front of neck (human) n.*

[18] Th im^{II} ~ im^{III} / rp *retain (secret) vt.* See *ʔip$^{I/II}$ *retain (urine/laughter) vt.*

[19] See *ʔim^{II} *retain (secret) vt.*

[20] See *ʔɔl^{II} *unengage v.*

	look-after, serve tea vt[21]							
look-after, serve tea vt[21]	*?om^I / *?om^III / *?om^III-s	om^IIc / om^IIb	?om^IIb	om^I / om^III	om^I / om^III	om^I / om^III	dc	dc
brood vi[22]	*?op	ɔp	?ɔp	ɔp	ɔp	ɔp	dc	dc
voice n	*?o^II	o^IIb	?o^II	o^II	o^II	o^II	o^II	o^II
choke vi[23]	*?ok^I / *?ok^III (< *?ok^I-s)	ok^IIa / ok^III	?ok^I	o?^I / o?^III	o?^I	ok^I / ok^III	ok^I / ok^III	ok^I / ok^III
halter v[24]	*?ok^I / *?ok^II-s	ok^IIb / ɔ?	?ok^IIb / ?ɔ?	o?^II / o^III	o?^II / o^III	ok^II / ok^III	ok^II / ok^III	ok^II / ok^III / o^III
unengage v[25]	*?ol^II / *?ol^III (< *?ol^II-s) / *?ol^III-s	ol^IIa / ol^III	?ol^IIa / ?ol^III / ?ɔl?	ol^II / ol^III	ol^II / ol^III	ol^II / ol^III	o^II / o^III	o^II / o^III
chest n	*?om^I	om^I	?om^I	om^I	om^I	om^I	om^I	om^I
vacant v, hole n[26]	*?oŋ^II / *?on^III (< *?oŋ^II-s)	oŋ^IIb	?oŋ^IIb	oŋ^II / on^III	oŋ^II / on^III	oŋ^II / on^III	oŋ^II / on^III	oŋ^II / on^III

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[21] Mi look-after (child, elderly) vt; Za/Th/Zo/Te serve tea vt; Si look-after (child), serve tea vt. Sizang has om^II ~ om^III look after (specifically outside of house) vt.

[22] Th brood vi, chest n. Zo has op^II chest n.

[23] Mi retch vi. See *?ok^II halter v.

[24] Mi/Za/Th/Te halter vi/t; Zo/Si halter vi. See *?ok^I choke vi.

[25] Mi/Th/Zo/Te/Si unengaged vi; Za ?ol^IIa ~ ?ol^III unengaged vi, ?ɔl? unengage, relieve vt. See *?ol^I easy vi.

[26] Mi hole n, holey vi; Zahau hole n; Th vacant vi; Zo/Te/Si oŋ^II ~ on^III vacant vi; on^III ~ ɔt vacate vt. Mizo has oŋ^IIb hole n, holey vi;

	Proto						
shout v[27]	*ʔon[III]-s *ʔoŋ[III] *ʔoŋ[III]-s			ɔŋ[III] ɔʔ	ɔŋ[III] ɔʔ / ɔt	ɔŋ[III] ɔt	ɔt
cover (as fruit) vt	*ʔʊam[I] *ʔʊam[III] (<*ʔʊam[I]-s)	ʊam[I] ʊam[III]	ʔʊam[I] ʔʊam[III]			ɔt	ɔk- / ɔt̲
boast, exagerrate vt[28]	*ʔʊaŋ[I/III] *ʔʊaŋ[I/III]-s	ʊaŋ[I] ʊan[III]	ʔʊaŋ[I]	ʊoŋ[III]	ʊoŋ[III] ʊot	ʊaŋ[III] ʊat	uaŋ[III]
nurse vt[29]	*ʔʊap[II] *ʊap[II]-s-ɔ	ʊap[IIb]	ʊap[IIb]	ʊop[II] ʊoɔ	ʊop[II] ʊop[III] ʊoɔ	ʊap[I] ʊap[III]	ᵐdan daŋ[I] / dan[III]
dog n	*ʔʊj[II]	ɔj[IIa]	ʔʊj[IIa]	ɔj[II]	uj[II]	ɔj[II]	ɔj[II]
govern vt	*ʔʊk		ɔk	ɔʔ	ɔʔ	ɔk	ɔk
stuffy vi	*ʔʊl *ʔʊl[III] (<*ʔʊl[I]-s)	ɔl[I]		ɔl[I] ɔl[III]	ɔl[I] ɔl[III]	ɔl[I] ɔl[III]	ɔl[I] ɔl[III]
cover (to ferment) vt	*ʔʊm[I] *ʔʊm[III] (<*ʔʊm[I]-s)	ɔm[I] ɔm[III]			ɔm[I] ɔm[III]	ɔm[I] ɔm[III]	ɔm[I] ɔm[III]

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[27] Th/Zo/Te shout vi, shout at vt; Si shout at vt.

[28] Mi/Za boast vt; Th exaggerate vt.

[29] Mi/Za nurse baby, attend (funeral) vt; Zo attend, console vt; Te attend vt; Si attend (funeral, wedding), console vt. Mizo has up[mb] sheltered (as a dingy room closed off to external elements) vi.

gloss							
cover vt[30]	*ʔɔp	ɔp	ʔɔp	ɔp	ɔp	ɔp	ɔp
elder sibling n	*ʔuˡ	uˡ	ʔuˡ	uˡ	uˡ	uˡ	uˡ
gourd n	*ʔumˡ	umˡ	ʔumˡ	umˡ	umˡ	umˡ	umˡ
surround vt	*ʔumˡˡ *ʔumˡˡˡ (>*ʔumˡˡ-s)			umˡˡ umˡˡˡ	umˡˡ umˡˡˡ	umˡˡ umˡˡˡ	umˡˡ umˡˡˡ

[30] Mi/Za cover a pot vt; Th/Zo put vegetables on hot rice vt; Si return strained rice to the stove vt

*b-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
easy vi	*bəj^{III}-s			bəj^{III}	bej^{III}	bəj?	bəj^{III}
owe vt[31]	*ba^{I} / *bet (<*ba^{I}-s)	ba^{I} / bet		ba^{I} / bet	ba^{I} / bet	ba^{I} / bet	ba^{I} / bet
[*lame vi*][32]	*bəj$^{I/II}$ / *bəj^{III} (<*bəj^{I}-s)	bəj^{IIa} / bəj^{III}	bəj^{IIa} / bəj^{III}	bəj^{I} / bəj^{III} / bej^{III}	bəj^{I} / vaj^{I} / bəj^{III} / vaj^{III}	bəj^{I} / bəj^{III}	bəj^{I} / bəj^{III}
[*bat n*]	*bak^{II}	bak^{IIa}		ba?^{II}	ba?^{II}	bak^{II}	bak^{II}
dirty vi, dirt n[33]	*bal^{III} / *bal^{III}-s	bal^{III} / bel?	bal^{III} / bel?	bal^{III}	bal^{III}	bal^{III} / bel?	bal^{III} / bal^{III}
arm n[34]	*ban^{I}	ban^{I}	ban^{I}	ban^{I}	ban^{I}	ban^{I}	ban^{I}
reach for vt[35]	*ban^{III} / *ban^{III}-s	ban^{III} / ben^{IIb}		ban^{III} / bet	ban^{III} / bet	ban^{III} / bet	
stop v[36]	*bəj^{I}	bəj^{I}	bəj^{I}	bəj^{I}	bəj^{I}	bəj^{I}	bəj^{I}

[31] Mizo has bak^{IIb} *pending vi, arrears n* and Zahau bak^{IIb} *owe vi*.
[32] Mizo and Zahau have pəj^{II} ~ pəj^{III} *stagger vi*.
[33] Mi/Th/Te/Si *dirty vi*; Za bal^{III} *dirt n*, bal^{III} ~ bel? *dirty vi*; Zo *dirt n*.
[34] Te *upper-arm n*. Tedim and Sizang have *ben^{I} ~ *ben^{III} *take a shortcut vt*. See *ban^{II} *reach for vt*.
[35] Mi *reach-for vt, arrive vi*. See *ban^{I} *arm n*.

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	Proto	Mi	Za	Th	Zo	Si	Te
remain vi[36][37]	*ban^{III} (< *baŋ^{I}-s); *baŋ^{II} ~ *ban^{III} (< *baŋ^{II}-s)	ban^{III}; baŋ^{IIa} ~ ban^{III}	ban^{III}	ban^{III}	ban^{III}	ban^{III}; baŋ^{II}	ban^{III}; -baŋ^{H}
gorge v[38]	*bar^{I}; *bar^{III} (< *bar^{I}-s); *bar^{III}-s	bar^{I}; bar^{III}; ber^{ʔ}	bar^{I}; bar^{III}; ber^{ʔ}	ba^{ʔ}; be^{ʔ}	ba^{I}; ba^{III}	bak^{I}; bak^{III}; ʔa^{ʔ}	bak^{I}; bak^{III}
use up v[39]	*bɛʔ^{I}; *bɛʔ^{III} (< *bɛʔ^{I}-s)	bɛʔ^{I}		bɛʔ^{I}; bɛʔ^{III}	bɛʔ^{I}; bɛʔ^{III}		bɛʔ^{I}; bɛʔ^{III}
do thoroughly vt	*bɛl^{II}; *bɛl^{III} (< *bɛl^{II}-s)	bɛl^{II}; bɛl^{III}			bɛl^{II}; bɛl^{III}	bɛl^{II}; bɛl^{III}	bɛl^{II}; bɛl^{III}
ear n[40]	*bɛŋ^{I}	bɛŋ^{I}	bɛŋ^{I}			bɛŋ^{I}	
shoo vt[41]	*bɛŋ^{II}; *bɛn^{III} (< *bɛŋ^{II}-s)	bɛŋ^{II}; bɛn^{III}		bɛŋ^{II}; bɛn^{III}		bɛŋ^{II}; bɛn^{III}	bɛŋ^{II}; bɛn^{III}
bean n	*be^{II}	be^{IIb}	be^{IIb}	be^{II}	be^{II}	be^{II}	be^{II}

[36] Mi stop, hang-up vt; Za stop vt; Th/Zo/Te hang-up vt, stopover, get caught on vi; Si stopover vi.

[37] Si exempt vi. Sizang tone H is due to sandhi.

[38] Mi bar^{ʔ} ~ bar^{III} put food in own mouth vt; ber^{ʔ} put food in guest's mouth vt; Za bar^{I} ~ bar^{III} put food in own mouth vt, bar^{III} feed child (as mother) vt, ber^{ʔ} put food in guest's mouth vt; Th ba^{ʔ} ~ be^{ʔ} put food in own mouth vt, be^{ʔ} put food in guest's mouth vb; Zo ba^{I} ~ ba^{III} put food in own mouth vt, ba^{III} put food in guest's mouth vb; Si bak^{I} ~ bak^{III} put food in own mouth vt, bak^{III} put food in guest's mouth vb; Te bak^{I} ~ bak^{III} put food in own mouth vt; bak^{III} ~ be^{ʔ} put food in guest's mouth vb, ba^{III} put food in guest's mouth vb.

[39] Th used up vi; Zo finished (as time) vi; Te be^{ʔI} ~ be^{ʔIII} used up vi, be^{ʔIII} use up vt.

[40] Za ear-wax n.

[41] Th/Te herd by slapping, scare-off vt; Si scare off vt. Mizo has beŋ^{IIb} press with hands vt.

The following is a comparative lexical table (rotated 90° on the page). Tone categories are marked as superscripts ^{I}, ^{II}, ^{III}, ^{IIb}.

gloss	reconstruction						
pot n	*bel^{I}	bel^{I}	bel^{I}	bel^{I}	bel^{I}	bel^{I}	bɛal^{I}
seek refuge vt	*bel^{III} / *bel^{III}-s	bel^{III} / bɛlʔ		bel^{III} / bɛl^{III}	bel^{III} / bɛl^{III}	bel^{III} / bɛlʔ	bɛal^{III} / bɛl^{III}
stick vt [42]	*bɛl^{IIb}-s	bɛl^{IIb}	bɛlʔ	bɛl^{III}	bɛl^{III}	bɛlʔ	bɛl^{III}
circular vi, basket n [43]	*bem^{II} / *bem^{III} (<*bem^{II}-s)	bem^{II} / bem^{III}	bem^{III}	bem^{II} / bem^{III}	bem^{II} / bem^{III}	bem^{II} / bem^{III}	bɛam^{II} / bɛam^{III}
clap, slap vt	*beŋ^{III} / *beŋ^{III}-s	beŋ^{I} / beŋ^{III} / bɛɲ^{IIb}	beŋ^{III} / bɛɲ^{IIb}	beŋ^{III} / bɛʔ	beŋ^{III} / bɛʔ	beŋ^{III} / bɛt	bɛaŋ^{III} / bɛk / bɛt
converse, propitiate v [44]	*bɹa^{III} (<*bɹas) / *bɹak^{IIb} (<*bɹa^{II}-s)	bɹa^{III} / bɹak^{IIb}	bɹa^{IIb} / bɹak^{IIb}	beɹ^{III} / beɹʔ^{II}	bie^{III} / bieʔ^{II}	bɹa^{III} / bɹak^{IIb}	bie^{III} / biek^{IIb}
circular vi [45]	*bɹaɪ^{I} / *bɹaɪ^{III} (<*bɹaɪ^{I}-s)	bɹaɪ^{I} / bɹaɪ^{III}	bɹaɪ^{I} / bɹaɪ^{III}			-bɹaɪ^{I} / -bɹaɪ^{III}	
cheek n	*bɹaɲ^{I}	bɹaɲ^{I}	bɹaɲ^{I}	beɪɲ^{I}	bieɲ^{I}	bɹaɲ^{I}	bieɲ^{I}
ear n [46]	*bɪl^{II}	bɪl^{II}		bɪl^{II}	bɪl^{II}	bɪl^{II}	bɪl^{II}

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[42] Mi *daub, make wear vt*; Za *patch, add more vt*.
[43] Mi *small basket for carrying seeds n*; Th/Zo/Te bem^{II} ~ bem^{III} *circular vi*; bem^{III} *large cylindrical storage basket for rice n*. Si beam^{II} ~ beam^{III} *circular vi*, beam^{II} *large cylindrical storage basket for rice n*.
[44] Mi/Za *converse vi/t*; Th/Zo/Te/Si *propitiate vi/t*.
[45] Za *rounded (as edges) vi*; Te *sit on floor/cushion* (after *sit vt* in compounds presumably referring to being cross-legged).
[46] Th *outer-ear n*.

blunt vi[47]	*bɪl^II *bɪl^III (<*bɪl^II-s)	bɪl^IIa bɪl^III	bɪl^III		bɔl^II bɔl^III	bɪl^III	bɪl^III
prostrate vi	*bɔk *bɔk-s	bɔk bɔʔ	bɔk bɔʔ	bɔʔ	bɔʔ bo^III	bɔk bɔʔ	bɔk bo^III
pluck vt	*bɔt *bɔt-s	pɔt pɔʔ	bɔt bɔʔ	bɔt bo^III	bɔt bo^III	bɔt bɔʔ	bɔt bo^III
swell vi	*bɔw^II *bɔw^III (<*bɔw^II-s)		bɔw^II bɔw^III	bɔw^II bɔw^III	bɔw^II bɔw^III	bɔw^II bɔw^III	bɔw^II bɔw^III
sperm n	*bo^II	bo^IIb	bɔa^II	bo^II	bo^II	bo^II	bo^II
coup, back-basket n[48]	*bom^I/II	bom^I	bom^I	bom^II	bom^I / bom^II	bom^I / bom^II	bom^I
swarm vt[49]	*bom^III *bom^III-s	bom^III bom^IIb	bom^IIb	bom^III bɔp	bom^III bɔp	bom^III bɔp	bom^III bɔp
`ox n`	*boŋ^I	boŋ^IIb		boŋ^I	boŋ^I	boŋ^I	boŋ^I
swarm, bulge v[50]	*bor^I	bor^I	bor^I	bɔʔ^I	bɔʔ^I	bok^I	bok^I

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[47] Te/Si *stunted vi*. Laizo has bol^III *blunt vi*, Mizo has bul^III ~ bɔlʔ *lopped off vi* and Sizang has bɔl^I- *blunt vi*.

[48] Mi *cage, coup n*; Za/Si *back-basket n*; Th *back-basket, coup n*; Zo bom^I *coup n*, bom^II *back-basket n*; Te bom^I *back-basket n*, bom^II *small shoulder-basket n*. Tedim has bom^II *bunch n*; Sizang has bom^II *small waist-basket, bunch n*.

[49] Za *hold to bosom vt*. Mizo has bɔp *hind-leg n*; Zahau has bom^I *swarm vt*.

[50] Mi bor^I ~ bor^III *swarm vi*, bɔrʔ *swarm vi*; Za *swarm vi*; Th/Si *bulge vi*; Te bok^I ~ bok^III *bulge vi*, bok^III *swarm vt*.

gloss							
wallow vi/n[51]	*bɔr^{III} (< *bɔr^{I}-s) / *bɔr^{III}-s	bɔr^{III} / bɔrʔ	bɔr^{III}	bɔʔ	bɔr^{III}	bok^{III}	bok^{III}
bamboo-rat n	*bɔal^{I} / *bɔal^{III} (< *bɔal^{I}-s)	bɔal^{I} / bɔal^{III}	bɔal^{I} / bɔal^{III}	bɔɔl^{I} / bɔɔl^{III}	bɔɔl^{I} / bɔɔl^{III}	bɔal^{I} / bɔal^{III}	buəl^{I} / buəl^{III}
base n	*bɔj^{I}	bɔj^{I}	-bɔj^{I}	bɔj^{I}	buj^{I}	bɔj^{I}	bɔj^{I}
put on (hand/foot) vt	*bɔl^{I} / *bol^{III}-s	bɔl^{IIa}	bɔl^{IIa}	bɔl^{II}	bɔl^{II}	bɔl^{II}	bɔl^{II}
affix vt[52]	*bon^{III} / *bon^{III}-s	bon^{IIb}	bon^{III}		bon^{III}	bɔlʔ	bon^{III} / bɔt
container n[53]	*bɔŋ$^{I/II}$	bɔŋ^{III}	bɔŋ^{III}-	bɔŋ^{I}	bɔŋ^{I}	bɔŋ^{I}	bɔŋ^{I} / bɔŋ^{II}
rice (cooked) n	*bos	bɔʔ	bɔʔ	bu^{III}	bu^{III}	bɔʔ	
nest n	*bu^{II}	bu^{IIb}	bu^{IIb}	bu^{II}	bu^{II}	bu^{II}	bu^{II}
hide vi	*bu^{III} (< *bus) / *bok (< *bu^{III}-s)				ḇu^{I} / bɔt	bu^{III} / bok	bu^{III} / bok

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[51] Mi/Te bɔal^{I} ~ bɔal^{III} wallow vi, bɔal^{III} wallow n; Za wash body vt; Th bɔɔl^{I} ~ bɔɔl^{III} wallow vi, bɔɔl^{III} wallow n; Zo bɔɔl^{I} ~ bɔɔl^{III} wallow vi, bɔɔl^{III} wallow n; Si buel^{I} ~ buel^{III} wallow vi, buel^{III} wallow n.

[52] Mi put on (non-garments), affix vt; Zo/Si put on (non-garments) vt.

[53] Si bɔŋ^{I} container n, bɔŋ^{III} counter for containers n. Laizo has bɔŋ^{III} container n, Mizo has bɔŋ^{IIb} sacrificial container n.

hut n[54]   *buk$^{\text{II}}$ buk$^{\text{IIb}}$ / bok$^{\text{IIb}}$ buk$^{\text{IIb}}$ bu?$^{\text{II}}$ bu?$^{\text{II}}$ buk$^{\text{II}}$ buk$^{\text{II}}$

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[54] Mi buk$^{\text{IIb}}$ *hut* n, bok$^{\text{IIb}}$ *temporary residence n.*

*d-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
shallow vi[55]	*dəɟ$^{I/II}$, *dəɟ^{III} (*daɟ^{I}-s)				daɟ$^{I/II}$, dəɟ^{III}	dəɟ$^{I/II}$, dəɟ^{III}	dəɟ$^{I/II}$
sheet n[56]	*dəl^{II}	dəl^{IIa}			del^{II}	del^{II}	del^{II}
heal v[57]	*dəm^{I}, *dəm^{III} (< *dəm^{I}-s), *dəm^{II}-s	dəm^{I}, dəm^{III}	dəm^{I}, dəm^{II}, dəm^{IIb}	dəm^{I}, dəm^{III}	dəm^{I}, dəm^{III}	dəm^{I}, dəm^{III}	dəm^{I}, dəm^{III}
palate n	*daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}
cold (weather) vi[58]	*dap		dap	dap	dap		dap
scatter vt[59]	*dər^{II}-s	dər?	dər?				
addle vi	*dəs	da?	də?	da^{III}	da^{III}	də?	da^{III}
fence, hedge n	*daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}	daɟ^{I}

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[55] Zo/Te dəɟ^{I} ~ dəɟ^{III} shallow (as vessel) vi, dəɟ^{II} ~ dəɟ^{III} shallow vi; Si dəɟ^{I} shallow (as vessel) vi, dəɟ^{II} ~ dəɟ^{III} shallow vi.

[56] Mi membrane n.

[57] Mi/Th/Zo/Te/Si heal vi; Za dəm^{I} ~ dəm^{III} heal vi, dəm^{IIb} heal vt.

[58] Zo deathly silent vi.

[59] Mi scatter vi, Za scatter vi/t.

	*Proto						
dew n	$*daj^{I}$	$\underline{daj^{III}}$	$\underline{daj^{IIb}}$	daj^{I}	daj^{I}	daj^{I}	daj^{I}
quiet, cool vi[60]	$*daj^{III}$ $*daj^{III}\text{-s}$	daj^{III} $daj?$	daj^{III} $daj?$	daj^{III} daj^{III}	daj^{III} daj^{III}	daj^{III} $daj?$	daj^{III} daj^{III}
dam vt/n[61]	$*dal^{II}$ $*dal^{III}$ ($< *dal^{II}\text{-s}$)	dal^{IIa}/dol^{IIa} dal^{III}/dol^{III}	dal^{IIa}/dol^{IIa} dol^{III}	dal^{II} dal^{III}	dal^{II} dal^{III}/dol^{III}	dal^{II} dal^{III}/dol^{III}	dal^{II} dal^{III}/dol^{III}
shaded vi[62]	$*dam^{III}$ $*dam^{III}\text{-s}$	dam^{III}	dam^{III}	dam^{III}	dam^{III}	dam^{III} $dəp$	
method n	$*dan^{III}$	dan^{III}	dan^{III}	dan^{III}	dan^{III}	dan^{III}	dan^{III}
different v[63]	$*deɲ^{II}$ $*den^{III}$ ($< *deɲ^{II}\text{-s}$) $*den^{II}\text{-s}$	$deɲ^{IIa}$ den^{II}	$deɲ^{IIa}$ den^{III}	$deɲ^{II}$ den^{III} $dət$	$deɲ^{II}$ den^{III} $dət$	$deɲ^{II}$ den^{III} $(dət)$	$deɲ^{II}$ den^{III} $dət$
segregate vt	$*dɛj^{II}$ $*dɛj^{III}$ ($< *dɛj^{II}\text{-s}$)	$dɛj^{II}$			$dɛj^{II}$ $dɛj^{III}$	$dɛj^{II}$ $dɛj^{III}$	doj^{II} doj^{III}
compete vt	$*dɛm^{II}$ $*dɛm^{III}$ ($< *dɛm^{II}\text{-s}$)			$dɛm^{II}$ $dɛm^{III}$	$dɛm^{II}$ $dɛm^{III}$	$dɛm^{II}$ $dɛm^{III}$	$dɛm^{II}$ $dɛm^{III}$

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[60] Te/Zo *quiet* vi.

[61] Mi $dal^{IIa} \sim dal^{III}$ *defend* vt, $dol^{IIa} \sim dol^{III}$ *dam* vt, dol^{III} *dam* n; Za dal^{IIa} *defend* vt, $dol^{IIa} \sim dol^{III}$ *dam* vt, dol^{III} *dam* n; Th *defend* vt; Zo/Te $dal^{II} \sim dal^{III}$ *defend* vt, dol^{III} *storey, layer* n; Si $dal^{II} \sim dal^{III}$ *defend* vt, dal^{III} *fence* n, dol^{III} *storey, layer* n. Mizo has dol^{III} *follow in succession* vi; Sizang $dol^{III} \sim dol^{III}$ *layer* vt.

[62] Th/Zo *secluded place in forest* n.

[63] Mi *different* vi; Th/Te/Si $deɲ^{II} \sim *den^{II}$ *different* vi, $den^{III} \sim *den^{III}$ *different* vi, $den^{III} \sim *dət$ *discriminate against* vt; Zo $*deɲ^{II} \sim *den^{III}$ *different* vi, $den^{III} \sim *dət$ *partition a room* vt.

crack a flea, sting vt[64]	*dɛs	dɛʔ	dɛʔ	de^{III}	de^{III}	dɛʔ	de^{III}
light a wick vt[65]	*de^{I} *dɛt (< *de^{I}-s)	de^{IIa} det^{IIb}	de^{I} dɛt	de^{I} dɛt	de^{I} dɛt	de^{I} dɛt	de^{I} dɛt
throw v[66]	*deɲ^{I} *den^{III} (< *deɲ^{I}-s) *dɛn^{III}-s	deɲ^{I} den^{III} dɛn^{IIb}	deɲ^{I} den^{III} dɛn^{IIb}	deɲ^{I} den^{III}	deɲ^{I} den^{III}	deɲ^{I} den^{III}	dɛaŋ^{I} den^{III}
overshadow vt	*dep^{II} *dep^{I}-s			<u>dep^{I}</u> dep^{III}	dep^{II} dep^{III}	dep^{II} dep^{III}	dɛap^{II} dɛap^{III}
correct, true vi[67]	*dɨk	dɨk / <u>dɨɲ^{IIb}</u>	dɨk / <u>dɨɲ^{IIb}</u>	dɨʔ	dɨʔ	dɨk	dɨk
full v[68]	*dɨm^{II} *dɨm^{III} (< *dɨm^{II}-s) *dɨm^{III}-s			dɨm^{II} dɨm^{III} dɨp	dɨm^{II} dɨm^{III} dɨp	dɨm^{II} dɨm^{III} dɨp	dɨm^{II} dɨm^{III} dɨp
stand v[69]	*dɨɲ^{I} *dɨm^{III} (< *dɨɲ^{I}-s) *dɨm^{III}-s	dɨɲ^{I} dɨm^{III} dɨm^{IIb}	dɨɲ^{I} dɨm^{III} dɨm^{IIb}	dɨɲ^{I} dɨm^{III}	dɨɲ^{I} dɨm^{III}	dɨɲ^{I} dɨm^{III}	dɨɲ^{I} dɨm^{III}
lake n[70]	*dil^{II}	dil^{II}	dil^{II}	dil^{II}	de^{III}	dɛʔ	-dil^{H}

[64] Mi/Za crack a flea vt; Th/Zo/Te/Si crack a flea, sting vt.
[65] Mi/Za twinkle vi.
[66] Mi deɲ^{I} ~ *den^{III} / *den^{IIb} throw vt; Za deɲ^{I} ~ den^{III} throw vt, den^{IIb} throw to vb; Th/Zo strike over arm with stick vt; Te/Si throw vt.
[67] Mi/Za dɨk correct, true vi, dɨɲ^{IIb} straight vi.
[68] Th/Zo/Si dɨm^{I} ~ dɨm^{III} full vi, dɨm^{III} ~ *dɨp full vt.
[69] Mi/Za dɨɲ^{I} ~ dɨm^{III} stand-up vi, dɨm^{IIb} establish vt; Th/Zo/Te/Si stand-up vi.

solar-plexus n[71]	$*dip^{II}$, $*dip^{II}\text{-s}$	—	dip^{II}, dip^{III}	dip^{II}	dip^{II}	dip^{II} -
shave vt[72]	$*dit^{II}$, $*dit^{II}\text{-s}$	dit^{IIb}, diʔ		dit^{II}, dit^{III}	dit^{II}, dit^{III}	dit^{II}, dit^{III} / di^{III}
slip/pull out v[73]	$*dɔk$, $*dɔk\text{-s}$	dɔk, dɔʔ	dɔk, dɔʔ	dɔʔ, do^{III}	dɔk, dɔʔ	dɔk
gulp v	$*dɔl^{III}\text{-s}$	dɔlʔ	dɔlʔ			
support vt[74]	$*dɔm^{II}$, $*dɔm^{III}$ ($<*dɔm^{II}\text{-s}$), $*dɔm^{II}\text{-s}$	$dɔm^{IIb}$	$dɔm^{II}$, $dɔm^{III}$, dɔp	$dɔm^{II}$, dɔp	$dɔm^{II}$, $dɔm^{III}$	$dɔm^{II}$, $dɔm^{III}$
solicit, intercept vt[75]	$*dɔŋ^{I}$, $*dɔn^{III}$ ($<*dɔŋ^{I}\text{-s}$)	$dɔŋ^{I}$, $dɔn^{III}$	$dɔŋ^{I}$, $dɔn^{III}$	$dɔŋ^{I}$, $dɔn^{III}$	$dɔŋ^{I}$, $dɔn^{III}$	$dɔŋ^{I}$, $dɔn^{III}$
hinder vt[76]	$*dɔŋ^{II}$, $*dɔn^{III}$ ($<*dɔŋ^{II}\text{-s}$)	$dɔŋ^{IIa}$, $dɛn^{III}$		$dɔŋ^{II}$, $dɔn^{III}$	$dɔŋ^{II}$, $dɔn^{III}$	$dɔŋ^{II}$, $dɔn^{III}$

[70] Te/Si *name of a village near a lake* n. Sizang tone H is due to sandhi.
[71] Th *inhale deeply* vi; Si *regurgitate* vt.
[72] Mi *bite, gnaw with front teeth* vt.
[73] Mi *slip out, stretch* vi; Za *leak* vi; Zo/Te *pull out* vi; Si *protude* vi.
[74] Mi/Za $dɔm^{IIb}$ *support below* vt; Th $dɔm^{II} \sim dɔm^{III}$ / dɔp *lift* vt; Zo $dɔm^{II} \sim dɔp$ *support below* vt. Mizo has $dɔm^{II} \sim dɔm^{III}$ *hold onto/up* vt.
[75] Mi/Za *catch, intercept* vt, Te *solicit donation, catch, intercept* vt. See $*dɔŋ^{II}$ *ask* vt.
[76] Th/Zo *hinder* vi.

gloss						
ask vt[77]	*dɔŋ[III]		dɔŋ[III]	dɔŋ[III]	dɔŋ[III]	dɔŋ[III]
	*dɔŋ[III]-s		dɔʔ	dɔʔ / dɔt	dɔt	dɔk / dɔt
fight vt	*dɔw[I]	dɔw[I]	dɔw[I]	dɔw[I]	dɔw[I]	dɔw[I]
	*dɔw[III] (< *dɔw[I]-s)	dɔw[III]	dɔw[III]	dɔw[III]	dɔw[III]	dɔw[III]
spirit n[78]	*dɔj[III]	dɔj[III]	dɔj[III]	dɔj[III]	dɔj[III]	dɔaj[III]
protrude vi[79]	*dok[II]	dok[IIb]		dɔʔ[II]	dok[II]	dok[II]
	*dok[II]-s	dɔʔ		do[III]	dok[III]	dok[III] / do[III]
handle carefully vt	*dom[III]		dom[III]	dom[III]	dom[III]	dom[III]
	*dom[III]-s		dɔp	dɔp	dɔp	dɔp
drink vt[80]	*don[I]	dutᴵ / dotᴵ	don[I]	don[I]	don[I]	don[I]
	*don[III] (< *don[I]-s)	dutᴵᴵᴵ / dotᴵᴵᴵ	don[III]	don[III]	don[III]	don[III]
unburden, go to meet vt	*don[II]		don[II]	don[II]	don[II]	don[II]
	*don[III] (< *don[II]-s)		don[III]	don[III]	don[III]	don[III]
reply vt[81]	*dɔŋ[I]		dɔŋ[I]	dɔŋ[I]	dɔŋ[I]	dɔŋ[I]
	*don[III] (< *dɔŋ[I]-s)		don[III]	don[III]	don[III]	

[77] See *dɔŋ[I] solicit, intercept vt.
[78] Mi witchcraft n, perform witchcraft vi; Za magic n. Note: Si dɔaj[I] ~ dɔaj[III] give trouble (indirectly) vt.
[79] Mi slip off vi; Si pull out vi. Tedim has dok[I] jut out of line vi and Sizang dok[I] protrude vi.
[80] Mi dot[I] tube n, dut[I] / dot[I] ~ dut[III] / dot[III] / dot[III] drink vt. Teizang has dut[I] ~ dut[II] drink vt. Lorrain (1940:108) lists a Mizo song word don drink vt.
[81] Si second verse of song sung in response to first verse n.

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pierce vt	$*dot^{II}$ $*dot^{III}$ (< $*dot^{II}$-s)	dot^{IIb} dɔʔ	dot^{II} dot^{III}	dot^{II} dot^{III}	dot^{II} dot^{III}	dot^{II} dot^{III} / do^{II}
black v[82]	$*dom^{I}$ $*dom^{III}$ (< $*dom^{I}$-s) $*dom^{IIb}$	dom^{I} dom^{III} dom^{IIb}	dom^{I} dom^{III} dɔp	dom^{I} dom^{III} dɔp	dom^{I} dom^{III} dɔp	dɔp
length n[83]	$*doŋ^{I}$	$doŋ^{I}$	$doŋ^{I}$	$doŋ^{I}$	$doŋ^{I}$	$doŋ^{I}$
want vt[84]	$*dʊs$	dɔʔ	du^{III}	du^{II}	dɔʔ	du^{III}
pool n/vi[85]	$*dum^{II}$ $*dum^{III}$ (< $*dum^{II}$-s)	dum^{IIa} dum^{III}	dum^{II}			

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[82] Mi/Za dom^{I} ~ dom^{III} *black vi*, dom^{IIb} *blacken vt*; Th/Te dom^{I} ~ dom^{III} *blue, green vi*, dɔp *blacken (as sky/bruise) vi*; Zo dom^{I} ~ dom^{III} *black vi*, dɔp *blacken (as sky/bruise) vi*; Si *blacken (as sky/bruise) vi*. Zahau has dɔp *dull (colour) vi.*

[83] Mizo has $doŋ^{IIb}$ *mountain range n.*

[84] Za *to love familially vt*, Th/Zo/Te/Si *crave food vt.*

[85] Mi dum^{IIa} *pool in stream n*, dum^{IIa} ~ dum^{III} *gather (as stream water) vi*; Th *nook n, gather (as stream water) vi.*

*ʤz-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
rice (grain) n	*ʤreŋ^{II}	feŋ^{IIa}	feŋ^{IIa}	tʃeŋ^{II}	teŋ^{II}	teŋ^{II}	teŋ^{II}
axe-head n	*ʤreŋ^{II}	feŋ^{IIa}	feŋ^{IIa}	tʃeŋ^{II}	teŋ^{II}	teŋ^{II}	teŋ^{II}
pine n	*ʤar^{I}	far^{I}	far^{I}	tʃaʔ^{I}	ta^{I}	tak^{I}	tak^{I}
drip n/vi[86]	*ʤrer^{I} *ʤrer^{III} (< *ʤrer^{II}-s)	fer^{I} fer^{III}	fɔr^{I} fɔr^{III}		ta^{I} ta^{III}	tak^{I} tak^{III}	tak^{I} tak^{III}
feed vi[87]	*ʤres	feʔ	feʔ		ta^{III}	teʔ	
offspring n	*ʤa^{II}	fa^{IIb}	fa^{IIb}	tʃa^{II}	ta^{II}	ta^{II}	ta^{II}
clean v[88]	*ʤaj^{II} *ʤaj^{III} (< *ʤaj^{II}-s) *ʤaj^{III}-s	faj^{IIa} faj^{III}	faj^{IIa} faj^{III} fejʔ	tʃaj^{II} tʃaj^{III} / tʃej^{III}	taj^{II} taj^{III} tej^{III}	taj^{II} taj^{III} tejʔ	taj^{II} taj^{III}
stretch, spacious vi[89]	*ʤan^{I} *ʤan^{III} (< *ʤan^{I}-s)	fan^{I} fan^{III}			tan^{III}-	tan^{III}-	tan^{III}-

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86 Mi fer^{I} drip n, fer^{I} ~ fer^{III} drip vi; Za fɔr^{I} drip n, fɔr^{I} ~ fɔr^{III} drip vi; Zo/Te drip vi; Si drop vi.

87 Mi/Za feed with mouth vt; Zo feed old/ill person vt; Te feed into mouth by hand vt. Tedim from Bhaskararao (1996:90).

88 Mi clean vi; Za faj^{IIa} ~ faj^{III} clean vi, fejʔ clean vt; Th/Si husked vi; Zo taj^{II} ~ taj^{III} husked vi, tejʔ sweep away (as water does) vt; Te taj^{II} ~ taj^{III} husked vi, tej^{III} sweep away (as water does) vt, plane wood vt.

89 Mi stretch vi/t; Te/Zo/Si spacious vi.

gloss	reconstruction						
rice n[90]	*dʑaŋ^{I}	faŋ^{I}	faŋ^{I}	tʃaŋ^{I}	taŋ^{I}	taŋ^{I}	taŋ^{I}
spear n	*dʑɛj^{II}	fɛj^{IIa}	fɛj^{IIa}		tɛj^{II}	tɛj^{II}	tɛj^{II}
certain vi, understand vt[91]	*dʑɛl^{II} / *dʑɛl^{III} (< *dʑɛl^{II}-s)	fɛl^{IIa} / fɛl^{III}	fɛl^{IIa} / fɛl^{III}		tɛl^{II} / tɛl^{III}	tɛl^{II} / tɛl^{III}	tɛl^{II} / tɛl^{III}
put on (lower body) vt[92]	*dʑeŋ^{I} / *dʑen^{III} (< *dʑeŋ^{I}-s)	feŋ^{I} / fen^{III}	-fen^{III}	tʃeŋ^{I} / tʃen^{III}	teŋ^{I} / ten^{III}	teŋ^{I} / ten^{III}	teaŋ^{I} / ten^{III}
fringe n[93]	*dʑep^{I}	fem^{I} / fep^{I}	fem^{I}	tʃep^{I}	tep^{I}	tep^{I}	tɛap^{I}
play, joke vi[94]	*dʑram^{I} / *dʑram^{III} (< *dʑram^{I}-s)	fram^{I}		tʃerm^{I} / tʃep	tʃem^{III}-	tʃam^{III}-	tʃɛm^{I}-
go, return vi[95]	*dʑra(p/t/k)-s[96]	fɛʔ	fɛʔ	tʃer^{III}		tʃaʔ	tʃiɛ^{III}
wise vi[97]	*dʑiŋ^{III} / *dʑiŋ^{III}-s	fɪŋ^{III} / fɪm^{IIb}		tʃɪŋ^{III} / tʃɪʔ	tʃɪŋ^{III} / tʃɪʔ / tʃɪt	tʃɪŋ^{III} / tʃɪt	tʃɪŋ^{III} / tʃɪk
clever, clear vi[98]	*dʑim^{I}	fɪm^{I}	fɪm^{I}	tʃɪm^{I}	tʃɪm^{I}	tʃɪm^{I}	tʃɪm^{I}

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90 Te millet n.
91 Mi/Za certain, righteous vi; Zo/Te/Si understand vt.
92 Za child's skirt n.
93 Mi fep^{l} long feathers near bird's tail n.
94 Mi/Th play vi; Zo/Te/Si joke vi.
95 Mi go to fields vi; Za/Th go vi; Te/Si return vi.
96 The nature of the original coda is unclear but an original root *dʑas would have given fe^{III} in Mizo and Zahau and tʃa^{III} in Tedim.
97 Th/Zo generous vi; Si obedient vi.

*dzim[III] (< *dzim[I]-s)	fim[III]	fim[III]	ʧim[III]	ʧim[III]	ʧim[III]	ʧim[III]
gather firewood vt[99]						
*dzɔm[I]	fɔm[I]		ʧɔm[I] / ʧɔm[III] / ʧɔp	tɔm[I]	tɔm[I]	tɔm[I]
*dzɔm[III] (< *dzɔm[I]-s)	fɔm[III]			tɔm[III]	tɔm[III]	tɔm[III]
*dzɔm[III]-s						
pick up vt[100]						
*dzɔm[III]	fɔm[III]		ʧɔm[III]	tɔm[III]	tɔm[III]	tɔm[III]
*dzɔm[III]-s			ʧɔp	tɔp	tɔp	tɔp
suck vt[101]						
*dzɔp[II] / *dzep[II]	fɔp[IIb] / fep[IIb]	fɔp[IIb] / fep[IIb]	ʧɔp[II] / ʧep[II]	top[II] / tep[II]	top[II] / tep[II]	top[II] / tɛap[II]
*dzɔp[II]-s / *dzep[II]-s	fɔʔ / fɛʔ	fɔʔ / fɛʔ	ʧɔp[III] / ʧep[III]	top[III] / tep[III]	top[III] / tep[III]	top[III] / to[II] / tɛap[III] / te[III]
overlong vi						
*dzɤal[II]	fɤal[IIa]	fɤal[IIa]	ʧɤɔl[II]	tool[II]	toal[II]	tual[II]
*dzɤal[III]	fɤal[III]	fɤal[III]	ʧɤɔl[III]	tool[III]	toal[III]	tual[III]
erect vi[102]						
*dzɔk	fɔk / fɔk	fɔk	ʧɤʔ	tɔk	tɔk	tɔk
sugarcane n[103]						
*dzu[I]	fu[I]	fu[I]	ʧu[I]	-tu[I]	tu[I]	tu[I]
wrap v[104]						
*dzun[II]	fun[IIa]	fun[IIa]	ʧun[II]	tun[II]	tun[II]	tun[II]
*dzun[II] (< *dzun[II]-s)	fun[III]	fun[III]	ʧun[III]	tun[III]	tun[III]	tun[III]

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[98] Mi *clear vi*; Za *wise vi*; Th *clever vi*; Zo *clever, clear vi*; Te *obedient, intelligent vi*; Si *wise vi*.

[99] Th ʧɔm[I] ~ ʧɔm[III] / ʧɔp *gather firewood vt.*

[100] Mi *supplement n/vt.*

[101] Mi/Th/Zo/Te/Si -op[II(b)] *suck up vt*, -ep[II(b)] *suck on vt*; Zahau fɔp[IIb] ~ fɔʔ *suck up vt*. Sizang fop[IIb] ~ fɔʔ *breast-feed vt*, fep[IIb] ~ fɛʔ *suck-on vt*, fɔʔ *breast-feed vi*, fɔʔ *breast-feed vt*, fɔʔ *suck-on vt*. Sizang has dup[I] ~ dup[III] *suck out directly (e.g. from an egg) vt.*

[102] Mi fuk *erect vi*, fɔk *erect (as phallus) vi*; Za/Th/Te/Si *erect (as phallus) vi.*

[103] Zo *village name n.*

[104] Mi/Th/Zo/Te/Si *wrap vt*; Za fun[IIa] ~ fun[III] *wrap vt*, fun[IIb] *wrap vb.*

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rainy season n

*ʥunᴵᴵ-s

*ʥurᴵᴵ furᴵᴵᴵ furᴵᴵᴵ tʃʊʔᴵᴵᴵ tɤaᴵᴵᴵ tukᴵᴵᴵ tukᴵᴵᴵ

fɤnᴵᴵᵇ

*h-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
separate vt[105]	*haɪ^{I} *haɪ^{III} (> *haɪ^{II}-s)			haɪ^{I} haɪ^{III}	haɪ^{I} haɪ^{III}	heɪ^{I} haɪ^{III}	haɪ^{I} haɪ^{III}
scoop up in arms vt[106]	*ham^{I} *hem^{III} (< *hem^{I}-s)	ham^{I} ham^{III}	ham^{I} ham^{III}	ham^{I} ham^{III}	ham^{I} ham^{III}	ham^{I} hem^{III}	hom^{I} hom^{III}
gobble vt[107]	*daɪ *hap-s	daɪ	daɪ ʔaɪ	daɪ	daɪ	daɪ	daɪ
difficult vi	*her^{I} *her^{III} (< *her^{I}-s)	her^{I} her^{III}	her^{I} haɪ^{III}	haʔ^{I} haʔ	ha^{I} ha^{III}	hɛk^{I}-	hɛk^{I}-
tooth n	*ha^{I}	ha^{I}	ha^{I}	ha^{I}	ha^{I}	ha^{I}	ha^{I}
mango n	*haj^{I}	haj^{I}	haj^{I}	haj^{I}	haj^{I}	haj^{I}	haj^{I}
forget vt[108]	*haj^{I} *haj^{III} (< *haj^{I}-s) *haj^{III}-s	haj^{I} haj^{III}	haj^{I} haj^{III}	haj^{III}	haj^{III}	hajʔ	haj^{III}

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105 Th *do in intervals vt*; Si *space out vt*. The lack of Mizo and Zahau evidence means this could alternatively derive from *ʰr-.
106 Mi *claw, scratch vt*.
107 Za *scoop out vt*.
108 Tedim and Sizang have haj^{II} ~ haj^{II} *foolish vi*.

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	Reconstruction					
skin off vt [109]	*haj^{II} / *haj^{III} (< *haj^{II}-s)	haj^{IIb}	haj^{II} / haj^{III} / haj^{III}	haj^{II} / haj^{III}	hoj^{II} / hoj^{III}	hoj^{II} / hoj^{III}
cup n	*haj^{III}	haj^{III}	haj^{III}	haj^{III}	haj^{III}	haj^{III}
choke vi [110]	*hak^{II} / *hak^{II}-s	hak^{IIb}			hak^{II} / hak^{III}	hak^{II} / hak^{III} ; hak^{III} / ha^{III}
burn vt [111]	*hal^{II} / *hal^{III} (< *hal^{II}-s)	hal^{IIa} / hal^{III}	hal^{II} / hal^{III}	hal^{II} / hal^{III}	hal^{II} / hal^{III}	hal^{II} / hal^{III}
`yawn vi [112]`	*ham^{III} / *ham^{III}-s	-hem^{IIa} / hem^{IIb}	ham^{III} / hem^{IIb}		ham^{III} / hep	ham^{III} / hep
lead n [113]	*har^{III}	har^{III}	ha?^{III}	ha?^{III}	hak^{III}	hak^{III}
reprove, quarrel v [114]	*haw^{I} / *haw^{III} (< *haw^{I}-s) / *haw^{III}-s	haw^{I} / haw^{III} / haw? / haw?	how^{I} / how^{III}	haw^{I} / haw^{III}		haw^{I} / haw^{III}
mix vt [115]	*hɛl^{II} / *hɛl^{III} (< *hɛl^{II}-s)		hɛl^{II} / hɛl^{III} ; hɛl^{III} / hal^{III}	hɛl^{II} / hɛl^{III}	hɛl^{II} / hɛl^{III}	hɛl^{II} / hɛl^{III}

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109 Za *brush aside debris* vt.
110 Mi *catch breath* vi.
111 Za *thirsty* vi.
112 Za -hem^{IIa} *yawn* vi, hem^{IIb} *make someone run into one's mouth (as human-eating snake does in stories)* vt.
113 Mi *pewter, solder* n.
114 Mi haw^{I} ~ haw^{III} / hew? *reprove* vt, hew? *bespeak* vt, Zo/Si *quarrel* vi. Teizang has haw^{I} ~ haw^{III} *quarrel* vi.
115 Th *mix* vi/t. The lack of Mizo and Zahau evidence means this could alternatively derive from *^{h}r-.

revolve v[116]	*hɛr^I, *hɛr^III (<*hɛr^I-s), *hɛr^III-s	hɛr^I, hɛr^III, hɛr?	hɛr^I, hɛr^III, hɛr?	he?^I, he?^III	he?^I, he?^III	hek^I, hek^III	hɛak^I, hɛak^III
court, woo vt	*hel^II, *hel^III (<*hel^II-s)	hel^IIa, hel^III	hel^II, hel^III	hel^II, hel^III	hel^II, hel^III	hel^II, hel^III	hɛal^II, hɛal^III
move aside v[117]	*hem^I, *hem^III (<*hem^I-s), *hem^III-s	hem^I, hem^III		hem^III, hɛp	hem^III, hɛp	hem^I, hem^III, hɛp	hem^III, hɛp
hollow vi[118]	*heŋ^I, *hen^III (<*heŋ^I-s)	heŋ^I, hen^III			heŋ^I, hen^III		hɛaŋ^I / hoŋ^I, hon^III
deplete v[119]	*hew^I/II, *hew^III (<*hew^I/II-s), *hew^III-s	hew^I, hew^III	hew^II / hɛw^II, hew^III / hɛw^III	hew^II / hɛw^II, hew^III / hɛw^III, hɛw^III	he?^II, he?^III	hew^II, hew^III, hɛw?	hɛw^II, hɛw^III, hɛw^III
ferment vi[120]	*hiŋ^III, *hiŋ^III-s	hiŋ^III, hiŋ^IIb		hiŋ^III, hɪt	hiŋ^III, hɪt	hiŋ^III, hɪt	hiŋ^III, hɪk
(turn to) face, rotate v[121]	*hɔj^I	hɔj^I	hɔj^I	hɛj^I	hɛj^I	hiŋ^III, hɪt	hɛj^I

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116 Mi/Za hɛr^I ~ hɛr^I revolve vi, hɛr? revolve vt; Th twist vi/t; Zo/Te/Si twist vt.
117 Mi wobble, wag vi, whip vt; Th/Zo/Si move aside vt; Te hem^I ~ hem^III squinted (as eyes) vi, hem^III ~ hɛp move aside vt.
118 Te perforated, have tooth cavity vi; Si heaŋ^I have tooth cavity vi; hoŋ^I ~ hon^III hollow, perforated vi.
119 Th hew^II ~ hew^III deplete vi, hew^II ~ hew^III prune vt; Zo hew^II ~ hew^III deplete vi, hew^III prune vt; Te hew^II ~ hew^III deplete vi, hew? prune vt; Sizang hew^II ~ hew^III deplete vi, hew^III prune vt.
120 Mi sour vi.

(turn to face)[121]	*hɔj^{III} (< *hɔj^{I}-s); *hɔj^{III}-s	hɔj^{III}; hɔjʔ-	hɛj^{III}	hɛj^{III}	hɛj^{III}	hɛj^{III}
charcoal n, almost hot vi[122]	*hɔl^{II}; *hɔl^{III}	hɔl^{IIa}; hɔl^{III}	-hɔl^{IIa}	hɔl^{II}	hɔl^{II}	hɔl^{II}
open v[123]	*hɔŋ^{I}; *hɔn^{III} (< *hɔŋ^{I}-s); *hɔn^{III}-s	hɔŋ^{I}; hɔn^{III}	ʔɔŋ^{I}; ʔɔn^{II}	hɔŋ^{I}; hɔn^{II}	hɔŋ^{I}; hɔn^{III}; hɔt	hɔŋ^{I}; hɔn^{III}; hɔt
come vi[124]	*hɔŋ^{II}; *hɔn^{III} (< *hɔŋ^{II}-s)	hɔŋ^{IIa}; hɔn^{III}	hɔŋ^{IIa}	hɔŋ^{II}	hɯŋ^{II}-	hɔŋ^{II}-
skin vt	*hɔk^{II}; *hɔk^{II}-s	hɔk^{IIb}; hɔʔ	hɔk^{IIb}; hɔʔ	hoʔ^{II}; ho^{III}	ho?^{II}; ho^{III}	hok^{II}; hok^{III} / ho^{III}
brandish, drive, prod v[125]	*hɔl^{I}; *hɔl^{III} (< *hɔl^{I}-s); *hɔl^{III}-s	hɔl^{I}; hɔl^{III}; hɔlʔ		hɔl^{I}; hɔl^{III}; hɔlʔ	hɔl^{I}; hɔl^{III}; hɔlʔ	hɔl^{I}; hɔl^{III}; hɔlʔ
seek v[126]	*hɔl^{II}; *hɔl^{III} (< *hɔl^{II}-s)		hɔl^{IIa}; hɔl^{III}	hɔl^{II}; hɔl^{III}		

[121] Mi hɔj^{I} ~ hɔj^{III} *turn to face vi/t*, Mi hɔj^{III}- *accommodate a guest vt*, Za hɔj^{I} ~ hɔj^{III} *face vi*, hɔjʔ *face vi*, hɔjʔ *face towards vt*; Tha/Te/Si *rotate vi/t*; Zo *rotate vi*. Zo, Tedim and Sizang have hɔj^{I} ~ hɔj^{II} *sway vi*.

[122] Mi hɔl^{IIa} *charcoal n*, hɔl^{IIa} ~ hɔl^{III} *almost hot/mature vi*; Za/Th/Zo/Te/Si *charcoal n*.

[123] Mi/Th/Za *open vi/t*; Zo/Te hɔŋ^{I} ~ hɔn^{III} *open vi/t*, hɔn^{III} ~ hot *open vb*; Si *open vt*.

[124] Za *come up vi*.

[125] Mi hɔl^{I} ~ hɔl^{III} *brandish a stick vi*, hɔlʔ *prod vt*; Th/Zo/Si hɔl^{I} ~ hɔl^{III} *drive vt*, hɔl^{III} *prod vt*; Te hɔl^{I} ~ hɔl^{III} *drive vt*, hɔlʔ *prod vt*.

[126] Za hɔl^{IIa} ~ hɔl^{III} *seek vt*, hɔlʔ *seek vt*; Th *seek vt*.

gloss						
	$\text{*hoi}^{III}\text{-s}$	$\text{hoi}?$				
hole n; hollow, empty vi [127]	$\text{*hom}^{I/II}$ / *hom^{III} (< $\text{*hom}^{I/II}\text{-s}$)	hom^{IIa}	hom^{I} / hom^{II}, hom^{III}	hom^{I}, hom^{III}	hom^{I} / hom^{II}, hom^{III}	hom^{II}, hom^{III}
bark n	*hoŋ^{I}	hoŋ^{I}	hoŋ^{I}	hoŋ^{I}	hoŋ^{I}	
acreage n [128]	*hɔʋan^{III}	hɔʋan^{III}	hɔɔn^{III}	hɔɔn^{III}	hɔʋan^{III}	huan^{III}
wind n [128]	$\text{*hoŋ}?^{III}\text{-s}$	$\text{hoŋ}?$	$\text{hoŋ}?^{III}$	huŋ^{III}	$\text{hoŋ}?$	$\text{hoŋ}?^{III}$
dry to touch vi [129]	*hoi^{II} / *hoi^{III} (< $\text{*hoi}^{II}\text{-s}$)	hoi^{IIa} / hoi^{III}	hoi^{II}, hoi^{III}	hoi^{II}, hoi^{III}	hoi^{II}, hoi^{III}	hoi^{II}, hoi^{III}
dry over fire vt, singe vi [130]	*hoi^{I} / *hoi^{III} (< $\text{*hoi}^{II}\text{-s}$)	$\underline{\text{hoi}^{I}}$ / hoi^{III}	hoi^{I}, hoi^{III}	hoi^{I}, hoi^{III}	hoi^{I}, hoi^{III}	hoi^{I}, hoi^{III}
time n	*hon^{II}	$\underline{\text{hon}^{IIb}}$	hon^{II}	hon^{II}	hon^{II}	hon^{II}
steam vi [131]	*hu^{II} / *huk^{II} (< $\text{*hu}^{II}\text{-s}$)	hu^{III} / huk^{IIb}				
steam n [132]	*hu^{III} (< *hus)	$\underline{\text{hu}^{IIb}}$	hu^{III}	hu^{III}	hu^{III}	hu^{III}

[127] Za empty vi; Th hom^{I} hole n, hom^{I} ~ hom^{III} hollow vi; Zo/Te hom^{I} hole n, hom^{II} ~ hom^{III} empty vi; Si empty vi.

[128] Za wind carrying debris n, carry debris (as wind) vt. Mizo is a song word.

[129] Mi dry, water-tight vi; Te boiled off (as water from rice), water-tight vi. Mizo has hri^{I} ~ hri^{III} dry to touch vi; Zahau has hil^{I} ~ hil^{III} dry to touch vi.

[130] Mi/Za dry (food over fire) vt; Th dry, steam vt; Zo/Te/Si singe vi.

[131] Zahau has hu^{IIa} ~ hu^{IIb} steam food vt. See *hu^{III} steam n.

[132] Mizo hu^{IIb} steam n appears to be a back-formation of hu^{III} steam vi via analogy with the shift of verbs in tone IIb to III discussed in 7.1.2.

husk n	*hum^{III}	hum^{III}	hum^{III}	hum^{III}	hum^{III}	hum^{III}
slurp vt[133]	*hup^{I}	hup^{I} / hop^{I} / hip^{I} hop^{I} / hip^{I}	hup^{I}	hup^{I}	hup^{I}	hup^{I}
	*hup-s	hup^{III}/hop^{III}/hip^{III} hop^{III} / hip^{III}	hup^{III}	hup^{III}	hup^{III}	hup^{III}

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[133] Mi hup^{I} ~ hup^{III} *drink from hands vt*, hop^{I} ~ hop^{I} *eat with spoon vt*, hip^{I} ~ hip^{III} *gulp air vt*; Za *eat with a spoon vt*; Th *sip at hot food vt*; Zo *suck up, absorb vt*; Te/Si *suck/lap up vt*. See *^{h}rop^{II} *slurp vt*.

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*j-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
wide vi[134]	*jej^{II}, *jej^{III} (< *jej^{II}-s)				zej^{II}, zej^{III}	zej^{II}, zej^{III}	zej^{II}, zej^{III}
song n, sing vi[135]	*jej^{I}, *jej^{III} (< *jej^{I}-s)	zaj^{I}, zaj^{III}	zej^{I}, zaj^{III}	ʒej^{I}-	zej^{I}-	zej^{I}-	zej^{I}-
ashamed, humble vi[136]	*jek, *jek-s	zek, zeʔ	zek, zaʔ	ʒa^{III}-	za^{III}- / ze^{III}-	zeʔ- / zɛʔ-	zek-, za^{III}-
armpit n	*jek	zek	zek	ʒeʔ		zek-	zek-
spread/fold out v[137]	*jel^{I}, *jel^{III} (< *jel^{I}-s), *jel^{III}-s	-zel^{I}		ʒel^{I}, ʒel^{III}	zel^{I}, zel^{III}	zel^{II}, zel^{III}, zelʔ / zelʔ	zel^{I}, zel^{III}
strand n, spread v[138]	*jem^{I}		zem^{I}	ʒem^{I}	zem^{I}	-zem^{I}	zem^{I}

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134 Mizo has zaj^{IIa} ~ zaj^{III} proliferate vi.

135 Mi zaj^{I} song n, zaj^{I} ~ zaj^{III} sing vi, zaj^{III} temperament n; Za skilful vi; Th/Zo/Te/Si song n (specifically referring to something innate and therefore found in compounds meaning temperament n or power n). Mizo has zej^{IIa}~ zej^{III} skilful vi; Thado, Zo, Tedim and Sizang are song words.

136 The Zo and Tedim ablaut variants are confined to different compounds.

137 Mi smooth vi; Te zel^{II} ~ zel^{III} spread/fold out vt, zelʔ / zelʔ flatten out completely vt; Si spread/lay out completely vt; Bhaskararao (1996:101) has Tedim zel^{II} ~ zel^{III} open umbrella or wings and zelʔ spread something evenly on a flat surface. Tedim zelʔ may plausibly be associated with *jel^{III}-s permeate vi.

138 Mi spread vt, Za fly vi; Th ʒem^{I} strand n, ʒem^{I} ~ ʒem^{III} lie on back vi, lay across vt, ʒem^{III} ~ ʒep reach for vt; Zo zem^{I} strand n, zem^{III} ~ zep reach for vt; Te -zem^{I} ~ -zem^{III} swim vi (lit. water-spread), droopy eyelids vi (lit. eye-spread), zem^{III} ~ zep reach for vt; Si zem^{I} strand n, zem^{I} ~ -zem^{III} go along way (as projectile) vi; zem^{III} ~ zep reach for vt.

gloss	proto						
intestines n[139]	*jem^{III} (< *jem^{I}-s)	zem^{IIb}	zem^{III}	ʒem^{III}	zem^{III}	-zem^{III}	zem^{III}
	*jam^{III}-s-s			ʒep	zep	zep	zep
penis n[140]	*jaŋ^{I}	ʒeŋ^{IIa}	ʒeŋ^{IIa}	-ʒaŋ^{I}	zaŋ^{I}-	zaŋ^{I}-	-zaŋ^{I}
	*jaŋ^{II}			ʒaŋ^{II}	zaŋ^{II}	zaŋ^{II}	ɲez / ɲaz
use vt	*jaŋ^{III}			ʒeŋ^{III}	zeŋ^{III}	zeŋ^{III}	zeŋ^{III}
	*jaŋ^{III}-s			ʒaʔ	zaʔ / zet	zet	zek / zet
hear vt	*ja^{II}			ʒa^{II}	za^{II}	za^{II}	za^{II}
	*jak^{II} (< *ja^{II}-s)			ʒaʔ^{II}	zaʔ^{II}	zak^{II}	zak^{II}
hundred n[141]	*ja^{III} (< *jas)	za^{III}	za^{III}	ʒa^{II}	za^{III}	za^{III}	za^{III}
itch vi	*ja^{II}	za^{IIa}	za^{IIa}	ʒa^{II}	za^{II}	zia^{II}	ze^{II}
	*jat^{II} (< *ja^{II(a)}-s)	zat^{IIb}	zat^{IIb}	ʒat^{II}	zat^{II}	ziat^{II}	zet^{II}
dorsum n[142]	*jaŋ^{I}	zaŋ^{I}	zaŋ^{I}	ʒaŋ^{I}	zaŋ^{I}	zaŋ^{I}	zaŋ^{I}
level vi	*jaŋ^{I}			ʒaŋ^{I}	zaŋ^{I}	zaŋ^{I}	zaŋ^{I}
	*jan^{III} (< *jaŋ^{I}-s)			ʒan^{III}	zan^{III}	zan^{III}	zan^{III}
beam n, recline vi[143]	*jal^{I}	zal^{I} / ʒol^{I}	zal^{I} / ʒol^{I}	ʒal^{I} / ʒol^{I}	zal^{I} / zol^{I}	zal^{I} / zol^{I}	zal^{I} / zol^{I}

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[139] Te intestines, strand n.
[140] Mi penis, stinger of bee n. Si zeŋ^{II} penis, stinger of bee n, zoŋ^{II} stalk n.
[141] Luce (1962c) notes a fluctuation between tones II and III in Thado.
[142] Mi upper-back n; Th crown of head n

Gloss	Reconstruction					
sprawl vi [144]	*jal^{III} (< *jal^{I}-s)	zal^{III} / zol^{III}	ʒal^{III}		zal^{III}	zal^{III}
night n, be night vi [145]	*jam^{I} / *jam^{III} (< *jam^{I}-s)	zam^{I} / zam^{III}	ʒam^{I} / ʒam^{III}	zam^{I} / zam^{III}	zam^{I} / zam^{III}	zam^{I} / zam^{III}
	*jan^{III} / *jan^{III}-s	zan^{III}	ʒan^{III}	zan^{III}	zan^{III} / zet	zan^{III}
lightweight vi	*jaŋ^{II} / *jaŋ^{II} (< *jan^{III}-s)	zaŋ^{IIa} / zan^{III}	ʒaŋ^{II} / ʒan^{III}	zaŋ^{II} / zan^{III}	zaŋ^{II} / zan^{III}	zaŋ^{II} / zan^{III}
flap vt [146]	*jap^{II} / *jap^{II}-s	zap^{IIb} / zeʔ	ʒap^{II} / ʒap^{III}	zap^{II} / zap^{III}	zap^{II} / zap^{III}	zap^{II} / zap^{III} / za^{III}
spread v [147]	*jar^{I} / *jar^{III} (< *jar^{I}-s) / *jar^{III}-s	zar^{I} / zar^{III} / -zarʔ	ʒaʔ^{I}		zak^{I} / zak^{III}	
sprawl vi/n [148]	*jaw^{I} / *jaw^{III} (< *jaw^{I}-s)	zaw^{I} / zaw^{III}	ʒaw^{I} / ʒaw^{III}	zaw^{III}		zaw^{I} / zaw^{III}
wedge vt [149]	*jɛp	zɛp	ʒɛp	zɛp	zɛp	

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143 Mi zal^{I} ~ zal^{III} *recline vi, level (as road) vi*, zol^{I} *level (as expanse of land) vi*; Th ʒal^{I} *shelf n*, ʒol^{I} *beam n*, ʒal^{I} ~ ʒal^{III} *recline vi*; Zo zal^{I} *branch n*, zol^{I} *beam n*; Te zol^{I} *beam n*, zal^{I} ~ zal^{III} *sleep vi*; Si zol^{I} *beam n*, zal^{I} ~ zal^{III} *recline vi, spread out vt*. Tedim zal^{I} ~ zal^{III} is a song word.

144 Mi *sprawl, float vi*.

145 Mi/Za/Th/Zo/Si *night n*; Te zan^{III} *night n*, zan^{III} ~ zet *be night vi*.

146 Mi/Za/Tha/Zo *flap vi/t*.

147 Mi zar^{I} *bough, branch n*, zar^{I} ~ zar^{III} *spread out vt*, -zerʔ *reveal, make known vt*; Za *hang out/down (as towel/curtain) vi/t*; Th *lay out vt*.

148 Mi *vast vi*; Za *lie down vi*; Th ʒaw^{I} ~ ʒaw^{III} *wide vi*, ʒaw^{III} *surroundings n*; Zo *all the field in one area n*; Si *sprawl on back vi*.

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	(reconstruction)						
distribute vt[150]	*jɛp-s			ʒe^{III}	ze^{III}	zɛʔ	
	*jek^{I} *jek^{III} (<*jek^{I}-s)			ʒeʔ^{I} ʒɛʔ	zeʔ^{I} zeʔ^{III}	zek^{I} zek^{III}	zɛɛak^{I} zɛɛak^{III}
permeate vi[151]	*jel^{III} *jel^{III}-s		zɛlʔ	ʒɛl^{III}	zel^{III} zɛlʔ	zel^{III} zɛlʔ	zɛl^{III}
roll v/n[152]	*jial^{I} *jial^{III} (<*jial^{I}-s) *jial^{III}-s	zial^{I} zial^{III}	zɔal^{I} zɔal^{III} zɔlʔ	ʒeɪl^{I} ʒeɪl^{III}	ziel^{I} ziel^{III}	zial^{I} zial^{III}	ziel^{I} ziel^{III}
file vt[153]	*jiat^{II} *jiat^{II}-s	ziat^{IIb} ziaʔ	ziat^{I}	ziat^{II}			
traveller n, *travel* vi[154]	*jɨm^{II} *jɨm^{III} (<*jɨm^{II}-s)	zɨm^{IIa} zɨm^{III}		ʒɨm^{II} ʒɨm^{III}	zɨm^{II} zɨm^{III}	zɨm^{II} zɨm^{III}	zɨm^{III}
learn v[155]	*jɨr^{I} *jɨr^{III} (<*jɨr^{I}-s) *jɨr^{III}-s	zɨr^{I} zɨr^{III}	zɨr^{I} zɨrʔ	ʒɨl^{I} ʒɨl^{III}	zɨl^{I} zɨl^{III}	zɨl^{I} zɨl^{III}	zɨl^{I} zɨl^{III}

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[149] Thado has ʒɨp *tuck-up/in* vt; Tedim has zɨp ~ zɨ^{III} *tuck-up/in* vt.

[150] Th *manage finances* vt; Zo *spread wings* vt; Si *distribute, manage finances* vt.

[151] Za *peel fruit skin with knife* vt.

[152] Mi zɨal^{I} ~ zɨal^{III} *roll* vt, zɨal^{III} *roll* n; Za zɔal^{I} ~ zɔal^{III} *roll* vt, zɔlʔ *roll* vb; Th ʒeɪl^{I} ~ ʒeɪl^{III} *roll* vt, ʒeɪl^{III} *roll* n, Zo zɨal^{I} ~ zɨal^{III} *roll* vt, zɨal^{III} *roll* n; Te *roll* vt, Si ziel^{I} ~ ziel^{III} *roll* vt, ziel^{III} *roll* n.

[153] Te *tickle* vi/t. Laizo has zzat^{IIb} *file* vt.

[154] Mi/Si *travel* vi; Th ʒɨm^{II} *traveller* n, ʒɨm^{II} ~ ʒɨm^{III} *travel* vi, Zo/Te zɨm^{II} *traveller* n, zɨm^{II} ~ zɨm^{III} *travel* vi. Zahau has zin^{I} *path, way* n; Sizang has zɨn^{I} *animal track* n.

[155] Mi/Th *learn* vt, Za zɨr^{I} ~ zɨrʔ *learn* vt, zɨrʔ *teach* vt, Zo/Te *recall, retrace* vt; Si *imitate* vt. Zo is a song word.

morning n, be morning vi[156]	*jiŋ[I] *jiŋ[III] (< *jiŋ[I]-s)	zin[I] zin[III]	zin[I] zin[III]	ʒiŋ[I] ʒiŋ[III]	zin[I] zin[III]	zin[I] zin[III]	zin[I] zin[III]
dense vi	*jiŋ[II] *jiŋ[III] (< *jiŋ[II]-s)	ziŋ[IIa] zin[III]	zin[II] zin[III]	ʒiŋ[II] ʒiŋ[III]	zin[II] zin[III]	zin[II] zin[III]	zin[II] zin[III]
segmentaliser n	*jiŋ[III] / *joŋ[I]	zoŋ[I]	zɔŋ[I]	ʒɔŋ[I]	ʒiŋ[III]	ʒiŋ[III]	ʒiŋ[III]
join vt[157]	*jɔm[II] *jɔm[III]-s-	zɔm[III]	ʒɔm[III]	ʒɔp	dɔz	zɔm[III]	zɔm[III]
seek vt	*jɔɟ[I] *jɔn[III] (< *jɔɟ[I]-s)	ʃɔz[I] zɔn[III]				ʃɔz[I] zɔn[III]	ʃɔz[I] zɔn[III]
Zo n	*jɔw[I]	zɔw[I]	ʒɔw[I]	zɔw[I]	zɔw[I]	zɔw[I]	zɔw[I]
finish, win vt[158]	*jɔw[II] *jɔw[III] (< *jɔw[II]-s) *jɔw[III]-s-	-zɔw[IIa]	ʒɔw[II]	zɔw[II]	zɔw[II]	zɔw[II]	zɔw[II]
oval vi	*jol[II] *jol[III] (< *jol[II]-s)	sol[I] sol[III]	ʒol[II] ʒol[III]	zol[II] zol[III]	zol[II] zol[III]	zol[II] zol[III]	zol[II] zol[III]

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[156] Mi zin[I] morning n, zin[I] ~ zin[III] be early morning, gather (as clouds) vi; Za zin[I] ~ zin[III] gather (as clouds) vi; Zo/Te/Si zin[I] morning n, zin[I] ~ zin[III] gather (as clouds in morning) vi; Th ʒiŋ[I] morning n, zin[I] ~ zin[III] dark vi; Za ʒiŋ[I] morning n, ʒiŋ[I] ~ ʒiŋ[III] gather (as clouds) vi.
[157] Mi/Th/Te/Si join vi/t.
[158] Mi/Za finish vt; Th/Zo/Te/Si finish, win vt.

	*proto	D1	D2	D3	D4	D5
languid vi[159]	*jom^{II} / *jom^{III} (< *jom^{III}-s)		ʒom^{II} / ʒom^{III}	zom^{II} / zom^{III}	zom^{II} / zom^{III}	zom^{II} / zom^{III}
rod (for corn-cobs) n	*jon^{I}		ʒon^{I}	zon^{I}	zon^{I}	zon^{I}
summon vt	*jon^{III} / *jon^{III}-s			zon^{III} / zɔt	zon^{III} / zɔt	zon^{III} / zɔt
dusk n[160]	*joŋ^{I}	-zoŋ^{I}	-zoŋ^{II}			
monkey n	*joŋ^{I}	zoŋ^{I}	ʒoŋ^{I}	zoŋ^{I}	zoŋ^{I}	zoŋ^{I}
impoverish vi[161]	*joŋ^{I} / *jon^{III} (< *joŋ^{I}-s)		ʒoŋ^{I} / ʒon^{III}	zoŋ^{I} / zon^{III}	zoŋ^{I} / zon^{III}	zoŋ^{I} / zon^{III}
ask vt[162]	*jot^{II} / *jot^{II}-s	zot^{IIb} / zoʔ	zot^{IIb}	ʒot^{II} / ʒot^{III}	zot^{II} / zot^{III}	zot^{II} / zot^{III} // zo^{II}
grope vt[163]	*jot^{II} / *jot^{II}-s			ʒot^{II} / ʒot^{III}	zot^{II} / zot^{III}	zot^{II} / zot^{III} // zo^{II}
sell v[164]	*joar^{I} / *joar^{III} (< *joar^{I}-s)	zoar^{I} / zoar^{III}	ʒoʔ^{I} / ʒoʔ^{III}	zoa^{I} / zoa^{III}	zoak^{I} / zoak^{III}	zuak^{I} / kuak^{III}

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159 Th *weak* vi. Mizo has zom^{IIa} ~ zom^{III} *shrink (in cooking)* vi.
160 Zahau tone II is due to sandhi.
161 Th *bad in character (as person)* vi.
162 Za *follow track/trail of animal* vt
163 Th *walk* vi.
164 Mi/Za zoar^{I} ~ zoar^{III} *sell* vt, zɔrʔ *sell* vb; Th/Zo/Te/Si *sell* vt.

	Reconstruction						
head for vi[165]	*joaɹ^{II}-s *joan^{III} *joan^{II}-s	zɔɹʔ	zɔɹʔ	ʒoon^{III} ʒɔt	zoon^{III} zɔt	zɔan^{III} zɔat	zuan^{III} zɔt
sambur-deer n	*jok	-zɔk	-zɔk	-ʒɔʔ	-zɔʔ	-zɔk	-zɔk
dissolve vi[166]	*jol^{II} *jol^{III} (< *jol^{II}-s)			ʒɔl^{II} ʒɔl^{III}	zɔl^{II} zɔl^{III}		
taper v[167]	*jom^{I} *jom^{III} (< *jom^{I}-s) *jom^{III}-s	zom^{I} zom^{III} zom^{IIb}	zom^{I} zom^{III} zom^{IIb}	ʒom^{I} ʒom^{III}	zom^{I} zom^{III}	zom^{I} zom^{III} zop	zom^{I} zom^{III} zop
ashamed vi[168]	*jom^{I} *jom^{III} (< *jom^{I}-s)	zom^{I} zom^{III}	zom^{I} zom^{III}	ʒom^{I} ʒom^{III}	zom^{I} zom^{III}	zom^{I} zom^{III}	zom^{I} zom^{III}
very ripe (as fruit) vi	*jon^{II} *jon^{III} (< *jon^{II}-s)			ʒon^{II}	zon^{II}	zon^{II} zon^{III}	zon^{II} zon^{III}
urinate vt, *urine* n[169]	*joŋ^{I} *jon^{III} (< *joŋ^{I}-s)	zoŋ^{I} zon^{III}	zon^{III}	ʒoŋ^{I} ʒon^{III}	zoŋ^{I} zon^{III}	zon^{III}	zoŋ^{I} zon^{III}

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[165] Th *go somewhere to live* vt; Si *move in with partner before wedding, leave mother to live with father* vi.

[166] Zo *become soft and squishy (as fruit)* vi.

[167] Mi/Za zom^{I} ~ zom^{III} *taper* vi, zom^{III} *taper* vt; Th/Zo *taper* vt; Te/Si zom^{I} ~ zom^{III} *taper* vi, zom^{III} ~ zop *taper* vt. Zahau has zom^{IIb} *peak* n.

[168] Mi *shy* vi.

[169] Mi/Si zoŋ^{I} ~ zon^{III} *urinate* vt, zom^{III} *urine* n; Za/Te zom^{III} *urine* n; Th zoŋ^{I} ~ zon^{III} *mel* vi, zom^{III} *urine* n; Zo zoŋ^{I} ~ zon^{III} *melt* vi, zom^{III} *urine* n. Laizo has zin^{III} *urine* n; Zahau has zun^{IIb} *leak* vi.

finger, root n[170]	$z\text{ɔ}\eta^{II}$	$z\text{ɔ}\eta^{II}$	$\text{ʒ}\text{ɔ}\eta^{II}$	$z\text{ɔ}\eta^{II}$	$z\text{ɔ}\eta^{II}$	$z\text{ɔ}\eta^{II}$	$*j\text{ɔ}\eta^{II}$
liquor n	zu^{I}	zu^{I}	$\text{ʒ}u^{I}$	zu^{I}	zu^{I}	zu^{I}	$*ju^{I}$
rodent n[171]	zu^{IIb}	$zu^{IIa}\text{-}$	$\text{ʒ}u^{II}$	zu^{II}	zu^{II}	$zo\text{-}$	$*ju^{II}$
descend (rain) vi[172]	$zu^{III}\text{-}$ $(z\text{ɔ}k\text{-})$		$\text{ʒ}u^{III}$ / $\text{ʒ}\text{ɔ}\text{ʔ}$	zu^{III} / $z\text{ɔ}\text{ʔ}$ / $\underline{z\text{ɔ}t}$	zu^{III} / $z\text{ɔ}k$	zu^{III} $z\text{ɔ}k$ / $\underline{z\text{ɔ}t}$	$*ju^{III}$ (< $*jus$) / $*juk$ (< $*ju^{III}\text{-}s$)
follow vt	$z\text{ɔ}j^{IIb}$		$\text{ʒ}uj^{II}$ / $\text{ʒ}\text{ɔ}j^{III}$	zuj^{II} / zuj^{III}	zuj^{II} / $z\text{ɔ}j\text{ʔ}$	$z\text{ɔ}j^{II}$ / $z\text{ɔ}j^{III}$	$*juj^{II}$ / $*juj^{III}$ (< $*juj^{II}\text{-}s$) / $*juj^{III}\text{-}s$
stroke vt	zut^{I} / zut^{III}	zut^{I} / zut^{III}	$\text{ʒ}ut^{I}$ / $\text{ʒ}ut^{III}$	zut^{II} / zut^{III}	zut^{II} / zut^{III}	zut^{II} / zut^{III}	$*jut^{I}$ / $*jut^{I}\text{-}s$

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170 Mi/Za finger n; Zo root n.
171 Mizo tone II may be conditioned by its status as the first part of a compound; Sizang is reduced as the first part of a compound.
172 Mizo is used after verbs to mean down (e.g. knock down) with the form 2 serving an emphatic role when used.

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	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
footstep n, walk vi[173]	*kɛl^{I} *kɛl^{III} (< *kɛl^{I}-s)	kɛl^{I} kɛl^{III}	kɛl^{I}	kɛl^{I} kɛl^{III}	kɛl^{I}	kɛl^{I} kɛl^{III}	kɛl^{I}
kidney n[174]	*kɛl^{II}	kɛl^{IIa}	kɛl^{IIa}-	kɛl^{II}	kɛl^{II}	kɛl^{II}	kɛl^{II}
lever, bolt vt[175]	*kɛl^{III} *kɛl^{III}-s	kɛlʔ	kɛlʔ	kɛl^{III}	kɛl^{III}	kɛl^{III} kɛlʔ	kɛl^{III}
mouth n, set trap vt[176]	*kɛm^{I} *kɛam^{III} (< *kɛm^{I}-s) *kɛm^{III}-s	kɛm^{I} kɛm^{IIb}	kɛm^{I} kɛm^{IIb}	kɛm^{I} kɛm^{III}	kɛm^{I} kɛm^{III}	kɛm^{I} kɛam^{III}	kɛm^{I} kɛm^{III}
fry vt[177]	*kɛŋ^{I} *kɛn^{III} (< *kɛŋ^{I}-s)	kɛŋ^{I} kɛn^{III}	kɛŋ^{I} kɛn^{III}	kɛŋ^{I} kɛn^{III}	kɛŋ^{I} kɛn^{III}	kɛŋ^{I} kɛn^{III}	kɛŋ^{I} kɛn^{III}
evaporate vi	*kɛŋ^{II} *kɛn^{III} (< *kɛŋ^{II}-s)	kɛŋ^{IIb} / kɑŋ^{I} kɑn^{III}		kɛŋ^{II} kɛn^{III}	kɛŋ^{II} kɛn^{III}	kɛŋ^{II} kɛn^{III}	kɛŋ^{II} kɛn^{III}

[173] Mi *walk, go vi*; Za/Te/Si *footstep n*; Th kɛl^{I} *footstep n*, kɛl^{I} ~ kɛl^{III} *ascend, cross vi*; Te kɛl^{I} *footstep n*, kɛl^{I} ~ kɛl^{III} *walk vi*. Tedim is a song word. Thado, Zo, Tedim and Sizang kɛl^{I} ~ kɛl^{III} *walk vi*. also means *groin n* which may possibly be related although see *kɛl^{II} *kidney n* which means *groin n* in Zahau.
[174] Za *groin n*.
[175] Te kɛl^{III} ~ kɛlʔ *lever vt*, kɛlʔ *bolt vt*,.
[176] Mi/Za kɛm^{I} *mouth n*, kɛm^{IIb} *set trap vt*; Th/Zo/Te/Si kɛm^{I} *mouth n*, kɛm^{I} ~ kɛm^{III} *set trap vt*.
[177] Za, *fry vt, evaporate vi*.

Gloss	Proto						
crotch n	*kɛp	kɛp	kɛp				
mouth n, open mouth vt[178]	*ka^{I}	ka^{I}	ka^{I}	ka^{I}		ka^{I}	ka^{I}
	*kɛt (< *ka^{I}-s)			kɛt / keʔ		kat^{II}	kɛt
forked vi[179]	*ka^{II}	ka^{II}		ka^{II}	ka^{II}	ka^{II}	ka^{II}
	*kat^{II} (< *ka^{II}-s)	kak^{IIb}		kat^{II}	kat^{II}	kat^{II}	kat^{II}
cross (a river) vt[180]	*kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}
	*kaj^{III} (< *kaj^{I}-s)	kaj^{III}	kaj^{III}	kaj^{III} / kej^{III}	kaj^{III}	kaj^{III}	kaj^{III}
hang, rise vi[181]	*kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}	kaj^{I}
	*kaj^{III} (< *kaj^{I}-s)	kaj^{III}	kaj^{III}	kaj^{III} / kej^{III}	kaj^{III}	kaj^{III}	kaj^{III}
askew, low (as sun) vi[182]	*kaj^{II}		kaj^{IIa}	kaj^{II}	kaj^{II}	kaj^{II}	kaj^{II}
	*kaj^{III} (< *kaj^{II}-s)		kaj^{III}	kaj^{III} / kej^{III}	kaj^{III}	kaj^{III}	kaj^{III}
pull vt[183]	*kaj^{III}	kaj^{III}	kaj^{III}	kaj^{III}	kaj^{III}	kaj^{III}	kaj^{III}
	*kaj^{III}-s	kejʔ	kejʔ	kaj^{III}	kaj^{III}	kejʔ	kaj^{III}
prawn n[184]	*kaj^{III}-	kej^{III}-	kej^{III}-	kaj^{III}-	kaj^{III}-	kaj^{III}-	kaj^{III}-

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[178] Mi/Za mouth n; Th/Te/Si open mouth vt.

[179] Mi fork of tree n, forked vi. Zahau has kak^{IIa} ~ kak^{III} spread out, distanced vi.

[180] Sizang is a song word.

[181] Mi/Za rise vi; Th hang, rise vi, Zo/Te/Si hang vi. See *kʰaj^{I} hang, carry vt.

[182] Za askew vi; Th/Zo low (as sun) vi; Te/Si askew (as eyes), low (as sun) vi.

[183] Za hold vt.

[184] The reduction in Mizo and Zahau may be a result of compounding.

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	Proto					
cross vi	*kan^{II} / *kan^{III} (< *kan^{II}-s) / *kan^{III}-s	kan^{IIb}	kan^{II} / kan^{III}	kan^{II} / kan^{III}	kan^{II} / kan^{III}	kan^{II} / kan^{III}
rise, convalesce vi[185]	*kaŋ^{II} / *kaŋ^{III} (< *kaŋ^{II}-s)	kaŋ^{IIa} / kan^{III}	kaŋ^{II} / kan^{III}	kaŋ^{II} / kan^{III}	kaŋ^{II} / kan^{III}	kaŋ^{II} / kan^{III}
white vi[186]	*kaŋ^{I} / *kaŋ^{III} (< *kaŋ^{II}-s)	kaŋ^{I} / kan^{III}	kaŋ^{I} / kan^{III}	kaŋ^{I} / kan^{III}	kaŋ^{I} / kan^{III}	kaŋ^{I} / kan^{III}
mosquito n	*kaŋ^{II}	-kaŋ^{IIa}	-kaŋ^{II}	-kaŋ^{II}	-kaŋ^{II}	-kaŋ^{II}
burn, scorch v[187]	*kaŋ^{III} / *kaŋ^{II}-s	kaŋ^{III} / keŋ^{IIb}			kaŋ^{III} / kat^{II}	kaŋ^{III} / ket
couple (oxen) n[188]	*kap^{II}		kap^{II}	kap^{II}	kap^{II}	kap^{II}
shoot vt	*kap^{II} / *kap^{II}-s	kap^{IIb} / keʔ	kap^{II} / kap^{III}	kap^{II} / kap^{III}	kap^{II} / kap^{III}	kap^{II} / kap^{III} / ka^{III}
widen, stride vi[189]	*kar^{I} / *kar^{III} (< *kar^{I}-s)	kar^{I} / kar^{IIb}	kar^{I}	ka$ʔ^{I}$ / keʔ	ka$ʔ^{I}$ / ka$ʔ^{III}$	kak^{I} / kak^{III}

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[185] Mi *raised above vi*; Za *distanced vi*; Th *rise, convalesce, distanced vi*; Zo *convalesce vi, raise to expose object underneath vt*; Te *convalesce vi*; Si *convalesce, distanced vi*. See *kʰaŋ^{II} *raise vt.*

[186] Mi *burn vi.*

[187] Mi *burn vi*; Za kaŋ^{II} ~ keŋ^{IIb} *burn vi*, keŋ^{IIb} *burn vt*; Te/Si *scorch vi.* Bhaskararao (1996:51) lists Tedim form 2 as ket.

[188] Lorrain (1940:239) has Mizo kop *pair, couple n.*

[189] Mi kar^{I} *between n*, kar^{IIb} *widen, stride vi*; Za *stride vi*; Te/Si *widen vi/t.* Laizo has kar^{I} *footstep n.*

	Proto						
sulphur n	*kat$^{\text{I}}$	kat$^{\text{I}}$	kat$^{\text{I}}$	kat$^{\text{I}}$	kat$^{\text{I}}$	kat$^{\text{I}}$	ken$^{\text{III}}$
divaricate vt[190]	*kaw$^{\text{I}}$ *kaw$^{\text{III}}$ (< *kaw$^{\text{I}}$-s) *kaw$^{\text{III}}$-s	kaw$^{\text{I}}$ kaw$^{\text{III}}$	kaw$^{\text{III}}$ kewʔ	kaw$^{\text{I}}$ kaw$^{\text{III}}$	kaw$^{\text{I}}$ kaw$^{\text{III}}$		kaw$^{\text{I}}$ kaw$^{\text{III}}$
I n	*kɛj$^{\text{I}}$	kɛj$^{\text{I}}$	kɛj$^{\text{I}}$ / ki$^{\text{I}}$	kɛj$^{\text{I}}$	kɛj$^{\text{I}}$	kɛj$^{\text{I}}$	kɛj$^{\text{I}}$
tiger n[191]	*kɛj$^{\text{I}}$	kɛj$^{\text{I}}$	-kɛj$^{\text{I}}$	-kɛj$^{\text{I}}$		-kɛj$^{\text{I}}$	-kɛj$^{\text{I}}$
bite vt[192]	*kɛj$^{\text{III}}$ *kɛj$^{\text{III}}$-s	kɛj$^{\text{I}}$ʔ		kɛj$^{\text{III}}$	kɛj$^{\text{III}}$	kɛj$^{\text{III}}$ kɛjʔ	
bring v[193]	*kɛɲ$^{\text{I}}$ *kɛn$^{\text{III}}$ (< *kɛɲ$^{\text{I}}$-s) *kɛn$^{\text{III}}$-s	kɛɲ$^{\text{I}}$ kɛn$^{\text{III}}$ kɛn$^{\text{IIb}}$	kɛɲ$^{\text{I}}$ kɛn$^{\text{II}}$ kɛn$^{\text{IIb}}$	kɛɲ$^{\text{I}}$ kɛn$^{\text{III}}$	kɛɲ$^{\text{I}}$ kɛn$^{\text{III}}$	kɛɲ$^{\text{I}}$ kɛn$^{\text{III}}$	kɛɲ$^{\text{I}}$ kɛn$^{\text{III}}$
mollusc n	*kɛp	kɛp	kɛp	kɛp	kɛp	kɛp	kɛp
leak slightly vi[194]	*kɛs	kɛʔ	kɛʔ	ke$^{\text{III}}$	ke$^{\text{III}}$	kɛʔ	ke$^{\text{III}}$
crack vi[195]	*kek$^{\text{II}}$ *kek$^{\text{II}}$-s	kek$^{\text{IIb}}$ / krɛk kɛʔ	kɛk / krɛk kɛʔ	keʔ$^{\text{II}}$ ke$^{\text{III}}$	keʔ$^{\text{II}}$ ke$^{\text{III}}$	kek$^{\text{II}}$ kek$^{\text{III}}$	kek$^{\text{II}}$ ke$^{\text{III}}$

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190 Mi *divaricate vi/t; wide vi.*
191 Za *mythical tiger n*; Th *lion n*; Te *leopard n*. See Lehman (1963:183) for further discussion of the meaning. Sizang is a song word.
192 Mi *bite off vt*; Zo *bite (by animals) vt*.
193 Mi/Za kɛj$^{\text{I}}$ ~ kɛn$^{\text{III}}$ *bring vt*, kɛn$^{\text{IIb}}$ *bring vb*; Th/Zo/Te/Si *bring vt*.
194 Mi *shatter vi*; Te *have a hole vi*.
195 Mi kek$^{\text{IIb}}$ *split, pull out/apart vt*, kɛk *crack vi*; Za kɛk *crack vi*, kak *crack vt*; Te *tear vi*.

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goat n	*kel^{III}	kel^{III}	kel^{III}	kel^{III}	kɛal^{III}
hatch vi	*kew^{III} *kew^{II}-s	<u>kew^{IIb}</u> kɛw?	kew^{III} kɛw^{III}	kew^{III}	kɛw^{III}
		kɛw?			
decrease vi[196]	*kɪam^{II} *kɪam^{II} (< *kɪam^{II}-s)	kɪam^{II} kɪam^{III}	kɛɪm^{II} kɛɪm^{III}	kɪam^{II} kɪam^{III}	kɪɛm^{II} kɪɛm^{III}
fasten/clip down vt[197]	*kɪl^{III}-s	kɪl?	kɪl^{III}	kɪl^{III}	kɪl^{III}
entire vi	*kɪm^{I} *kɪm^{III} (< *kɪm^{I}-s)	kɪm^{I} kɪm^{III}	kɪm^{I} kɪm^{III}	kɪm^{I} kɪm^{III}	kɪm^{I} kɪm^{III}
equal vi[198]	*kɪm^{II} *kɪm^{III} (< *kɪm^{II}-s)	kɪm^{IIa} kɪm^{III}	kɪm^{II}	kɪm^{II}	kɪm^{II} (kɪm^{III})
					kɪm^{II} kɪm^{III}
stable vi[199]	*kɪp	kɪp	kɪp	kɪp	kɪp
parrot n[200]	*kɪl^{II}	-kɪl^{IIa}	kɪl^{II}	kɪl^{II}	kɪl^{II}
horn n	*kɪl^{II}	kɪl^{IIb}	kɪl^{II}	kɪl^{II}	kɪl^{II}

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196 See *kʰɪam^{III} *decrease* vt.
197 Zahau has kɪl^{IIa} ~ kɪl^{III} *guard* vt.
198 Mi *complete* vi.
199 Mi *every* vi
200 Mizo and Zahau tone IIa does not seem to be a product of sandhi but further research is required.

Gloss	Proto						
edge, corner n [201]	*kil^{I}	k_ɨl^{IIa}_	kil^{I} / k_ɨl^{IIb}_	kil^{I}	kil^{I}	kil^{I}	kil^{I}
knock vt	*kiŋ^{III} *kiŋ^{III}-s	_kɨk_	kiŋ^{III} kəŋ^{IIb}				kiŋ^{III} kɨk
return vi [202]	*kir^{II} *kir^{III} (< *kir^{II}-s)	kir^{IIa} kir^{III}	kir^{IIa} kir^{III}	ki?^{I} kɨ?^{III}	kra^{II} kra^{III}	kik^{II} kik^{III}	kik^{II} kik^{III} / kɨ^{III}
elbow n [203]	*kiw^{III}	kiw^{III}	kiw^{III}	krw^{III}	kiw^{III}	kiw^{III}	
peel up vi [204]	*kor/k *kor/k-s			kə?	kə? ko^{III}	_kok^{I}_	_kok^{I}_ ko^{III}
horse n [205]	*kol^{II}	_-kol^{IIa}_		-kol^{II}	-kol^{II}	-kol^{II}	
yoke, hand-cuffs n	*kol^{II}	kol^{IIa}		kol^{II}	kol^{II}	kol^{II}	kol^{II}
indented vi [206]	*kom^{I} *kom^{III} (< *kom^{I}-s)	_kɔam^{IIa}_ kɔam^{III}		kom^{I} kom^{III}	kom^{I} kom^{III}	kom^{I} kom^{III}	kom^{I} kom^{III}
path, door n [207]	*kɔŋ^{I}	kɔŋ^{I}	kɔŋ^{I}			kɔŋ^{I}	kɔŋ^{I}

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[201] Mi *edge, corner n, angled vi*; Za *corner n*; Zo/Si *edge n*. Thado, Tedim and Sizang have kɨl^{II} ~ kɨl^{II} *curl (as hair) vi*.

[202] Th *turn back (when on route) vi*; Si *run (as colours) vi*. See *kʰɨr-s *return vt*.

[203] Zo/Te *elbow, corner n*.

[204] The *-r coda is suggested by Tedim and Sizang tone I but *kʰɔk *peel up vt* suggests original *-k.

[205] Zahau has reŋ^{IIa} *horse n*; Sizang has si^{III}pʰu^{III} *horse n*.

[206] Mizo may be influenced by *kɔam^{III} *valley n*; Mizo also has kom^{IIa} ~ kɔm^{III} *bent vi*, kɔm^{III} *bend limb vt*.

[207] Mi *path, doorway n*; Za *path n*; Te *door n*; Si *entrance, road-home n*.

couple n	*kɔp	kɔp	kɔp	kɔp	kɔp	kɔp	kɔp
door, gate n[208]	*kɔt	kɔt	kɔt	kɔt	kɔt		
disparage vt	*kow^I *kow^III (< *kow^I-s)				kow^IIa / kow^I	kow^I kow^III	kow^I kow^III
shoulder n	*kow^II	kow^IIa / kow^I	kow^II		kow^II	kow^II	kow^II
call, inform vt[209]	*kow^I *kow^III *kow^II-s	kow^III kow?	kow^I kow?	kcw^III	kow^III	kow^III kow?	kcw^III
$\boxed{\text{bent}}$ vi[210]	*koj^II *koj^III (< *koj^III-s) *koj^III-s	koj^III kɔj?	koj^IIb koj^III	koj^II koj^III / koj^III	koj^II koj^III	koj^II koj^III	kɔaj^II kɔaj^III
Burman n	*kol^I	kol^I	kol^I	kol^I	kol^I	kol^I	kol^I
outer-coating n[211]	*kom^I	kom^I	kom^I	kom^I	kom^I	kom^I	
$\boxed{\text{waist}}$ n[212]	*koɲ^II	koɲ^IIb	koɲ^IIb	koɲ^II	koɲ^II	koɲ^II	koɲ^II
$\boxed{\text{nine}}$ vi	*kɔa^II	kɔa^IIa	kɔa^IIa	kɔʊ^II	kɔʊ^II	kɔa^II	kue^II

208 Mi *place infront of house* n; Za *gate* n; Th/Zo *door* n.
209 Mi/Za *call* vt; Th *call, inform* vt; Te/Zo/Si *inform* vt.
210 See *kɔaj^I *bend* v/n.
211 Mi *pod, shell* n; Za *husk* n; Th *cob* n; Zo/Te *wall* n.
212 Mi *loins* n; Za *upper-leg* n.

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	*Proto						
burrow n	*kɤa^{II}-s ; *kɤa^{III} (< *kɤas)	kɤa^{II}	kɤa^{IIb}	koo^{III}	kɤo	kɤa^{III}	kue^{III}
bend v/n[213]	*kɤaj^{I} ; *kɤaj^{III} (< *kɤaj^{III}-s) ; *kɤaj^{III}-s	kɤaj^{I} / kɤaj^{III} / kɔjʔ	kɤaj^{III} / kɔjʔ	kɤoj^{I} / kɤoj^{III}	kɤej^{I} / kɤej^{III}	kɤaj^{I} / kɤaj^{III} / kɤajʔ	kuɛj^{I} / kuɛj^{III}
coil n/v[214]	*kɤal^{II} ; *kɤal^{III} (< *kɤal^{II}-s)	kɤal^{I} / kɤal^{III}	kɤal^{IIa} / kɤal^{III}	kool^{II} / kool^{III}	kɤol^{II} / kɤol^{III}	kɤal^{II} / kɤal^{III}	kual^{II} / kuɛl^{III}
valley n	*kɤam^{III}	kɤam^{III}		kɔm^{III}	kɤom^{III}	kɤam^{III}	kuam^{III} / kuam^{I}
coffin n[215]	*kɤaŋ^{I}	kɤaŋ^{I}	kɤaŋ^{I}	kooŋ^{I}	kɤoŋ^{I}	kɤaŋ^{I}	kuaɲ^{I}
twenty n	*koɭ^{I}	kɔɭ^{I}	kɔɭ^{I}			koɭ^{I}	koɭ^{I}
year n	*kom^{III}	kom^{III}	kom^{III}	kɤm^{III}	kɤm^{III}	kɤm^{III}	kom^{III}
rod n[216]	*kɔɲ^{I}	kɔɲ^{I}		kɤɲ^{I}	kɤɲ^{I}	kɤɲ^{I}	kuɲ^{I}
stalk, trunk n[217]	*kɤŋ^{II}	kuŋ^{IIa}	kuŋ^{IIa}	kɤŋ^{II}	kɤŋ^{II}	kɤŋ^{II}	kuŋ^{II}

[213] Mi/Za kɤaj^{III} ~ kɔjʔ bend vt, kɔjʔ bend n; Th ready to be harvested as rice vi; Zo kɤej^{I} ~ kɤej^{III} ready to be harvested as rice vi; kɤej^{III} bend vt, Te kɤaj^{I} ~ kɤaj^{III} sag vi, kɤaj^{III} kɤajʔ bend vt; Si sag vi. See *kɔj^{II} bent vi.

[214] Mi kɤal^{I} coil n; kɤal^{I} ~ kɤal^{III} coil vi, kɤal^{III} coil vt; Za kɤal^{IIa} ~ kɤal^{III} coil vi, kɤal^{III} coil vt; Zo kɤol^{II} ~ kɤol^{III} coil vi, kɤol^{III} coil vt; Th kool^{II} ~ kool^{III} coil vi, kool^{III} coil vt; Te kɤal^{III} coil n, kɤal^{II} ~ kɤal^{III} coil vi; Si kual^{II} coil n, kual^{II} ~ kual^{III} coil vi, kual^{III} coil vt.

[215] Mi/Za coffin, wooden box n; Th/Zo/Te/Si coffin, plate n.

[216] Si rod-shaped handle n.

[217] Mi trunk n; Za stalk, trunk n; Th/Zo/Te/Si stalk n. Mizo and Laizo have kɤaŋ^{IIa} stalk n.

	*kɔs	-kɔʔ	-kɔʔ	-ku^{II}	-ku^{III}	-kɔʔ	-ku^{H}
porcupine n[218]	*kɔs						
exclaim vt	*ku^{II}, *ku^{II}-s			ku^{II}, kut^{II}		ku^{II}, kut^{II}	ku^{II}, kut^{II}
rake vt[219]	*kuj^{III}, *kuj^{III}-s			kuj^{III}, kɔj^{III}	kuj^{III}	kuj^{III}, kɔjʔ	kɔj^{III}
bend vi[220]	*kul^{I}, *kul^{III} (< *kul^{III}-s), *kul^{III}-s	kul^{I}, kul^{III}, kɔlʔ	kul^{III}			<u>kɔl^{III}</u>, kɔlʔ	kul^{III}, kɔl^{III}
concave, cup hand vi[221]	*kum^{I}, *kum^{III} (< *kum^{I}-s)	<u>kɔm^{I}</u>, kɔm^{III}	<u>kʰɔm^{I}</u>		kum^{I}, kum^{III}	kum^{I}, kum^{III}	
bow vi[222]	*kun^{II}, *kun^{III} (< *kun^{II}-s)	kun^{IIa}, kun^{III} / kon^{III}	kun^{IIa}, kun^{III}	kun^{II} / kon^{II}, kun^{III} / kon^{III}	kun^{II} / kon^{II}, kun^{III} / kon^{III}	kun^{II}, kun^{III}	kun^{II} / kon^{II}, kun^{III} / kon^{III}

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[218] Sizang tone H is due to sandhi.

[219] Te scratch vt. Mizo has kʰɔjʔ comb n/vt.

[220] Mi kul^{I} ~ kul^{III} / kɔlʔ bend vi; Za bend vi/t.

[221] Mi shrug, cup hand vi; Za concave vi.

[222] Mi kun^{IIa} ~ kun^{III} bow vi, kɔn^{II} saddle of hill n; Za bow, hunchbacked vi; Th kun^{II} ~ kun^{III} bow vi, kɔn^{II} ~ kɔn^{III} bent vi; Zo kun^{II} ~ kun^{III} bow vi, kɔn^{II} ~ kɔn^{III} hunchbacked vi; Si kun^{II} ~ kun^{III} bow at neck vi, kɔn^{II} ~ kɔn^{III} bow at waist vi. Thado, Zo, Tedim and Sizang have kɔn^{I} ~ kɔn^{III} crouch vi.

kʰ -

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
solid, congeal vi [223]	*kʰəlᴵᴵ *kʰəlᴵᴵᴵ (< *kʰəlᴵᴵ-s) *kʰəlᴵᴵᴵ-s	kʰəlᴵᴵᵇ	kʰəlᴵᴵᵃ kʰəlᴵᴵᴵ	xalᴵᴵᴵ	xalᴵᴵ xalᴵᴵᴵ	xalᴵᴵᴵ xalʔ	kʰəlᴵᴵᴵ
terrace (with logs) vt [224]	*kʰəmᴵ *kʰəmᴵᴵᴵ (< *kʰəmᴵ-s) *kʰəmᴵᴵᴵ-s	kʰəmᴵ kʰəmᴵᴵᴵ	kʰəmᴵ kʰəmᴵᴵᴵ	xemᴵ xamᴵᴵᴵ	xemᴵ ɗax	xemᴵ xamᴵᴵᴵ ɗap	kʰemᴵ kʰamᴵᴵᴵ kʰap
pillow v [225]	*kʰəmᴵ *kʰəmᴵᴵᴵ (< *kʰəmᴵ)(s-) *kʰəmᴵᴵᴵ-s	kʰəmᴵᴵᴵ kʰəmᴵᴵᵇ	kʰəmᴵᴵᴵ	xamᴵ xemᴵᴵᴵ ɗax	xemᴵᴵᴵ ɗax	xemᴵᴵᴵ ɗap	kʰamᴵᴵᴵ kʰap
satiate vi [226]	*kʰəmᴵᴵ *kʰamᴵᴵᴵ (< *kʰəmᴵᴵ-s)	kʰemᴵᴵᵃ kʰəmᴵᴵ	kʰəmᴵᴵᵃ kʰəmᴵᴵᴵ	xemᴵᴵ xamᴵᴵᴵ	xemᴵᴵ xamᴵᴵᴵ	xemᴵᴵ xamᴵᴵᴵ	kʰemᴵᴵ kʰamᴵᴵᴵ
gold n	*kʰemᴵᴵᴵ				xaamᴵᴵᴵ	xaamᴵᴵᴵ	kʰemᴵᴵᴵ
one/same vi, full v [227]	*kʰet *kʰet-s	kʰet kʰeʔ	kʰet kʰeʔ	xet	xet	xet	kʰat

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[223] Mi *congeal vi.*

[224] Mi/Za *block vt;* Zo xemᴵ ~ xep *terrace (with logs) vt;* Te xemᴵ ~ xemᴵᴵᴵ/ xep *terrace (with logs) vt;* Te kʰemᴵ ~ kʰemᴵᴵᴵ/ kʰəp *terrace (with logs) vt.*

[225] Mi/Za/Zo/Te/Si *pillow vt;* Th xemᴵ ~ xemᴵᴵᴵ *lie down vi,* xemᴵᴵᴵ ~ xep *pillow vt.*

[226] Mi *satiate, ache vi;* Za *ache vi;* Th/Zo/Te/Si *satiate, nauseate vi.*

[227] Mi kʰet *one vi,* kʰet ~ kʰeʔ *full vi;* Za kʰet *one vi,* kʰet (~ kʰeʔ) *full vi,* kʰeʔ *fill vi;* Th/Te/Si *one, same vi;* Zo *one, same (as time) vi.*

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gloss							
jaw, chin n	$*k^ha^{II}$	k^ha^{IIb}	k^ha^{IIb}	xa^{II}	xa^{II}	xa^{II}	k^ha^{II}
phlegm vi/n[228]	$*k^ha^{II}$, $*k^hak^{II}$ (< $*k^ha^{II}$-s)	k^ha^{III}, k^hak^{IIb} / $\underline{k^hak^I}$	$\underline{k^hak^I}$	$xa\underline{ʔ^{II}}$ / $\underline{xat^{II}}$	$xaʔ^{II}$- / $\underline{xat^{II}}$-	xak^{II}-	k^hak^{II}
bitter vi[229]	$*k^ha^{II}$, $*k^hak^{II}$ (< $*k^ha^{II}$-s)	k^ha^{III}, k^hak^{IIb}	k^ha^{IIb}, $\underline{k^hat^{IIb}}$	xa^{II}, $\underline{xat^{II}}$	xa^{II}, $\underline{xat^{II}}$	xa^{II}, $\underline{xat^{II}}$	k^ha^{II}, $\underline{k^hat^{II}}$
bile n[230]	$*k^ha^{III}$ (< $*k^has$)			$-xa^{III}$	$-xa^{III}$	$-xa^{III}$	$-k^ha^{III}$
carry, hang vt[231]	$*k^haj^I$, $*k^haj^{III}$ (< $*k^haj^I$-s), $*k^haj^{II}$-s	k^haj^I, k^haj^{III}, $k^hejʔ$	k^haj^I, k^haj^{III}, $k^hejʔ$	xaj^I, xaj^{III} / xax^{III}	xaj^I, xaj^{III}, xej^{III}	xaj^I, xaj^{III}, $xajʔ$	k^haj^I, k^haj^{III}
overtake, herd vt[232]	$*k^hal^{III}$, $*k^hal^{III}$-s	k^hal^{III}, $k^hejʔ$	$k^hejʔ$	xej^{III} / xej^{III}	xej^{III}	$-xejʔ$	
precipice n, precipitous vi[233]	$*k^ham^I$, $*k^ham^{III}$ (< $*k^ham^I$-s)	k^ham^{III}	k^ham^{III}				k^ham^I

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228 Mi k^ha^{III} ~ k^hak^{IIb} *phlegm vi*, k^hak^{IIb} *phlegm n*; Za k^hak^I *phlegm vi/n*; Th/Zo/Te/Si *phlegm n*.
229 See $*k^ha^{III}$ *bile n*.
230 See $*k^ha^{II}$ *bitter vi*.
231 Mi/Th *carry, hoist, hang vt*; Za k^haj^I ~ k^haj^{III} *carry, hoist, hang vt*, $k^hejʔ$ *carry vb*; Zo xaj^I ~ xaj^{III} *carry*; Si k^haj^I ~ k^haj^{III} *hang vt*, $xejʔ$ *siphon vt*; Te xaj^I ~ xaj^{III} *carry, hoist, hang vt*, xej^{III} *siphon vt*; *mass n*, $xejʔ$ *siphon vt*; Si k^haj^I ~ k^haj^{III} *hang vt*, k^haj^{III} *unspecified mass n*. See $*kaj^I$ *hang, rise vi*.
232 Za *watch herd vt*; Th/Zo/Te *overtake vt*.
233 Mi/Za *precipice n, precipitous vi*; Si *steep vi*.

	Proto						
crack vi	*kʰaŋ^{I} / *kʰan^{III} (< *kʰaŋ^{I}-s)		xaŋ^{I} / xan^{III}	xaŋ^{I} / xan^{III}		xaŋ^{I} / xan^{III}	xaŋ^{I} / xan^{III}
raise vt[234]	*kʰaŋ^{II} / *kʰan^{III} (< *kʰaŋ^{II}-s)	kʰaŋ^{IIa} / kʰan^{III}	kʰaŋ^{IIa} / kʰan^{III}	xaŋ^{II} / xan^{III}	xaŋ^{II} / xan^{III}	xaŋ^{II} / xan^{III}	kʰaŋ^{II} / kʰan^{III}
handspan n[235]	*kʰap^{II}	k̲ʰ̲a̲p̲^{I}	kʰap^{IIb}	xap^{II}	xap^{II}	xap^{II}	kʰap^{II}
close shut vt[236]	*kʰar^{II} / *kʰar^{III} (< *kʰar^{II}-s)	kʰar^{IIa} / kʰar^{III}	kʰar^{IIa} / kʰar^{III}	xaʔ^{II} / xa^{III}	xaʔ^{II} / xa^{III}	xak^{II} / xak^{III}	kʰak^{II} / kʰak^{III} / kʰa^{III}
[infrequent vi[237]]	*kʰat^{I} / *kʰat^{I}-s	kʰat^{I} / kʰat^{III}	kʰat^{I}	xat^{I}	xat^{I} / xat^{III}	xat^{I} / xat^{III}	kʰat^{I} / kʰat^{III}
rope n[238]	*kʰaw^{I}	kʰaw^{I}	kʰaw^{I}	xaw^{I}	xaw^{I}	xaw^{I}	kʰaw^{I}
ferret vt[239]	*kʰɛj^{II} / *kʰɛj^{III} (< *kʰɛj^{II}-s)	kʰɛj^{IIa} / kʰɛj^{III}	kʰɛj^{IIa} / kʰɛj^{III}	xɛj^{II} / xɛj^{III}		xɛj^{II} / xɛj^{III}	kʰɛj^{II} / kʰɛj^{III}
peel vt	*kʰɛs	kʰɛʔ	kʰɛʔ	xɛʔ	xe^{III}	kʰɛʔ	kʰe^{III}
foot n[240]	*k⁽ʰ⁾e^{III} (< *k⁽ʰ⁾es)	ke^{III}	ke^{III}	xe^{III}		ke^{III}	ke^{III}

[234] Mi/Za *lay over gap* vi; Th/Si *raise, lay over gap* vt. Mizo has kʰan^{III} *mountain pass* n, kʰen^{IIb} *watershed* n. See *kaŋ^{II} *rise, convalesce* vi.

[235] Mizo tone I is associated with an irregular verbal form kʰap^{I} ~ kʰap^{III} *span with the hand* vt.

[236] Mi/Za *close shut* vi/t; *crust, dam, glutinous mass* n.

[237] Zo *rare* vi.

[238] Mi *bark used for rope* n.

[239] Za *sift* vt.

[240] Mi *foot, leg* n; Za *foot, wheel* n. See *k⁽ʰ⁾ut *hand* n for a similar alternation of initial aspiration. Thado and Tedim have keŋ^{II} *leg* n; Zo has keŋ^{II} *leg, foot* n.

			$k^hé\underline{ɲ}^{IIb}$				
hip n	$*k^hel^{II}$			xel^{II}	xel^{II}	xel^{II}	
resound, hammer v[241]	$*k^heɲ^{I}$ $*k^hen^{III}$ $(<*k^heɲ^{I}\text{-s})$ $*k^hen^{II}\text{-s}$		$k^heɲ^{I}$ k^hen^{III} $k^hé n^{IIb}$	$k^heɲ^{I}$ k^hen^{III}	$xeɲ^{I}$ xen^{III} $xɛt$	$xeɲ^{I}$ xen^{III} $xɛt$	$xeɲ^{I}/xoɲ^{I}$ xen^{III}/xon^{III} $xɛt$
scrape vt[242]	$*k^hew^{III}\text{-s}$		$k^hɛwʔ$	$k^hɛwʔ$	$xɛw^{III}$	$xɛwʔ$	$k^hɛw^{III}$
decrease vt[243]	$*k^hlam^{III}$ $*k^hlam^{III}\text{-s}$				$xiem^{III}$ $xiep$	$xiam^{III}$ $xiap$	k^hiem^{III} $k^hɛp$
put on head vt[244]	$*k^hlm^{III}$ $*k^hlm^{III}\text{-s}$		k^hom^{IIb}	k^hom^{IIb}	xim^{III} xip	xim^{III}/xom^{III} xip/xop	k^hlm^{III} k^hlp
crack vi	$*k^hlŋ^{IIb}$		$k^hlŋ^{IIb}$	$k^hlŋ^{IIb}$			
return vt[245]	$*k^hlr\text{-s}$		$k^hlrʔ$	$k^hlrʔ$			
tie, bind vt[246]	$*k^hlt$ $*k^hlt\text{-s}$		k^hlt $k^hlʔ$	k^hlt $k^hlʔ$	xlt xl^{III}	$xlʔ$	k^hlt k^hl^{III}

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[241] Mi $k^heɲ^{I}$ ~ k^hen^{III} / k^hen^{IIb} *hammer* vt; Za *hammer* vt; Th $xeɲ^{I}$ ~ xen^{III} *hammer (as blacksmith does)* vt; xen^{III} ~ xet *hammer* vt; Te/Zo $xeɲ^{I}$ ~ xen^{III} *resound* vi, xen^{III} ~ xet *hammer* vt. Tedim *hammer* vi is from Bhaskararao (1996:58).

[242] Mi *pick at with finger-nail* vt; Za *scratch with hands* vt. Thado has an irregular form 1 $xɛw^{II}$ which may have been influenced by $*t^hew^{II}$ *diminish plane* vt.

[243] See $*kram^{II}$ *decrease* vi.

[244] Za *put on head* vi; *shut up animals up in a pen* vt; Zo/Te/Si *put on bandana* vt. Thado and Zo have xom^{II} ~ xom^{III} *herd into* vt; Tedim has xom^{II} ~ xom^{III} *insert, herd into* vt; Sizang has k^hom^{II} ~ k^hom^{III} *insert, herd into* vt.

[245] See $*kir^{II}$ *return* vi.

[246] Za *bind* vt; Th/Si *tie* vt; Zo *tie, bind* vt; Te *tie, tether* vt.

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	*kʰɪ^{I}	-kʰɪ^{I}	-kʰɪ^{I}	-xɪ^{I}	-xɪ^{I}	-xɪ^{I}	-kʰɪ^{I}
barking-deer n	*kʰɪ^{I}						
gore (with horns) vt	*kʰɪ^{II} *kʰɪk^{II} (< kʰɪ^{II}-s)		kʰɪ$^{II\,mb}$ kʰɪk^{mb}				
heavy vt[247]	*kʰɪŋ^{III}	kʰɪŋ^{III}	kʰɪŋ^{III}				
peel up vt[248]	*kʰɔk *kʰɔk-s	kʰɔk kʰɔʔ		xɔʔ	xɔʔ xo^{III}	xɔk xɔʔ	kʰɔk kʰo^{III}
store vt[249]	*kʰɔl^{II} *kʰɔl^{III} (< *kʰɔl^{II}-s)			xɔl^{II} xɔl^{III}	xɔl^{II} xɔl^{III}	xɔl^{II} xɔl^{III}	xɔl^{II} xɔl^{III}
sufficient vi[250]	*kʰɔm^{II} *kʰɔm^{III} (< *kʰɔm^{II}-s)	kʰɔm^{II} _xɔp_	_kʰɔp_	xɔm^{II} _xɔp_	xɔm^{II} xɔm^{III}	xɔm^{II} nxɔm^{III}	kʰɔm^{II} kʰɔm^{III}
collect vt[251]	*kʰɔn^{I} *kʰɔn^{III} (< kʰɔn-s)	kʰɔn^{I} kʰɔn^{III}	kʰɔn^{III}	xɔn^{I} nxɔn^{III}	xɔn^{I} xɔn^{II}	xɔn^{I} xɔn^{III}	kʰɔn^{I} kʰɔn^{III}
extract vt[252]	*kʰɔr^{III}-s	kʰɔrʔ	kʰɔrʔ				
breed vt	*kʰɔj^{I}	kʰɔj^{I}	kʰɔj^{I}		xɔj^{I}	xɔj^{I}	kʰɔj^{I}

[247] Mi heavier than expected vi; Za heavy (of humans) vi. Mizo has kʰɪn^{III} ~ kʰɪm^{mb} weigh vt.
[248] Mizo peel up vi/t. See *kor/k peel up vi.
[249] Mizo has kol^{mb} keep vt.
[250] Za completely satiated vi; Th/Te/Si sufficient (as consumables) vi.
[251] Za pile of lumber n.
[252] Mi extract from hole (as crab), scoop out (as rice) vt; Za extract from hole (as crab) vt.

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Gloss	Reconstruction						
rest, stop vi[253]	*kʰɔj^{III} (< *kʰɔj^{I}-s)	kʰɔj^{III}	—	—	—	xɔj^{III}	kʰɔaj^{III}
gather vt	*kʰɔl^{I} / *kʰɔl^{III} (< *kʰɔl^{I}-s)	—	kʰɔl^{I} / kʰɔl^{III}	xɔl^{I} / xɔl^{III}	xɔl^{I} / xɔl^{III}	xɔl^{I} / xɔl^{III}	kʰɔl^{I}
	*kʰɔm^{III} / *kʰɔm^{III}-s	kʰɔm^{nb}	kʰɔm^{nb}	kʰɔm^{III} / kʰɔp	kʰɔm^{III} / kʰɔp	kʰɔm^{III} / kʰɔp	kʰɔm^{III} / kʰɔp
village n	*kʰʊa^{I}	kʰʊa^{I}	kʰʊa^{I}	xɔʊ^{I}	xɔo^{I}	xʊa^{I}	kʰua^{I}
bee n	*kʰʊaj^{I}	kʰʊaj^{I}	kʰʊaj^{I}	xɔʊj^{I}	xʊɛj^{I}	xʊaj^{I}	kʰuɛj^{I}
stranger n	*kʰʊal^{III}	kʰʊal^{III}	kʰʊal^{III}	xɔol^{III}	xɔol^{III}	xʊal^{III}	kʰual^{III}
drum n	*kʰʊaŋ^{I}	kʰʊaŋ^{I}	kʰʊaŋ^{I}	xɔoŋ^{I}	xɔoŋ^{I}	xʊaŋ^{I}	kʰuaŋ^{I}
crow vi	*kʰʊaŋ^{I} (< *kʰʊaŋ^{I}-s) / *kʰʊan^{III} (>)	kʰʊaŋ^{I} / kʰʊan^{III}	kʰʊaŋ^{I} / kʰʊan^{III}	xɔoŋ^{I} / xɔon^{III}	xɔoŋ^{I} / xɔon^{III}	xʊaŋ^{I} / xʊan^{III}	kʰuaŋ^{I} / kʰuan^{III}
city-wall n[254]	*kʊl^{III}-s	kʊlʔ	kʊlʔ	kɔl^{III}	kɔl^{III}	kɔlʔ	kɔl^{III}
bed n[255]	*kʰɔn^{III}	kʰɔm^{III}	kʰɔn^{III}	xɔn^{III}	xɔn^{III}	xɔn^{III}	-kʰɔn^{III}
upturn, close (book) vt	*kʰɔp / *kʰɔp-s	kʰɔp (khɔʔ)	kʰɔp	xɔp	xɔp	xɔp	kʰɔp

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253 Za gather vt; Si set-aside area of trees, remnant blood clots after birth n.
254 Mi city-wall n, erect a city-wall vt; Za erect a fence vt.
255 Zo, Tedim and Sizang are song words.

man-made hole n	$*k^hɔr^{I}$	$k^hɔr^{I}$	$xuʔ^{I}$	$xuʔ^{I}$	$k^hɔr^{I}$	xuk^{I}	k^huk^{I}
cover vt[256]	$*k^hu^{III}$ (< $*k^hus$) $*k^hɔk^{II}$ (< $*k^hu^{III}$-s) $*k^hɔks$		xu^{III} $xɔʔ$	xu^{III} $xɔʔ$	$k^hɔʔ$	xu^{III} $xɔk$ $xɔʔ$	k^hu^{III} $k^hɔk$
cough vi	$*k^hɔs$ $*k^hɔk^{II}$ (< $*k^hu^{III}$-s)	$k^hɔʔ$	xu^{III}		$k^hɔʔ$	$xɔʔ$	k^hu^{III} $k^hɔk$
hand n[257]	$*k^{(h)}ɔt$		$xɔt$	$xɔt$	$kɔt$	$xɔt$	$k^hɔt$
smoke n/vi[258]	$*k^hu^{II}$ $*k^hut^{II}$ (< $*k^hu^{II(a)}$-s)	k^hu^{IIb} / k^hu^{III} k^huk^{IIb}	xu^{II} xut^{II}	xu^{II} xut^{II}	k^huk^{IIb}	xu^{II} xut^{II}	k^hu^{II} k^hut^{II}
knee n	$*k^hup^{II}/k^{II}$	k^hup^{IIb}	xup^{II}	xup^{II}	k^huk^{IIb}	xuk^{II}	k^hup^{II}

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[256] Thado xoʔ *cover (as head)* vt, xu^{III} *cover* vt; Zo xu^{III} ~ xoʔ *cover (as head)* vt, xu^{III} *cover* vt; Tedim xu^{III} ~ xok *cover (as head)* vt, xuʔ *cover* vt; Sizang k^{h}u^{III} ~ k^{h}ok *cover (as head)* vt.

[257] See *k$^{(h)}$e^{III} *foot* n for a similar alternation of initial aspiration.

[258] Mi k^{h}u^{IIb} *smoke* n, k^{h}u^{III} ~ *k^{h}uk^{IIb} ~ *k^{h}u^{IIb} *smoke* vi; Th xu^{II} *smoke* vi; Za k^{h}u^{IIb} *smoke* n, xu^{II} ~ xut^{II} *smoke, cough* vi; Zo/Te xu^{II} *smoke* n, xu^{II} ~ xut^{II} *smoke* vi; Si k^{h}u^{II} *smoke* n, k^{h}u^{II} ~ k^{h}ut^{II} *smoke* vi.

*kl-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
satiated vi	*klej^{I} *klej^{III} (< *klej^{I}-s)	tˡej^{I} tˡej^{III}		ʰlej^{I} ʰlej^{III}	taj^{I} tej^{III}		
tiger n, prowl vi [259]	*kla^{II} *klak^{II} (< *kla^{II}-s)	ta^{III} tak^{IIb}	tˡa^{IIb}-	ʰlo^{II}	to^{II}	to-	to-
drop, free vi [260]	*kla$^{II(/III)}$ *klak^{II} (< *kla^{II}-s)	ta^{III}/tu^{III} tak^{IIb}/tuk^{IIb}	tˡa^{IIb}/tˡu^{IIb} tˡak^{IIb}/tˡuk^{IIb}		-ta^{III} -tat^{II}	-ta^{III} -tak^{II}	-ta^{II} -tak^{II}/tat^{II}
hang vi [261]	*klaj^{I} *klaj^{III} (< *klaj^{I}-s)		tˡaj^{I} tˡaj^{III}				
run vi	*klaj^{I} *klaj^{III} (< *klaj^{I}-s)			ʰlej^{I} ʰlej^{III}	taj^{I} taj^{III}	taj^{I} taj^{III}	taj^{I} taj^{III}
late vi [262]	*klaj^{II} *klaj^{III} (< *klaj^{I}-s)	taj^{IIa} tˡaj^{III}	taj^{IIa} tˡaj^{III}				-taj^{H} -taj^{III}
public n	*klaŋ^{I}	-taŋ^{I}	tˡaŋ^{I}	ʰlaŋ^{I}	taŋ^{I}-	taŋ^{I}-	taŋ^{I}

[259] Mi *prowl vi*; Za *leopard n*; Th *mythical tiger n*; Te/Si *mythical half-man half tiger n*.

[260] Mi ta^{III} *drop vi*, tu^{III} *fall vi*; Za tˡa^{IIb} *drop vi*, tˡu^{IIb} *fall vi*, Zo/Te/Si *free vi*. Thado -ʈa^{III} ~ ʈat^{II} *free vi* is possibly associated with Mizo and Zahau tseʔ *send for vi*; Sizang tone II may be sandhi influenced. The tonal variations are due to external influence disucssed under *Fall* (#8). See *kʰla$^{II(/III)}$ *drop, send-off, send vt*.

[261] See *kʰlaj^{I} *hang vt/b*.

[262] Sizang tone H is due to sandhi.

mountain n[263]	*klaŋ^{I}	t^{l}aŋ^{I}	t^{l}aŋ^{I}	^{h}laŋ^{I}	taŋ^{I}	taŋ^{I}	taŋ^{I}
run vi	*klan^{II} *klan^{III} (< *klan^{II}-s)	t^{l}an^{IIa} t^{l}an^{III}	t^{l}an^{IIa} t^{l}an^{III}				
obedient vi[264]	*klɛj^{II} *klɛj^{III} (< *klɛj^{II}-s)	t^{l}ɛj^{IIa} t^{l}ɛj^{III}	t^{l}ɛj^{IIa} t^{l}ɛj^{III}		tɛj^{II} tɛj^{III}	tɛj^{II} tɛj^{III}	tɛj^{II} tɛj^{III}
fold vi[265]	*klɛp	t^{l}ɛp	t^{l}ɛp				
bright vi[266]	*kle^{II} *klet^{II} (< *kle^{II}-s)	t^{l}e^{IIa} t^{l}et^{IIb}	t^{l}e^{IIa} t^{l}et^{IIb}		te^{II} tet^{II}	te^{II} tet^{II}	te^{II} tet^{II}
rinse vt[267]	*kleŋ^{III} *kleŋ^{III}-s	t^{l}eŋ^{III} (t^{l}ɛn^{IIb})	t^{l}eŋ^{III} tlɛŋ^{IIb}	^{h}leŋ^{III} ^{h}lɛʔ			
snap vi[268]	*kʰɹak^{II} *kʰɹak^{II}-s	t^{l}ɹak^{IIb} t^{l}ɹaʔ	<u>kɹak^{IIb}</u> <u>kɹaʔ</u>				
complete v[269]	*klɪŋ^{I} *klɪn^{III} (< *klɪŋ^{I}-s)	t^{l}ɪŋ^{I} t^{l}ɪn^{III}	t^{l}ɪŋ^{I} t^{l}ɪn^{III}	^{h}lɪŋ^{I} ^{h}lɪn^{III}	ʧɪŋ^{I} ʧɪn^{III}	ʧɪŋ^{I} ʧɪn^{III}	ʧɪŋ^{I} ʧɪn^{III}

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263 Th *mountain-range n*; Zo/Te *hill n.*
264 Za *rearable by foster mum vi*; Si *capable vi.*
265 Mi *turned (as edge of knife) vi*; Za *shrink (when cooked) vi.*
266 Za *luminated vi*; Te/Si *twinkle vi.*
267 Za *transfer from pot to pot vt.* Laizo has t^{l}eŋ^{III} *rinse vt.*
268 Teizang has ʧɹak^{II} ~ ʧɹak^{III} *snap vi.* See *kʰɹak^{II} *snap vt.*
269 Mi/Th/Zo *complete vi*; Za t^{l}ɪŋ^{I} ~ t^{l}ɪn^{III} *complete vi*, t^{l}ɪn^{IIb} *complete vi*; Te/Si ʧɪŋ^{I} ~ ʧɪn^{III} *complete vi*, ʧɪn^{III} *complete vi.*

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	*kIːn[III]-s	t'ɪn[IIb]				
durable vi	*klɔw[I] / *klɔw[III] (< *klɔw[I]-s)	t'ɔw[I] / t'ɔw[III]	ʰlɔw[I] / ʰlɔw[III]	tow[I] / tow[III]	tow[I] / tow[III]	
few vi	*klom[I] / *klom[III] (< *klom[I]-s)	t'em[I] / t'em[III]	ʰlom[I] / ʰlom[III]	tom[I] / tom[III]	tom[I] / tom[III]	tom[I] / tom[III]
sink vi[270]	*klom[I] / *klom[III] (< *klom[I]-s)	t'om[I] / t'om[III]	ʰlom[I] / ʰlom[III]	tom[I] / tom[III]	tom[I] / tom[III]	tom[I] / tom[III]
arrive v[271]	*klɔŋ[II] / *klɔn[III] (< *klɔŋ[II]-s) / *klɔn[III]-s	t'ɔŋ[IIa] / t'ɔn[III] / t'ɔn[IIb]	ʰlɔŋ[II] / ʰlɔn[III] / ʰlɔt	tɔŋ[II] / tɔn[III] / tɔt	tɔŋ[II] / tɔn[III] / tɔt	tɔŋ[II] / tɔn[III] / tɔt

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[270] Zo/Te/Si *sink, enter vi.*

[271] Za t'ɔŋ[IIa] ~ t'ɔn[III] *return vi*, t'un[IIb] *return vi*, ʰlɔŋ[IIa] ~ ʰlɔn[III] *arrive vi*, ʰtɔn[III] ~ *ʰlɔt *bring vt*; Zo/Te tɔŋ[II] ~ tɔm[III] *arrive vi*, ton[III] ~ tɔt *reach (symptom time) vi*; Si tɔŋ[II] ~ tɔm[III] *reach (goal) vi*, ton[III] ~ tɔt *reach (symptom time) vi.*

*kʰl-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
south, west n[272]	*kʰlaŋ^I	tʰlaŋ^I	tʰlaŋ^I	ʰlaŋ^I	ʰlaŋ^I	xaŋ^I	tʰaŋ^I
descendant n	*kʰlas	tʰlaʔ	tʰlaʔ				
free vt	*kʰlas	tʰlaʔ	tʰlaʔ	ʰla^{III}	ʰla^{III}	xaʔ	tʰa^{III}
spirit n	*kʰla^I	tʰla^I	tʰla^I	ʰla^I	ʰla^I	xa^I	tʰa^I
wing, feather n	*kʰla^{III} (< *kʰlas)	tʰla^{III}	tʰla^{III}	ʰla^{III}	ʰla^{III}	xa^{III}	tʰa^{III}
moon n	*kʰla^{III} (< *kʰlas)	tʰla^{III}	tʰla^{III}	ʰla^{III}	ʰla^{III}	xa^{III}	tʰa^{III}
drop, send-off, send vt[273]	*kʰla$^{II(/III)}$ *kʰlak^{II} *kʰlak^{II}-s	tʰla^{III} / tʰlu^{III} tʰlak^{IIb} / tʰluk^{IIb}	tʰla^{IIb} / tʰlu^{IIb} tʰlak^{IIb} / tʰluk^{IIb}	ʰla^{II} ʰlaʔ^{III}	ʰla^{III} ʰlaʔ^{II} ʰla^{III}	xa^{III} xak^{II} xak^{III}	tʰa^{III} tʰak^{II} tʰak^{III} / tʰa^{III}
hang v[274]	*kʰlaj^I *kʰlaj^{III} (< *kʰlaj^I-s) *kʰlaj^{III}-s		tʰlaj^I tʰlaj^{III} tʰej ʔ				

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[272] Mi *west n*; Za/Th/Zo/Te/Si *south n*.

[273] Mi tʰa^{III} *drop vt*, tʰu^{III} *fell vt*; Za tʰa^{IIb} *drop vt*, tʰu^{IIb} *fell vt*; Th ʰla^{III} ~ ʰlaʔ^{II} *drop.free vt*; Za tʰa^{IIb} *drop vt*, Si tʰa^{III} ~ tʰak^{II} *send-off, escort vt*, ʰla^{III} *send vt*. Te xa^{III} ~ xak^{III} *send-off, escort vt*; Zo ʰla^{III} ~ ʰlaʔ^{II} *send-off, escort vt*, ʰla^{III} *send vt*. Te *send vt* is from Henderson (1965:151). The tonal variations are due to external influence discussed under *Fall* (#8). See *kla$^{III(/III)}$ *drop, free vi*.

[274] Za tʰlaj^I ~ tʰaj^{III} *hang vt*, tʰej ʔ *hang vb*. See *klaj *hang vi*.

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chew vt[275]	*kʰlaj^{II} / *kʰlaj^{III} (< *ɪkʰlaj^{II}-s)	k̲ʰ̲a̲j̲^{IIa} / kʰaj^{III}	ʰlaj^{II} / ʰlaj^{III} / ʰlɛj^{III}	ʰlaj^{II} / ʰlaj^{III}		tʰaj^{II} / tʰaj^{III}
vegetable, seed n[276]	*kʰlaj^{III}	tʰlaj^{III}	ʰlaj^{III}	ʰlaj^{III}	xaj^{III}	tʰaj^{III}
jhoom hut n[277]	*kʰlam^{I}	tʰlam^{I}	ʰlam^{I}	ʰlam^{I}	xam^{I}	tʰam^{II} / t̲ʰ̲o̲m̲^{II}
jaw n	*kʰlaŋ^{I}		ʰlaŋ^{I}	ʰlaŋ^{I}		
sift vt[278]	*kʰlɛj^{II} / *kʰlɛj^{III} (< *kʰlɛj^{II}-s)	tʰlɛj^{IIa} / tʰlɛj^{III}	ʰlɛj^{II} / ʰlɛj^{III}	ʰlɛj^{II} / ʰlɛj^{III}	xɛj^{II} / xɛj^{III}	tʰɛj^{II} / tʰɛj^{III}
stunted vi[279]	*kʰlɛk	tʰlɛk	ʰlɛʔ	ʰlɛʔ	xɛk	k̲ʰ̲ɛ̲k̲
choose vt	*k$^{(h)}$lɛŋ^{I} / *k$^{(h)}$lɛn^{III} (< *ɪk$^{(h)}$lɛŋ^{I}-s)	tʰlɛŋ^{I} / tʰlɛn^{III}	ʰlɛŋ^{I} / ʰlɛn^{III}	ʰlɛŋ^{I} / ʰlɛn^{III}	t̲ɛ̲ŋ̲^{I} / tɛn^{III}	tɛŋ^{I} / tɛn^{III}
exchange vt[280]	*kʰlɛŋ^{II} / *kʰlek^{II} / *kʰlɛŋ^{II}-s / *kʰlek^{II}-s	t̲ʰ̲l̲ɛ̲ŋ̲^{IIb}	ʰlɛŋ^{II} / ʰleʔ^{II} / ʰlɛn^{III} / ʰle^{III}	ʰlɛŋ^{II} / ʰleʔ^{II} / ʰlɛn^{III} / ʰle^{III}	xɛŋ^{II} / xek^{II} / xɛŋ^{III} / xek^{III}	tʰɛak^{II} / tʰɛak^{III} / tʰe^{III}
arrive v[281]	*kʰlɛŋ^{I}	tʰlɛŋ^{I}	ʰlɛŋ^{I}	ʰlɛŋ^{I}	xɛŋ^{I}	tʰɛŋ^{I}

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[275] Saizang has xaj^{II} ~ xaj^{II} chew vt.

[276] Mi/Za vegetable n; Te/Si seed n.

[277] Te batchelor's bed, temporary hut n; Si tʰam^{II} sleeping platform n, tʰom^{II} batchelors' quarters n.

[278] Zo take something from container for a while vt; Te slit open (as belly) vt; Si choose vt.

[279] Sizang appears to be a loanword, possibly from Tedim.

[280] Th ʰlɛŋ^{II} ~ ʰlɛn^{III} substitute vt, ʰleʔ^{II} ~ ʰle^{III} exchange vt.

[281] Mi/Za tʰlɛŋ^{I} ~ tʰlɛn^{III} arrive vi, tʰen^{III} enable somebody to arrive vi; Te overtake, overshoot vt; Zo arrive (as time to do something) vi; Si tʰɛŋ^{I} ~ tʰen^{III} / tʰɛt arrive vi, tʰen^{III} arrive vt.

Gloss							
	*kʰlɛn^{III} (< *kʰlɛŋ^{I}-s) *kʰlɛn-s	tʰlɛn^{III} tʰlɛn^{IIb}	tʰlɛn^{III} tʰlɛn^{IIb}		ʰlɛn^{III}	xɛn^{III}	tʰɛn^{III} tʰɛt
fold vt	*kʰlɛp *kʰlɛp-s	tʰlɛp tʰlɛʔ	tʰlɛp tʰlɛʔ	ʰlɛp	ʰlɩp	xɛp	tʰɛp tʰe^{III}
deceive vt[282]	*kʰlem^{II} *kʰlem^{III} (<*kʰlem^{II}-s) *kʰlem^{III}-s	tʰlem^{IIa} tʰlem^{III}	tʰlem^{IIa} tʰlem^{III}	ʰlem^{II} ʰlem^{III} ʰlɛp	ʰlem^{II} ʰlem^{III}	xem^{II} xem^{III}	tʰɛam^{II} tʰɛam^{III}
dish n	*kʰlɛŋ^{III}	tʰlɛŋ^{III}	tʰlɛŋ^{III}	ʰlɛŋ^{III}			
snap vt[283]	*kʰlɩak^{IIb} *kʰlɩak^{II}-s	tʰlɩak^{IIb} tʰlɩaʔ	k̲ʰl̲ɩ̲a̲k̲^{IIb} kʰlɩaʔ	ʰlɩɛʔ^{II} ʰlɩɛ^{III}	ʰlɩɛʔ^{II} ʰlɩɛ^{III}	xɩak^{II} xɩak^{III} / xɩaʔ	ʧʰɩɛk^{II} ʧʰɩɛk^{III} / ʧʰɩe^{III}
put to sleep vt[284]	*kʰlɩm^{I} *kʰlɩm^{II} (< *kʰlɩm^{I}-s) *kʰlɩm^{III}-s	tʰlɩm^{I} tʰlɩm^{III} tʰlɩm^{IIb}	tʰlɩm^{I} tʰlɩm^{III} tʰlɩm^{IIb}	ʰlɩm^{I} ʰlɩm^{III}	ʰlɩm^{I} ʰlɩm^{III}		
wind n[285]	*kʰli^{I}	tʰli^{I}	tʰli^{I}	ʰli^{I}		-xi^{I}	ʧʰi^{I}
tears n, *strain* vt[286]	*kʰli^{I} *kʰlɩt (< *kʰli^{I}-s)	tʰli^{I} tʰlɩt	tʰli^{I}	ʰli^{I} ʰlɩt	ʰli^{I} ʰlɩt	xi^{I} xɩt	ʧʰi^{I} ʧʰɩt

[282] Th ʰlem^{II} ~ ʰlem^{III} / ʰlɛp *deceive* vt.

[283] See *klɩak^{II} *snap* vi.

[284] Mi tʰlɩm^{I} ~ tʰlɩm^{III} *act stealthily* vi, tʰlɩm^{IIb} *put to sleep* vt; Th/Zo ʰlɩm^{I} ~ ʰlɩm^{III} *put to sleep* vt.

[285] Th *breeze* n. Thado and Tedim are song words.

[286] Mi tʰli^{I} *tears* n, tʰli^{I} ~ tʰlɩt *strain* vt; Za tʰli^{I} *tears* n, ʰli^{I} ~ ʰlɩt *strain* vt; Te xi^{I} *tears* n, xi^{I} ~ xɩt *strain* vt; Si ʧʰi^{I} *tears* n, ʧʰɩt ~ ʧʰi^{III} *strain* vt; Tedim form 1 xi^{I} *strain* vt is only in Tonzang Tedim.

	*kʰɪt-s					
marrow n	*kʰlɪŋ^{II}	tʰlɪŋ^{II}	tʰlɪk	ʰlɪn^{II}		tʃʰɪ^{III}
dislocate vt[287]	*kʰlɔŋ^{III} *kʰlɔŋ^{III}-s	tʰlɔn^{III} tʰlɔn^{IIb}	tʰlɔŋ^{III} tʰlɔŋ^{IIb}	ʰlɔŋ^{III} ʰlɔʔ	ʰlɔŋ^{III} ʰlɔʔ	xɔŋ^{III} xɔt	tʰɔŋ^{III} tʰɔk
weed vt	*kʰlɔw^{II} *kʰlɔw^{III} (< *kʰlɔw^{II}-s) *kʰlɔw^{III}-s	tʰlɔw^{IIa} tʰlɔʔ	tʰlɔw^{IIa} tʰlɔʔ	ʰlɔw^{II} ʰlɔ^{III}	ʰlɔw^{II} ʰlɔ^{III}	xɔw^{II} xɔʔ	tʰɔw^{II} tʰɔ^{II}
discourage vt	*kʰlɔw^{III} *kʰlɔw^{III}-s			ʰlɔw^{III}	ʰlɔw^{III}	xɔw^{III} xɔw$^{?}$	
brain n	*kʰlɔak^{II}	tʰlɔak^{IIb}	tʰlɔak^{IIb}	ʰlɔɔʔ^{II}	ʰlɔɔʔ^{III}	xɔak^{II}	tʰuek^{II}
sweet v[288]	*kʰlɔm^{I} *kʰlɔm^{III} (< *kʰlɔm^{I}-s) *kʰlɔm^{III}-s	tʰlɔm^{I} tʰlɔm^{III}	tʰlɔm^{I} tʰlɔm^{III} tʰlɔm^{IIb}	ʰlɔm^{I} ʰlɔm^{III}	ʰlɔm^{I} ʰlɔm^{III}	xɔm^{I} xɔm^{III}	tʰɔm^{I} tʰɔm^{III}
tauten vt[289]	*kʰlɔŋ^{I} *kʰlɔŋ^{III} (< *kʰlɔŋ^{I}-s)	tʰlɔŋ^{I} tʰlɔŋ^{III}		ʰlɔŋ^{I} ʰlɔn^{III}	ʰlɔŋ^{I} ʰlɔn^{III}	xɔŋ^{I} xɔn^{III}	tʰɔŋ^{I} tʰɔn^{III}

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[287] Mi/Za/Th dislocate vi/t.
[288] Mi/Zo/Th/Te/Si sweet vi; Za tʰlɔm^{I} ~ tʰlɔm^{III} sweet vi, tʰɔm^{IIb} sweeten vt.
[289] Te lay over a gap vt.

*kr-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
distend v [290]	*kreŋ^I *kren^{III} (< *kreŋ^I-s)	tʃaŋ^I tʃen^{III}	tʃeŋ^I tʃen^{III}	kaŋ^I ken^{III}	keŋ^I ken^{III}	kaŋ^I ken^{III}	kaŋ^I ken^{III}
dry vi	*kreŋ$^{I/II}$ *kren^{III} (< *kreŋ^I-s)	tʃaŋ^I tʃen^{III}	tʃaŋ^{IIa} tʃen^{III}				
weep vi	*krɒp *krɒp-s	tʃap tʃaʔ	tʃap tʃaʔ	kap ka^{III}	kɒp ka^{III}	kap ʔaʔ	kɒp ka^{III}
bosom n [291]	*(kr)aŋ^I	tʃaŋ^I	tʃaŋ^I	aŋ^I	aŋ^I	aŋ^I	kaŋ^I
evil-spirit n	*kraw^{III}	tʃaw^{III}		kaw^{III}	kaw^{III}	kaw^{III}	kaw^{III}
tear, tatty vi [292]	*krɛt *krɛt-s	tʃet tʃɛʔ	tʃet tʃɛʔ				
lightning n [293]	*krek^{II}	tʃek^{IIb}	tʃek^{IIb}	keʔ^{II}	keʔ^{II}	kek^I	kɛak^{II}
steep vi	*kren^I *kren^{III} (< *kren^I-s)	tʃen^{IIa} tʃen^{III}		ken^I ken^{III}	ken^I ken^{III}	ken^I ken^{III}	ken^I ken^{III}

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[290] Mi/Th exert oneself; Th stretch vi/t, Zo steadfast vi; Te/Si stretch vt. Mizo has tʃeŋ^{IIa} ~ tʃen^{III} distended (as breasts with milk) vi. Possibly related to *kʰreŋ^I increase vi.

[291] Mizo has a song word eŋ^I bosom n.

[292] Mi tear vi; Za tatty vi. See *kʰret tear, make tatty vt.

[293] Th/Si mineral believed to come to earth during a thunderstorm n.

drop vi[294]	*kɪɪa$^{II/III}$			kɪe^{III}	kɪa^{III}	kie^{III}
	*kɪɪa^{I}-s			kɪaʔ^{II} / kɪet^{II}	kɪaʔ^{II} / <u>kɪet^{II}</u>	<u>kiet^{II}</u>
disperse vi[295]	*kɪɪak^{II}	tɪak^{IIb}				
	*kɪɪak^{II}-s	tɪak^{IIb} tɪaʔ				
stripe v[296]	*(k)ɪɪa^{I}	tɪa^{I}	geɪ^{I}	gɪe^{I}	gɪa^{I}	ŋiel^{I}
	*(k)ɪɪa^{III} (< *(k)ɪɪa^{I}-s)	tɪa^{III}	geɪ^{III}	gɪe^{III}	gɪa^{III}	ŋiel^{III}
	*(k)ɪɪa^{III}-s				gɪaʔ	
drop vi[297]	*kɪɪ^{III}	tɪl^{III}				
	*kɪɪ^{III}-s	tɪl^{III} tɪlʔ				
scare, disgusted vi[298]	*kɪɪs	tɪʔ	kɪ^{III}	kɪ^{III}	kɪʔ	ki^{III}
move vi[299]	*kɪɪn^{II}	tɪak^{II}		kin^{II}	kin^{II}	kin^{II}
	*kɪɪn^{III} (< *kɪɪn^{II}-s)	tɪak^{III} (< *kɪin^{II}-s)		kin^{III}	kin^{III}	kin^{III}
borrow, lend v[300]	*kɪom^{I}	kom^{I}	kom^{I}	kom^{I}	kom^{I}	kom^{I}

[294] Si *drop (as mineral believed to come to earth during a thunderstorm)* vi. The tone III in form 1 is most likely associated with the fluctuations discussed in footnote 160 of the main text; an original tone III would have derived from *kɪɪas which would have given kiaʔ in Tedim.

[295] See *kʰɪak~^{II}-s *disperse* vt

[296] Mi/Za *striped* vi; Th *striped, spotted* vi; Zo geɪ^{I} ~ gɪe^{I} *striped, spotted, spotted* vi; gɪe^{III} *stripe, write* vt; Te gɪa^{I} ~ gɪa^{III} *striped, spotted* vi, gɪa^{III} ~ gɪaʔ *stripe* vt; Si ŋiel^{I} ~ ŋiel^{III} *striped, spotted* vi, ŋiel^{III} *stripe* vt. Tedim has geɪʔ *write* vt.

[297] See *kʰɪɪl^{III} *drop* vt.

[298] Mi/Za *scare* vi; Th/Zo/Te/Si *scare* vt. Mizo has tɪ^{I} ~ tɪt *timid* vi. See *kʰɪɪs *scare* vt.

[299] See *kʰɪɪn^{II} *move* vt.

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	*krom^{III} (< *krom^{I}-s)			kom^{III}	kom^{III}	kom^{III}
	*krom^{III}-s				kɔp	kɔp
tie vt	*kron^{I}	ton^{I}	ton^{I}			
	*kron^{III} (< *kron^{I}-s)	ton^{III}	ton^{III}			
descend, decrease vi[301]	*krom^{II}	ʈom^{IIa}	ʈom^{IIa}	kom^{II}	kom^{II}	
	*krom^{III} (< *krom^{II}-s)	ʈom^{III}	ʈom^{III}	kom^{III}	kom^{III}	

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[300] Th/Zo *borrow, lend, visit (a person)* vt, Te kom^{I} ~ kom^{III} *borrow* vt, *gather (as relatives)* vi, kom^{III} ~ kɔp *lend* vt, Si kom^{I} ~ kom^{III} *borrow* vt, *in regular contact with* vi; kom^{III} ~ kɔp *lend* vt. Lorrain (1940:434) has Mizo ʈom *share with* vt.
[301] Mi/Th/Zo/Te *descend* vi; Za *descend, decrease* vi. See *kʰrom^{II} *decrease* vt.

*kʰr-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
increase vi[302]	*kʰraŋ^{I} *kʰren^{III} (< *kʰraŋ^{I}-s)	tʰaŋ^{I} tʰen^{III}	tʰaŋ^{I} tʰen^{III}	xaŋ^{I} xen^{III}	xaŋ^{I} xen^{III}	xaŋ^{I} xen^{III}	kʰaŋ^{I} kʰen^{III}
wake vi[303]	*kʰraŋ^{III} *kʰraŋ^{III}-s	tʰaŋ^{IIb}	tʰaŋ^{III} tʰaŋ^{IIb}	xaŋ^{III} ʔax^{I}	xaŋ^{III} ʔax		kʰaŋ^{III} kʰen^{III}
good vi	*kʰra^{III} (*kʰras) *kʰrek (< *kʰra^{III}-s)	tʰa^{III} tʰet	tʰa^{III} tʰɛt	pʰa^{III} pʰɛt	pʰa^{III} pʰɛt	pʰa^{III} pʰɛt	pʰa^{III} pʰɛt
summer n	*kʰral^{I}	tʰal^{I}	tʰal^{I}	xal^{I}	xal^{I}	xal^{I}	kʰal^{I}
crotch n[304]	*kʰral^{III}	tʰal^{III}		xal^{III}	xal^{III}	xal^{III}	
separate v[305]	*kʰren^{I} *kʰren^{III} (< *kʰren^{I}-s) *kʰren^{III}-s	tʰen^{I} tʰen^{III}	tʰen^{I} tʰen^{III} tʰen^{IIb}	xen^{I} xen^{III} xet	xen^{I} xen^{III} xet	xen^{I} xen^{III}	kʰen^{I} kʰen^{III} kʰet
tear, make tatty vi[306]	*kʰret	tʰɛt	tʰɛt		xet		kʰɛt

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302 Possibly related to *kraŋ^{I} distend vi/t.

303 Mi counter for number of times wake up during night n; Za wake vi/t; Si kʰaŋ^{III} counter for number of times wake up during night n, kʰaŋ^{III} ~ kʰen^{III} wake briefly vi.

304 Mi groin n. Mizo from Schuessler (2007:276). Thado, Zo, Tedim and Sizang have kal^{I} interval n.

305 Mi tʰen^{I} ~ tʰen^{III} separate vt, Za tʰen^{I} ~ tʰen^{III} separate vt, tʰen^{III} ~ tʰen^{IIb} separate vt, xen^{III} ~ xet separate vt, xen^{III} separate vb, Te xen^{I} ~ xen^{III} separate vt, xen^{III} separate vb; Th/Zo xen^{I} ~ xen^{III} separate vb; Si kʰen^{I} ~ kʰen^{III} separate vt, kʰen^{III} ~ kʰet separate vb.

306 Mi tear vi; Za make tatty vi. See *kret tear, tatty vi.

Gloss	Proto	R1	R2	R3	R4	R5	R6
drop vt[307]	*kʰrɛt-s	tʰɛʔ	tʰɛʔ	xeɪ^{III}	xie^{III}	xia^{III}	kʰie^{III}
	*kʰrɪa$^{II/III}$	tʰɪat^{IIb} / tʰɪaʔ	tʰɪat^{IIb}	xeɪʔ^{II}	xiet^{II} / xieʔ^{II}	xiat^{II}	kʰiet^{II}
	*kʰrɪak (< *kʰrɪa^{II} -s)		tʰɪaʔ				
	*kʰrɪak-s						
disperse vt[308]	*kʰrɪak^{II}-s	tʰɪaʔ				xiaʔ	
drop vt[309]	*kʰrɪl^{III}		tʰɪl^{III}				
needle n	*kʰrɪm^{I}		tʰɪm^{I}		pʰim^{I}	pʰim^{I}	
scare vt[310]	*kʰrɪs		tʰɪʔ				
move vt[311]	*kʰrɪn^{II}		tʰin^{IIb}	xin^{II}	xin^{II}	xin^{II}	kʰin^{II}
	*kʰrɪn^{III} (< *kʰrɪn^{II} -s)			xin^{III}	xin^{III}	xin^{III}	kʰin^{II}
	*kʰrɪn^{II}-s						
tend vt[312]	*kʰrɔj^{I}				xɔj^{I}	xɔj^{I}	kʰɔj^{I}
	*kʰrɔj^{III} (< *kʰrɔj^{I} -s)			xɔj^{III}	xɔj^{III}	xɔj^{III}	kʰɔj^{III}
column n	*kʰrʊam^{III}	tʰʊam^{III}	tʰʊam^{III}	xʊom^{III}	xʊom^{III}	xʊam^{III}	kʰuam^{III}

307 Mi demolish, fell vt; Za demolish vt; Th drop vi. See the discussion under *kʰrɪa$^{II/III}$ drop vi regarding tonal issues.

308 Mi/Te pound rice a second time vt. See *kʰrɪak^{II} disperse vi.

309 See *kʰrɪl^{III} drop vi.

310 See *kʰrɪs scare, disgusted vi.

311 Th move vi/t. See *kʰrɪn^{II} move vi.

312 Lorrain (1940:432) has Mizo ʔɔj- sit and look on while another is working v.

	*kʰroas	tʰɤaʔ	tʰɤaʔ	xɤoᴵᴵᴵ	xɤoᴵᴵ	xɤaʔ	kʰueᴵᴵᴵ
swill vt	*kʰroas	tʰɤaʔ	tʰɤaʔ	xɤoᴵᴵᴵ	xɤoᴵᴵ	xɤaʔ	kʰueᴵᴵᴵ
decrease vi[313]	*kʰromᴵᴵ *kʰromᴵᴵᴵ (< *kʰromᴵᴵ-s)	tʰumᴵᴵᵃ tʰumᴵᴵ					
dove n	*kʰruᴵ	tʰuᴵ-	tʰuᴵ-	-xuᴵ	-xuᴵ	-xuᴵ	-kʰɪ
sew vt[314]	*kʰrujᴵ *kʰrujᴵᴵ (< *kʰrujᴵ-s)	tʰɪᴵ tʰɪtᴵᴵᵇ	tʰɤjᴵ tʰɤjᴵᴵᴵ	xujᴵ xujᴵᴵᴵ / xojᴵᴵᴵ	xujᴵ xujᴵᴵᴵ	xujᴵ xujᴵᴵᴵ	kʰɤjᴵ kʰɤjᴵᴵᴵ

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[313] See *kromᴵᴵ *descend, decrease vi.
[314] Zahau irregular form 2 is confirmed in Osburne (1975:125).

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	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
road n	$*lɛm^{II}$	$lɛm^{IIa}$	$lɛm^{IIa}$	$lɛm^{II}$	$lɛm^{II}$	$lɛm^{II}$	$lɛm^{II}$
seek out vt[315]	$*lɛm^{II}$ $*lɛm^{III}$ (< $*lɛm^{II}$-s) $*lɛm^{III}$-s	$lɛm^{IIa}$ $lɛm^{III}$		$lɛm^{II}$ $lɛm^{III}$	$lɛm^{II}$ $lɛm^{III}$	$lɛm^{II}$ $lɛm^{III}$	$lɛm^{II}$ $lɛm^{III}$ $lɛp$
appear vi	$*laŋ^{III}$ $*laŋ^{III}$-s	$laŋ^{III}$ $laŋ^{IIb}$	$laŋ^{III}$ $laŋ^{IIb}$	$laŋ^{III}$ $laʔ$	$laŋ^{III}$ $laʔ$	$laŋ^{III}$ lat	$laŋ^{III}$ lak / lat
young female n/vi[316]	$*la^{I}$ $*lat$ (< $*la^{I}$-s)	la^{I} lat^{IIb}	la^{I} lat^{IIb}	la^{I}	la^{I}	la^{I}	la^{I}
spleen, diaphragm n[317]	$*la^{II}$	la^{IIb}	la^{IIb}	la^{II}	la^{II}	la^{II}	la^{II}
take vt	$*la^{II}$ $*la^{I}$-s	la^{III} lak^{IIb}	la^{IIb} lak^{IIb}	la^{II} $laʔ^{II}$	la^{II} $laʔ^{II}$	la^{II} lak^{II}	la^{II} lak^{II}
middle, navel n[318]	$*laj^{I}$	laj^{I}	laj^{I}	laj^{I}	laj^{I}	laj^{I}	laj^{I}
writing n	$*laj^{III}$		laj^{III}		laj^{III}	laj^{III}	laj^{III}

[315] Mi *retrieve, articulate* vt; Th/Si *search and obtain* vt; Zo *make money, build a house* vt; Te $lɛm^{II}$ ~ $lɛm^{III}$ *earn* vt, $lɛm^{III}$ ~ $lɛp$ *earn* vb. Tedim *earn* vb from Henderson (1965:83).
[316] Mi/Za *la*^{I} *female animal* vi, *la*^{I} ~ *lat*^{IIb} *be a young female* vi; Th *la*^{I} *female animal* n; Zo/Te/Si *la*^{I} *female animal suffix* n.
[317] Mi/Za/Th/Zo *spleen* n; Te/Si *diaphragm* n
[318] Used as gerundive marker after verbs in all six languages.

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harrow, dig vt[319]	$*$laj^{III} / $*$laj^{III}-s	laj^{III} / lajʔ	laj^{III} / lajʔ	laj^{III} / laj^{III}	laj^{III} / laj^{III}	laj^{III} / laj^{III}	laj^{III} / laj^{III}
fathom n[320]	$*$lam^{I}	^{h}lam^{I}	lam^{I}	lam^{I}	lam^{I}	lam^{I}	lam^{I}
dance v[321]	$*$lam^{I} / $*$lam^{III} ($<*$lam^{I}-s) / $*$lam^{III}-s	lam^{I} / lam^{III} / lem^{IIb}	lam^{I} / lam^{III}	lam^{I} / lam^{III} / lep	lam^{I} / lam^{III} / lep	lam^{I} / lam^{III} / lep	lam^{I} / lam^{III} / lep
visit, fly, epidemic vi[322]	$*$laŋ^{I} / $*$lan^{III} ($<*$laŋ^{I}-s)	laŋ^{I} / leŋ^{I} / lan^{III} / len^{III}	laŋ^{I} / leŋ^{I} / len^{III}	laŋ^{I} / leŋ^{I} / lan^{III} / len^{III}	laŋ^{I} / leŋ^{I} / lan^{III} / len^{III}	laŋ^{I} / leŋ^{I} / lan^{III} / len^{III}	laŋ^{I} / lɛaŋ^{I} / lan^{III} / len^{III}
buy v[323]	$*$lɛj^{II} / $*$lɛj^{III} ($<*$lɛj^{II}-s) / $*$lɛj^{III}-s	lɛj^{IIa} / lɛj^{III} / lɛjʔ	lɛj^{II} / lɛj^{III}	lɛj^{II} / lɛj^{III}	lɛj^{II} / lɛj^{III}	lɛj^{II} / lɛj^{III}	
debt n	$*$lɛj^{I}	lɛj^{I}-	lɛj^{I}-	lɛj^{I}-	lɛj^{I}-	lɛj^{I}-	lɛj^{I}
tongue n	$*$lɛj^{I}	lɛj^{I}	lɛj^{I}	lɛj^{I}	lɛj^{I}	lɛj^{I}	lɛj^{I}
slant vi	$*$lɛj^{I}	lɛj^{I}	lɛj^{I}				

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[319] Mi harrow vt; Za dig vt; Th/Zo/Te/Si harrow, dig vt.

[320] Mizo is a nominalisation of ^{h}lem^{I} ~ ^{h}lem^{III} fathom vt.

[321] Mi lam^{I} ~ lam^{III} dance vi, lem^{IIb} spin a top vt; Za/Th dance vi; Zo lam^{I} ~ lam^{III} dance vi, lam^{I} ~ lep float vi; Te lam^{I} ~ lam^{III} dance vi, lam^{I} ~ lep dance carrying animal's head vi; Si lam^{I} ~ lam^{III} / lep dance vi. Tedim dance carrying animal's head vi from Henderson (1965:83). Thado, Zo, Tedim and Sizang have lam^{III} ~ lep lift vt.

[322] Mi laŋ^{I} ~ lan^{III} go and return the same day, leŋ^{I} ~ len^{III} visit, epidemic vi; Za laŋ^{I} ~ lan^{III} go and return the same day, leŋ^{I} ~ len^{III} visit vi; Th laŋ^{I} ~ lan^{III} epidemic vi, leŋ^{I} ~ len^{III} visit, fly vi; Zo/Te laŋ^{I} ~ lan^{III} visit (as ghost), epidemic vi, leŋ^{I} ~ len^{III} visit, fly vi, laŋ^{I} ~ lan^{III} visit (as ghost), epidemic vi. Si leaŋ^{I} ~ len^{III} jump, fly vi, laŋ^{I} ~ lan^{III} visit (as ghost), epidemic vi.

[323] Mi/Zo/Te/Si buy vt; Za lɛj^{IIa} ~ lɛj^{III} change vt; Tedim has lɛj^{III} change vt; Sizang has lɛj^{III} replace vt. Zo has lɛj^{III} change vt, lɛjʔ buy vt, lɛjʔ buy vb.

Gloss	Proto						
ground n	*lɛj^{III} (< *lɛj^{I}-s)	lɛj^{III}	lɛj^{III}	lɛj^{II}	lɛj^{II}	lɛj^{II}	lɛj^{II}
brandish vt[324]	*lɛk / *lɛk-s	lɛj^{IIa} / lɛk / lɛʔ	lɛj^{IIa} / lɛk / lɛʔ	lɛʔ / le^{III}	lɛʔ / le^{III}	lɛk / lɛʔ	lɛp / le^{III}
pacificate v[325]	*lɛm^{I} / *lɛm^{III} (< *lɛm^{I}-s) / *lɛm^{III}-s			lɛm^{I} / lɛm^{III}	lɛm^{I} / lɛm^{III} / lɛp-	lɛm^{I} / lɛm^{II} / lɛp	lɛm^{I} / lɛm^{I} / lɛp
image n, rehearse vt[326]	*lɛm^{III} / *lɛm^{III}-s	lɛm^{III}	lɛm^{III}	lɛm^{III} / lɛp	lɛm^{III} / lɛp	lɛm^{III} / lɛp	lɛm^{III} / lɛp
swallow vt[327]	*lɛm^{III}-s	lɛm^{IIb}	lɛm^{IIb}				
twinkle vi[328]	*lɛp	-lɛp	-lɛp	-lɛp	-lɛp	-lɛp	-lɛp
invert vt[329]	*lɛt / *lɛt-s	lɛt / lɛʔ	lɛt / lɛʔ	lɛt / le^{III}	-lɛt / -le^{III}	-lɛt / -lɛʔ	-lɛt / -le^{III}
cart n[330]	*lɛŋ^{II}	lɛŋ^{IIa}	lɛŋ^{IIa}	lɛŋ^{II}	lɛŋ^{II}	lɛŋ^{II}	lɛaŋ^{II}

324 Za play vi; Th/Zo toss vt.
325 Th lɛm^{I} ~ lɛm^{III} peaceful vi, lɛm^{III} pacify vt, Zo/Te/Si lɛm^{I} ~ lɛm^{III} peaceful vi, lɛm^{III} ~ lɛp pacify vt. The lack of Mizo and Zahau evidence means initial *ʰl- may not be excluded.
326 Mi/Za image n; Th/Zo/Te/Si rehearse vt.
327 Za swallow saliva vt.
328 Zo rush all over as kids vi; Te flash vi/t.
329 Mi/Za invert vi/t.
330 Mi cart, wheel (when used as a plaything by children) n

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Gloss						
overflow vi[331]	*let[II] *let[II]-s	let[IIb] (lɛʔ)	let[II] let[III]	let[II] let[III]	let[II] let[III]	let[II] let[III] / le[III]
lick vt[332]	*ɬak[II] *ɬakʔ-s	ɬak[IIb] ɬaʔ	ɬeʔ[II] ɬe[III]	ɬeʔ[II] ɬe[III]	ɬak[II] ɬak[III] / ɬaʔ	ɬek[II] ɬek[III] / ɬie[III]
overflow vi[333]	*ɬam[II] *ɬam[III] (< *ɬam[II]-s) *ɬam[II]-s	ɬam[IIa] ɬam[III]	ɬem[I] ɬem[III]	ɬem[III] ɬep	ɬam[I] ɬam[III]	ɬiam[II] ɬiam[III]
big vi[334]	*ɬan[III] *ɬan[II]-s	ɬan[III] ɬɛn[IIb]	ɬen[III] ɬet	ɬen[III] ɬet	ɬan[III] ɬat	ɬian[III] ɬɛt
shoulder n	*ɬaŋ[I]	ɬaŋ[I]	ɬeŋ[I]	ɬeŋ[I]	ɬaŋ[I]	ɬiaŋ[I]
`four vi`	*ɬi[I] *ɬit (< *ɬi[I]-s)	ɬi[I] ɬit[III]	ɬi[I] ɬi[III]	ɬi[I]	ɬi[I]	ɬi[I]
pool n/vi[335]	*ɬi[I] *ɬit (< *ɬi[I]-s)	ɬi[I] ɬit	ɬi[I]	ɬi[I]	-ɬi[I]	-ɬi[I]
slingshot n[336]	*ɬi[II]	ɬi[IIb]	ɬi[I]	-ɬi[II]	-ɬi[II]	-ɬi[II]

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331 Mi *alter, change vt.*
332 Za ɬak[IIb] *lick vt*, ɬaʔ *lick n.*
333 Th *pass away vi*; Zo/Te/Si *disappear over mountains vi.* Sizang is a song word.
334 Za *rich vi.*
335 Mi ɬi[I] *pool n*, ɬi[I] ~ ɬit *form a pool vi*; Za/Si *lake n*; Th/Zo/Te *pool in river n.*
336 Mi *hairspring n*; Za *bow n*; Th *arrow, slingshot n.*

Gloss	Reconstruction					
image n [337]	*lim^{II}		lim^{II}	lim^{II}	lim^{II}	lim^{II}
boat n [338]	*lɔŋ^{III} / *lɔŋ^{III}	lɔŋ^{III}	lɔŋ^{III}			lɔŋ^{III}
pick (flowers/fruit) vt	*lɔw^{II} *lɔw^{III} (< *lɔw^{II}-s) *lɔw^{III}-s	lɔw^{IIa}	lɔw^{II}	lɔw^{II}	lɔw^{II}	lɔw^{II}
	*lɔʔ	lɔʔ	lo^{III}	lo^{III}	lɔʔ	lo^{III}
field n	*lɔw^{II}	lɔw^{IIa}	lɔw^{II}	lɔw^{II}	lɔw^{II}	lɔw^{II}
buffalo n	*lɔj^{I}		lɔj^{I}	lɔj^{I}	lɔj^{I}	lɔaj^{I}
friend n, suitable vi [339]	*lom^{I} *lom^{III} (< *lom^{I}-s) *lom^{III}-s		lom^{I} lom^{III} lɔp	lom^{I} lom^{III} lɔp	lom^{I} lom^{II}	lom^{I} lom^{III}
rejoice v [340]	*lom^{II} *lom^{III} (< *lom^{II}-s) *lom^{III}-s	lom^{III} lom^{IIb}	lom^{III} lɔp	lom^{III} lɔp	lom^{III} lɔp	lom^{III} lɔp
vomit vt/n [341]	*lɔa^{III} (< *lɔas) *lɔa^{III}-s	lɔak^{IIb}	lɔɔ^{III} lɔɔʔ^{II}	lɔɔ^{III} lɔɔʔ^{II}	lɔa^{III} lɔak^{IIb}	lue^{III} luek^{IIb}

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337 Mizo has lim^{IIb} carving, bust, model n.

338 Si raft n.

339 Mi mutually assist vt; Th lom^{I} friend n, lom^{I} ~ lom^{III} / lɔp suitable vi; Zo/Te/Si lom^{I} friend n, lom^{I} ~ lom^{III} suitable vi.

340 Mi lom^{II} ~ lom^{III} rejoice vi, lom^{IIb} rejoice vt; Za/Th/Zo/Te/Si rejoice vt.

341 Mi/Te lɔa^{III} ~ lɔak^{IIb} vomit vt, lɔak^{IIb} vomit n, Za lɔak^{IIb} vomit vt/n; Th lɔɔ^{III} ~ lɔɔʔ^{III} vomit vt/n; Zo lɔɔ^{III} ~ lɔɔʔ^{III} vomit n; Zo lɔɔ^{III} ~ lɔɔʔ^{II} vomit vt, lɔɔʔ^{II} vomit n, Si lɔɔ^{III} ~ lɔɔ^{III} vomit vt, lɔɔʔ^{II} vomit n; Si hue^{III} ~ luek^{II} vomit vt, luek^{II} vomit n.

scoop up vt[342]	*lʋak^II* / *lʋak^II-s*	<u>lok^IIb</u> / lɔʔ	lʋak^IIb	lʋoʔ^II / lʋo^III	lʋoʔ^II / lʋo^III	lʋak^II / lʋak^III / lʋaʔ	lʋek^II / lʋak^III / hʋa^III
plate vt	*lʋan^III* / *lʋan^III-s*	lʋan^III		lʋon^III		lʋan^III / lʋat	
flow v[343]	*lʋaŋ^I* / *lʋan^II* (< *lʋaŋ^I-s*) / *lʋan^III-s*	lʋaŋ^I / lʋan^III	lʋaŋ^I / lʋan^III / lʋn^IIb	lʋoŋ^I / lʋon^III	lʋoŋ^I / lʋon^III	lʋaŋ^I / lʋan^III	lʋaŋ^I / luan^II
corpse, body n[344]	*lʋaŋ^I/II*	<u>rʋaŋ^IIa</u>	<u>rʋaŋ^IIa</u> / <u>rʋak^IIb</u>	lʋoŋ^I	lʋoŋ^I / <u>dʋoŋ^II</u>	lʋaŋ^I / <u>dʋaŋ^II</u>	luaŋ^I / <u>duaŋ^II</u>
lie down vi[345]	*lʋm^III* / *lʋm^III-s*	lʋm^III / lʋm^IIb	lʋm^III (lʋm^IIb)	lʋm^III / lʋp	lʋm^III / lʋp	lʋm^III / lʋp	lʋm^III / lʋp
heart n	*lʋŋ^I*	lʋŋ^I	lʋŋ^I	lʋŋ^I	lʋŋ^I	lʋŋ^I	lʋŋ^I
stone n[346]	*lʋŋ^II*	lʋŋ^IIa	lʋŋ^IIa	lʋŋ^II-	lʋŋ^II-	lʋŋ^II-	lʋŋ^II-
maggot n, *maggoty* vi[347]	*lʋŋ^II*	lʋŋ^IIa	lʋŋ^IIa	lʋŋ^II	lʋŋ^II	lʋŋ^II	lʋŋ^II

[342] Za *gather back up* vt. Tedim has lok^II ~ lok^III *repossess* vt. A possible derivative is found in Mizo, Zahau lʋaʔ *occupy* vt, Tedim lʋaʔ *inherit* vt, Thado loo^III, Zo loo^III, Sizang lue^III *inherit* vt.

[343] Mi/Th/Zo/Te/Si *flow* vi; Za lʋaŋ^I ~ lʋan^III *flow* vi, lʋn^IIb *carry in flow* vt.

[344] Mi/Th *corpse* n; Za rʋaŋ^IIa *body* n, rʋak^IIb *corpse* n; Zo lʋoŋ^I *corpse* n; Te lʋaŋ^I *corpse* n, dʋoŋ^II *body* n; Si lueŋ^I *corpse* n, dueŋ^II *body* n. Zo, Tedim and Sizang *body* n are song words.

[345] See *^hlʋm^III *lay down* vt.

[346] Tedim from Vul Za Thang & J. Gin Za Twang (1975:74).

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rob vt[348]	*lŋ^{III} (< lŋ^{II}-s)	lŋ^{III}	lɤʔ	lɤʔ	lu^{III}	lu^{III}	lɤʔ	lu^{III}
head n	*lu^{I}	lu^{I}	lu^{I}	lu^{I}	lu^{I}	lu^{I}	lu^{I}	
copulate vi[349]	*lu^{II} (< *lu^{I}-s)	lu^{III}	lu^{IIb}	lu^{II}	lu^{II}	lu^{II}		
	*luk^{II} (< *lu^{II}-s)	luk^{IIb}	luk^{IIb}	lu?^{II}	lu?^{II}	luk^{II}		
stream n	*luj^{III}	lɤj^{III}		luj^{III}	luj^{III}	lɤj^{III}	lɤj^{III}	
enter vi	*lut^{II}	lut^{IIb}	lut^{IIb}	lut^{II}	lut^{II}	lut^{II}	lut^{II}	
	*lut^{II}-s	lɤʔ	(lɤʔ)	lut^{III}	lut^{III}	lut^{III}	lut^{III} / lu^{III}	

[347] Mi lŋ^{IIa} maggot n, lŋ^{IIa} ~ lŋ^{III} maggoty vi; Za/Th maggot n; Zo/Te/Si insect n.
[348] Mi eat out of a pot vt; Za bring inside from outside vt.
[349] Mi/Th/Zo/Te copulate wih a woman (as a man) vi.

^{h}l-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
placenta n	*^{h}lɛm^{III}	^{h}lɛm^{III}	^{h}lɛm^{III}	lɛm^{III}	lɛm^{III}	lɛm^{III}	lɛm^{III}
song n	*^{h}la^{II}	^{h}la^{IIa}	^{h}la^{IIa}	la^{II}	la^{II}	la^{II}	la^{II}
far vi	*^{h}la^{II} / *^{h}la-s	^{h}la^{I} / ^{h}lɛt	^{h}la^{IIa} / ^{h}lat^{IIb}	la^{II} / lat^{II}	la^{II} / lat^{II}	la^{II} / lat^{II}	la^{II} / lat^{II}
bier, machan n[350]	*(ʰ)laŋ$^{II/III}$	^{h}laŋ^{IIa}	laŋ^{IIa}	laŋ$^{II/III}$	laŋ$^{II/III}$	laŋ$^{II/III}$	laŋ$^{II/III}$
squirrel n[351]	*^{h}lɛj^{II}	-^{h}lɛj^{IIa}	-^{h}lɛj^{IIa}	-lɛj^{II}	-lɛj^{II}	-lɛj^{II}	-lɛj^{II}
surplus n[352]	*^{h}lɛj$^{I/II}$	^{h}lɛj^{I}	^{h}lɛj^{IIa}				
bridge n	*(ʰ)lɛj^{III}	lɛj^{III}	^{h}lɛj^{III}-	lɛj^{III}	lɛj^{III}	lɛj^{III}	lɛj^{III}
pare vt	*^{h}lɛp / *^{h}lɛp-s	^{h}lɛp / ^{h}lɛʔ	^{h}lɛp / lɛʔ				
butterfly n	*(ʰ)lɛp	-^{h}lɛp	-lɛp	-lɛp		lek^{III}	-lɛap^{III}
leech n	*^{h}lɛw^{I}	^{h}lɛw^{I}		^{h}lɛw^{I}	^{h}lɛw^{I}		

[350] Th/Zo/Te/Si laŋ^{II} *bier n*, laŋ^{III} *machan n*. Mizo has ^{h}laŋ^{I} ~ ^{h}lan^{III} *lift up/down/across vt.*

[351] Mizo appears to fluctuate with tone III.

[352] Mi *over ten moons in time n*; Za *surplus n, ten (from numbers eleven to nineteen) vi.* Mizo has ^{h}laj^{I} ~ ^{h}laj^{III} *broad vi.*

Comparative table (Kuki-Chin forms; language-column labels not present on this page):

Gloss	Reconstruction						
strip vt[353]	*ʰlem$^{I/II}$ / *ʰlem^{III} (< *lem$^{I/II}$-s)	ʰlim^{I} / ʰlim^{III}		lem^{I} / lem^{III}	lem^{I} / lem^{II} / lem^{III}	lem^{I} / lem^{II} / lem^{III}	lɛam^{I} / lɛam^{II} / lɛam^{III}
wound vi[354]	*ʰlɪam^{I} / *ʰlɪam^{III} (< *ʰlɪam^{I}-s)	ʰlɪam^{I} / ʰlɪam^{III}		lem^{I} / lem^{III}	lɪem^{I} / lɪem^{III}	lɪam^{I} / lɪam^{III}	liem^{I} / liem^{III}
passed over (by sun) vi[355]	*ʰlɪap^{II} / *ʰlɪap^{II}-s				lɪep^{II} / lɪep^{III}	lɪap^{II} / lɪap^{III}	liap^{II} / liap^{III}
lick (as a flame) vi	*ʰlɪaw^{I} / *ʰlɪaw^{III}	ʰlɪaw^{I} / ʰlɪaw^{III}	ʰlɪaw^{I} / ʰlɪaw^{II}	lerw^{I} / lerw^{III}	lɪew^{I} / lɪew^{III}	lɪaw^{I} / lɪaw^{III}	liew^{I} / liew^{III}
flea n	*ʰli^{I}	ʰli^{I}	ʰli^{I}	li^{I}	li^{I}	li^{I}	li^{I}
retract foreskin vt, glans n[356]	*(ʰ)li^{III} / li^{IIb} / lɪk^{IIa} / *(ʰ)lit^{II} (< *(ʰ)li^{II}-s)	li^{III} / li^{IIb} / lɪk^{IIa} / lɪk^{IIb}	ʰlɪk^{IIa} / ʰlɪk^{IIb}	li^{II} / lit^{II}	li^{II} / lit^{II}	li^{II} / lɪk / lit^{II}	li^{II} / lit^{II}
delicious vi[357]	*ʰlɪm^{I} / *ʰlɪm^{III} (< *ʰlɪm^{I}-s)	ʰlɪm^{I} / ʰlɪm^{III}	ʰlɪm^{I} / ʰlɪm^{III}	lɪm^{I} / lɪm^{III}		lɪm^{I} / lɪm^{III}	lim^{I} / lim^{III}
thorn n	*ʰlɪŋ^{I}	ʰlɪŋ^{I}	ʰlɪŋ^{I}	lɪŋ^{I}	lɪŋ^{I}	lɪŋ^{I}	lɪŋ^{I}

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[353] Th/Zo stip off, flip (flat object) vt; Te lem^{I} ~ lem^{II} strip off vt, lem^{II} ~ lem^{III} flip (flat object) vt.

[354] Mi wound vi/t.

[355] Lorrain (1940:153) has Mizo ʰlɪap overshadow, shade (as from the sun) v.

[356] Mi lɪ^{IIb} / lɪk^{IIa} glans-penis n, lɪ^{III} ~ lɪk^{IIb} retract forekin vt; Za/Zo retract forekin vt, Te lɪk glans-penis n, lɪ^{II} ~ lɪt^{II} retract forekin, bare teeth vt; Te lɪk glans-penis n, lɪ^{II} ~ lɪt^{II} retract forekin, bare teeth vt; Si lɪ^{II} glans-penis n, lɪ^{II} ~ lɪt^{II} retract forekin vt.

[357] Mi/Za get inner feeling of joy vi.

	$*^{(h)}$lɨp	^{h}lɨp	lɨp	lɨp	lɨp	lɨp	lɨp
scales n	$*^{(h)}$lɨp	^{h}lɨp	lɨp	lɨp	lɨp	lɨp	lɨp
lift/curl up vt[358]	$*^{h}$lip$^{I/II}$ $*^{h}$lip^{III} ($< *^{h}$lip^{I}-s)	^{h}lip^{I} / ^{h}lip^{IIb} ^{h}lip^{III} / ^{h}lɨʔ	^{h}lip^{I} ^{h}lip^{III}	lip^{I} lip^{III}	lip^{I} lip^{III}	lip^{I} lip^{III}	lip^{I} / lip^{II} lip^{III} / lip^{II}
leech n	$*^{h}$lit^{II}	^{h}lit^{IIb}	$\underline{^{h}\text{nit}^{IIb}}$	^{h}lit^{II}	lit^{II}	lit^{II}	lit^{II}
distribute vt[359]	$*^{h}$(l)om^{I} $*^{h}$(l)om^{III} ($< *^{h}$(l)om^{I}-s) $*^{h}$(l)om^{III}-s	^{h}lom^{I} ^{h}lom^{III}	^{h}lom^{I} ^{h}lom^{III}	hom^{I} hom^{III} dcɥ	hom^{I} hom^{III} dcɥ	hom^{I} hom^{III}	hom^{I} hom^{III}
throw v[360]	$*^{(h)}$lon^{I} $*^{(h)}$lon^{III} ($< *^{(h)}$lon^{I}-s) $*^{(h)}$lon^{III}-s	lon^{I} lon^{III}	^{h}lon^{IIb}	lon^{III} lɔt	lon^{III} lɔt	lon^{III} lɔt	lon^{III} lɔt
earn wage v, wage n[361]	$*^{h}$lɔs	^{h}lɔʔ	^{h}lɔʔ	lo^{III}	lo^{III}	lɔʔ	lo^{III}
weed n	$*^{h}$low^{I}	^{h}low^{I}	^{h}low^{I}	low^{I}	low^{I}	low^{I}	lcw^{I}
colugo n	$*^{h}$lok	^{h}lok	^{h}lok	$\underline{\text{lup}}$	lok	lok	lok
warm v[362]	$*^{(h)}$lom^{I} $*^{(h)}$lom^{III} ($< *^{(h)}$lomi-s) lom^{III}	^{h}lom^{I} ^{h}lom^{III}	^{h}lom^{I} ^{h}lom^{III}	lom^{I} lom^{III}	lom^{I} lom^{III}	lom^{I} lom^{III}	lom^{I} lom^{III}

[358] Th/Zo *strip off vt*; Te *curl up vi/t*; Si lip^{II} *curl up vi*, lip^{I} *curl up vt.*

[359] Th/Zo/Te hom^{I} ~ hom^{III} / hop *distribute vt.*

[360] Mi lon^{I} ~ lon^{III} *launch, go up vi/t*; Za ^{h}lon^{IIb} *throw vt*; Th/Zo/Te lon^{III} ~ lɔt *throw vt*; Te/Si lɔt *throw to vb.*

[361] Mi/Th/Te/Si *wage n*; Za/Zo *earn (wage) vt.*

[362] Mi lom^{I} ~ lom^{III} / lom^{IIb} *warm vi*; lom^{IIb} *warm vt*; Za lom^{I} ~ lom^{III} *warm vi*, lom^{IIb} *warm vt*; Th/Zo/Te/Si *warm vi.*

lay down vt[363]	$*^{(h)}$lɔm^{III}-s	lɔm^{IIb}	^{h}lɔm^{IIb}			
	$*^h$lɔm^{III}	$_-$lɔm^{III}	^{h}lɔm^{III}			
	$*^h$lɔm^{III}-s	$_-$lɔm^{IIb}	^{h}lɔm^{IIb}			
old vi	$*^h$luj^I	^{h}lɔj^I	luj^I	luj^I	luj^I	lɔj^I
	$*^h$luj^{III}	^{h}lɔj^{III}	luj^{III} / lɔj^{III}	luj^{III}	luj^{III}	lɔj^{III}
male-bird n[364]	$*^h$luj^I	^{h}lɔj^I	lɔj^I	-luj^I	-luj^I	-lɔj^I
ball n, *sphericalise/coil* v[365]	$*^h$lum^{II}	^{h}lum^{IIa} / ^{h}lɔm^{IIa}	lum^{II}/lɔm^{II}/lɔm^{II}	lum^{II}/lɔm^{II}/-lim^{II}	lum^{II}/lɔm^{II}/lim^{II}	lum^{II}/lɔm^{II}/lim^{II}
	$*^h$lum^{III} ($< *^h$lum^{II}-s)	^{h}lum^{III} / ^{h}lɔm^{III}	lum^{III} / lɔm^{III}	lum^{III} / lɔm^{III}	lum^{III} / lɔm^{III}	lum^{III} / lim^{III}
	$*^h$lum^{III}-s	^{h}lɔm^{IIb}				lɔm^{III} / lim^{III}

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363 Mizo used after a verb to mean *dead* (e.g. *shoot dead*). See *lɔm^{III} *lie down* vi.

364 Mizo is from table B of Luce (1962a) which also includes Khualsim ^{h}lj^I.

365 Mi ^{h}lum^{IIa} *ball* n, ^{h}lum^{IIa}~ ^{h}lum^{III} / ^{h}lɔm^{III} *coil-up* vt, ^{h}lɔm^{IIa}~ ^{h}lɔm^{III} *knead into lump* vt; Za ^{h}lum^{IIa}~ ^{h}lum^{III} *sphericalise* vi, *coil-up* vt, ^{h}lɔm^{IIb} *coil-up* vb; Th lɔm^{II} *string-ball* n, lum^{II} ~ lum^{III} *sphericalise* vi, lɔm^{II} ~ lɔm^{III} *sphericalise* vt; Zo/Te lim^{II} *string-ball* n, lum^{II} ~ lum^{III} *sphericalise* vi, lɔm^{II} ~ lɔm^{III} *sphericalise* vt, Si lim^{II} *string-ball* n, lum^{II} *sphericalise* vi, lɔm^{II} ~ lɔm^{III} *sphericalise* vt, lim^{II} ~ lim^{III} *coil-up* vt. Laizo has ^{h}lum^{IIa} ~ ^{h}lum^{III} *sphericalise* vi, ^{h}lum^{III} *coil up* vt.

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
dim vi[366]	$*mel^{II}$ $*mel^{III}\ (< *mel^{II}\text{-s})$	mel^{IIa} mel^{III}	mel^{III}				
catch, stick v[367]	$*men^{I}$ $*maŋ^{III}\ (< *maŋ^{II}\text{-s})$ $*maŋ^{II}\text{-s}$	men^{I} $maŋ^{IIb}$	man^{I} / man^{I} $maŋ^{III}$ $maŋ^{IIb}$	man^{I} $maŋ$	man^{I} $maŋ$	man^{I} met	men^{I} met
dream n/vt[368]	$*maɲ^{II}$ $*maŋ^{III}\ (< *maɲ^{II})$ $*maŋ^{II}\text{-s}$	$maɲ^{IIa}$ $maŋ^{IIb}$	$maɲ^{IIa}$ $maŋ^{IIb}$	$maɲ^{II}$ $maŋ^{III}$ met	$maɲ^{II}$ $maŋ^{III}$ met	$maɲ^{II}$ $maŋ^{III}$ $maŋ$	$maɲ^{II}$ men^{III} met
$\boxed{\textit{black (as pot) vi/n}}$[369]	$*maŋ^{II}$ $*maŋ^{III}\ (> *maŋ^{III})$ $(s\text{-}maŋ^{II} >)$	$maŋ^{IIa}$ $maŋ^{III}$	$-maŋ^{IIa}$	$maŋ^{II}$	$-maŋ^{II}$	$-maŋ^{II}$	$-maɲ^{II}$
divorce, disapprove vt[370]	$*ma^{II}$ $*mak^{II}\ (< *ma^{II}\text{-s})$	ma^{III} mak^{IIb}	mak^{IIb}	ma^{II} $ma\text{?}^{II}$	ma^{II} $ma\text{?}^{II}$	ma^{II} mak^{II}	
pumpkin	$*maj^{I}$	maj^{I}	maj^{I}	maj^{I}	maj^{I}	maj^{I}	maj^{I}

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366 Mi *blurry eyesight vi*; Za *slightly dark vi*

367 Mi men^{I} ~ $*men^{IIb}$ *catch vt*; Za men^{I} *catch up with vt*, men^{I} ~ men^{III} *sticky vi*; Th/Zo/Si men^{I} ~ $*met$ *sticky vi, catch vt, met stick vi*; Te men^{I} ~ met *sticky vi, catch vt, met stick vt, met sticky vi, catch vt, met stick vt, captive n.*

368 Mi $maɲ^{IIa}$ *dream n*, $maɲ^{IIa}$ ~ $*men^{IIb}$ *dream vt*; Za $maɲ^{IIa}$ *dream vt*; Th/Zo/Te/Si $maɲ^{IIa}$ *dream n*, men^{III} ~ met *dream vt.*

369 Mi/Za/Th *black (as pot) vi*; Zo/Te/Si *blackness (of pot) n.*

370 Mi/Za/Te *leave one's wife vt*; Th/Zo *disapprove vt.*

son/brother-in-law n[371]	mak^{II}	mak^{II}	maʔ^{II}		mak^{IIb}	mak^{IIb}	*mak^{II}
cloud n[372]	mɛj^{I}	mɛj^{I}	mɛj^{I}	mɛj^{I}		-mɛj^{II}	*mɛj^{I}
fire n	mɛj^{II}	mɛj^{II}	mɛj^{II}	mɛj^{II}	mɛj^{IIa}	mɛj^{IIa}	*mɛj^{II}
tail n	mɛj^{II}	mɛj^{II}	mɛj^{II}	mɛj^{II}	mɛj^{IIa}	mɛj^{IIa}	*mɛj^{II}
awake v[373]	mɛɲ^{I} / mɛn^{III}	mɛɲ^{I} / mɛn^{III}			mɛɲ^{I} / mɛn^{III}	mɛɲ^{I} / mɛn^{IIb}	*mɛɲ^{I} / *mɛn^{III} (< *mɛɲ^{I}-s) / *mɛn^{III}-s
shave vt[374]	met^{II} / met^{III}	met^{II} / met^{III}	met^{II} / met^{III}	met^{II} / met^{III}	met^{IIb} / mɛʔ	met^{IIb} / mɛʔ	*met^{II} / *met^{II}-s
eye n[375]	mɹt	mɹt	mɹt	mɹt	mɹt	mɹt	*mɹt
extinguish v[376]	mɹt / mi^{III}	mɹt / miʔ	mɹt / mi^{III}	mɹt / mi^{III}	mɹt / miʔ	mɹt / miʔ	*mɹt / *mɹt-s
person n	mi^{II}	mi^{II}	mi^{II}	mi^{II}	mi^{IIb}	mi^{IIb}	*mi^{II}

[371] Za *son-in-law* n.

[372] Mi *haze* n. The Mizo tone may be due to sandhi.

[373] Mi mɛɲ^{I} *open eyes* vi, mɛn^{IIb} *awake at night with* vt; Za mɛɲ^{I} ~ mɛn^{III} *awake at night with* vt; Za mɛɲ^{I} ~ mɛn^{III} *open eyes* vi, *awake at night with* vt; Te mɛɲ^{I} ~ mɛn^{III} *seized by ghost during night and unable to move* vi, mɛɲ^{I}- *nap* vi; Si mɛɲ^{I} ~ mɛn^{II} *nap* vi.

[374] Zo, Tedim and Sizang met^{I} ~ met^{III} *profit* vi is a Burmese loan.

[375] Southern Chin evidence under *Eye* (#71) shows this to have originally had a velar coda -k, see the discussion in 5.2.5.

[376] Mi/Th *extinguish* vi/t; Za *extinguish* vt; Zo/Te/Si *extinguish* vi.

beautiful, young vi[377]	*mɔj^{I} / *mɔj^{III} (< *mɔj^{I}-s)	mɔl^{I} / mɔj^{III}	mɔl^{I} / mɔj^{III}		mɔj^{I} / mɔj^{III}	mɔj^{I} / mɔj^{III}	mɔj^{I} / mɔj^{III}
sprout vi[378]	*mɔm^{II} / *mɔm^{III} (*mɔm^{II}-s)	mɔm^{IIa} / mɔm^{II}		mɔm^{I} / mɔm^{III}	mɔm^{I} / mɔm^{III}	mɔm^{I} / mɔm^{III}	mɔm^{II} / (mɔm^{III})
edge, river-mouth n[379]	*mɔŋ^{II}	mɔŋ^{IIb}		mɔŋ^{II}	mɔŋ^{II}	mɔŋ^{II}	mɔŋ^{II}
misdeed n, err vi[380]	*mɔs	mɔʔ	mɔʔ	mo^{III}	mo^{III}	mɔʔ	mo^{III}
daughter/sister-in-law n[381]	*mɔw^{I}	mɔw^{I}	mɔw^{I}	mɔw^{I}	mɔw^{I}	mɔw^{I}	mɔw^{I}
fog n[382]	*mɔk^{II}	mɔk^{IIb}			mɔʔ^{II}	mɔk^{II}	mɛk
stupid, forget v[383]	*mɔl^{I} / *mɔl^{III} (< *mɔl^{I}-s) / *mɔl^{III}-s			mɔl^{I} / (mɔl^{III})	mɔl^{I} / mɔl^{III}	mɔl^{I} / mɔl^{III}	mɔl^{I} / mɔl^{III}
blunt vi[384]	*mɔl^{II}	mɔl^{IIa}	mɔl^{IIb}		mɔl^{II}	mɔl^{II}	mɔl^{II}

377 Mi/Za beautiful vi; Zo/Te/Si young vi. Thado, Zo and Sizang have hɔj^{III} and Tedim has hɔj^{II} beautiful vi.

378 Te very young vi; Si very young vi, bud n.

379 Mi river-mouth, posterior n; Zo river-mouth, edge, top n; Th edge n, Te end, top, extremity n; Si edge, top, river-mouth n. Sizang has mɔŋ^{II} ~ mɔn^{III} die off (as all one's relatives) vi.

380 Mi/Za misdeed n; Th/Zo/Te/Si err vi.

381 Mi/Th daughter/sister-in-law; Za/Te/Si daughter-in-law n; Zo sister-in-law n.

382 Mi sallow vi. Mizo has muk^{IIb} dull (colour) vi, sit quietly and reseved vi.

383 Mi forget vi; Za dull (intelligence) vi; Th/Zo/Te stupid vi; Si muddle-headed vi. Laizo has mɔl^{II} forget vt.

Gloss	PKC							
clitoris n[385]	*mol[III] (< *mol[II]-s)	mol[III]		mol[III]	mol[III]	mol[III]	mol[III]	mol[III]
mountain n[386]	*mon[III]	mon[III]	moal[I]	mon[III] / men[III]	mool[I]	mon[III] / men[III]	mon[III] / men[III]	mon[III]
rot vi[387]	*moat[II] / *moat[II]-s	moat[IIb] / moa?	moat[IIb]	moot[II] / moot[III]	moot[II] / moot[III]	moat[II] / moat[III]	moat[II] / moat[III]	muet[II] / luem[III]
vulture n	*mu[I]	mu[I]	mu[I]	mu[I]	mu[I]	mu[I]	mu[I]	mu[I]
kernel n[388]	*mu[II]	mu[IIb]	mu[IIb]	mu[II]	mu[II]	mu[II]	mu[II]	mu[II]
closed (as flower) vi[389]	*mum[II] / *mum[II] (*mum[II]-s)	mum[IIa] / mum[II]	mum[IIa] / mum[II]					mom[II]
blow, make smoulder vt[390]	*mut[II] / *mut[II]-s	mut[IIb] / mo?	mut[IIb]	mut[II] / mut[III]	mut[II] / mut[III]	mut[II] / mut[III]	mut[II] / mut[III]	mut[II] / mut[III] / mu[III]

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[384] Mi simple, stupid vi; Zo dull (colour) vi; Si blunt, dumb vi. Thado mel[II] ~ mel[III] and mool[III], Zo miel[II] ~ miel[III] and mool[III], Tedim mial[II] ~ mial[III] and moal[III] ~ moal?, Sizang miel[III] ~ miel[III] and muel[III] mean dark vi and dull vi respectively in Sizang only referring to the sky.

[385] Zo/Te/Si clitoris, tip of bud n.

[386] Mi hill n. Zahau is a song word.

[387] Mi discoloured and brittle vi. Zahau has mot old and ragged/rotten vi.

[388] Te area in cucumber or pumpkin where seeds are located n.

[389] Si bud n.

[390] Mi smoulder vi/t, Za make smoulder vi/t; Th/Zo blow (often as musical instrument) vt. Sizang has mut[III] exaggerate vt.

*ʰm-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
fumble v[391]	*ʰmaj^{II} *ʰmaj^{III} (< *ʰmaj^{II}) *ʰmaj^{III}-s	ʰmaj?		maj^{II} ʃaŋ^{III}	maj^{II} ʃaŋ^{III}	mej^{II} mej^{III} ʃaŋ?	maj^{II} ʃaŋ^{III}
footloose, finish vi[392]	*⁽ʰ⁾maŋ^{II} *⁽ʰ⁾maŋ^{III} (< *⁽ʰ⁾maŋ^{II}) *⁽ʰ⁾maŋ^{III}	ʰmaŋ^{IIb}	ʰmaŋ^{IIb}	maŋ^{II} maŋ^{III}	maŋ^{II} maŋ^{III}	maŋ^{II} maŋ^{III}	maŋ^{II} maŋ^{III}
utilise vt[393]	*ʰmaŋ^{I} *ʰmaŋ^{III} (> *ʰmaŋ^{I}-s) *ʰmaŋ^{III}-s	ʰmaŋ^{I} ʰmaŋ^{III} ʰmaŋ^{IIb}	ʰmaŋ^{I} ʰmaŋ^{III}	maŋ^{I} maŋ^{III}	maŋ^{I} maŋ^{III}	maŋ^{I} maŋ^{III}	ʃaŋ^{I} maŋ^{II}
wound n/vi[394]	*ʰma^{I} *ʰmet (< *ʰma^{I}-s)	ʰma^{I}	ʰma^{I} ʰmet	ma^{I}	ma^{I}	ma^{I}	ma^{I}
face, front n	*ʰmaj^{II}	ʰmaj^{IIa}	ʰmaj^{IIa}	maj^{II}	maj^{II}	maj^{II}	maj^{II}
curry n, eat curry vt[395]	*ʰmɛs	ʰmɛ?	ʰmɛ?	me^{III}	me^{III}	mɛ?	me^{III}

[391] Mi overlook vt; Th/Si fumble vi; Zo mej^{II} ~ mej^{II} fumble vi; mej^{III} smear vt; Tedim mej^{II} ~ mej^{II} fumble vi, mej? smear vt. Zo has -mej^{I} ~ mej^{III} -mej^{III} play vi; Tedim has mej^{I} ~ mej^{I} ~ mej^{III} play vi.

[392] Mi/Za footloose vi; Te/Si footloose vi, finish vi/t.

[393] Mi ʰmaj^{I} ~ ʰmen^{III} / ʰmen^{IIb} utilise vt.

[394] Mi/Za/Th/Zo/Te/Si wound, knife-edge n; Za *ʰma^{I} wound, knife-edge n, *ʰma^{I} ~ *ʰma^{I}-s wound vi.

[395] Laizo has mɛ? curry n, ʰmɛ? eat curry vt.

press (with fingers) vt[396]	*ʰmekᴵ / *ʰmɛtᴵ *ʰmekᴵ-s / *ʰmɛtᴵ-s	ʰmɛt ʰmɛʔ	ʰmɛt ʰmɛʔ	-meʔᴵ -mɛʔ	mɛt / meʔᴵ meᴵᴵᴵ	mekᴵ mekᴵᴵᴵ	mɛt meᴵᴵᴵ
visage n	*ʰmelᴵ	ʰmelᴵ	ʰmelᴵ	melᴵ	melᴵ	melᴵ	mɛɑlᴵ
ripe v[397]	*ʰmɪnᴵ *ʰmɪnᴵᴵᴵ (< *ʰmɪnᴵ-s) *ʰmɪnᴵᴵᴵ-s	ʰmɪnᴵ ʰmɪnᴵᴵᴵ ʰmɪnᴵᴵᴮ	ʰmɪnᴵ ʰmɪnᴵᴵᴵ ʰmɪnᴵᴵᴮ	mɪnᴵ mɪnᴵᴵᴵ	mɪnᴵ mɪnᴵᴵᴵ	mɪnᴵ mɪnᴵᴵᴵ	mɪnᴵ mɪnᴵᴵᴵ
name n	*ʰmɪɲᴵ	ʰmɪɲᴵ	ʰmɪɲᴵ	mɪnᴵ	mɪnᴵ	mɪnᴵ	mɪnᴵ
have in mouth v[398]	*ʰmɔamᴵ *ʰmɔamᴵᴵᴵ (< *ʰmɔamᴵ-s) *ʰmɔamᴵᴵᴵ-s	ʰmɔamᴵ ʰmɔamᴵᴵᴵ ʰmɔmᴵᴵᴮ	ʰmomᴵ ʰmomᴵᴵᴵ momᴵᴵᴮ	moomᴵ moomᴵ mɔp	mɔomᴵ mɔomᴵᴵᴵ mɔp	mɔamᴵ mɔamᴵᴵᴵ mɔp	muamᴵ muamᴵᴵᴵ mɔp
spindle n	*ʰmɔjᴵᴵ	ʰmɔjᴵᴵᵃ	ʰmɔjᴵᴵᵃ	mɔjᴵᴵ	mujᴵᴵ	mɔjᴵᴵᴵ	mɔjᴵᴵ
muzzle n[399]	*ʰmɔjᴵᴵᴵ	ʰmujᴵᴵᴵ	ʰmɔjᴵᴵᴵ				
hair (body) n	*ʰmɔlᴵᴵ	ʰmɔlᴵᴵᵃ	ʰmɔlᴵᴵᵃ	mɔlᴵᴵ	mɔlᴵᴵ	mɔlᴵᴵ	mɔlᴵᴵ

Thado and Sizang have meᴵ finger, toe n; Zo and Tedim have -meᴵ finger, toe n.

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[396] Zo mɛt ~ meᴵᴵᴵ press (with fingers) vt, meʔᴵ ~ meᴵᴵᴵ massage vt. The form 2 of Zo mɛt ~ meᴵᴵᴵ has become confused with meʔᴵ.

[397] Mi ʰmɪnᴵ ~ ʰmɪnᴵᴵᴵ ripe vi, ʰmɪnᴵᴵᴮ prepare vt. Th/Zo/Te/Si ripe vi. Zahau prepare vt. Th/Zo/Te/Si ripe vi. Za ʰmɪnᴵ ~ ʰmɪnᴵᴵᴵ ripe vi, ʰmɪnᴵᴵᴮ prepare vt from Osburne (1975:111).

[398] Mi ʰmɔamᴵ ~ ʰmɔamᴵᴵᴵ hold in mouth vt, ʰmɔmᴵᴵᴮ put into mouth vt; Za ʰmomᴵ ~ ʰmomᴵᴵᴵ wolf down food vt; Th mɔmᴵ ~ mɔmᴵᴵᴵ hold in mouth vt, mɔp feed mouth to mouth vb; Zo mɔomᴵ ~ mɔomᴵᴵᴵ hold in mouth vt, mɔomᴵᴵᴵ ~ mɔamᴵᴵᴵ hold in mouth vb; Te mɔamᴵ ~ mɔamᴵᴵᴵ hold in mouth vt, mɔp feed mouth to mouth vb; Si muamᴵ ~ muamᴵᴵᴵ hold in mouth vt, mɔp feed mouth to mouth vb.

[399] Za visage n.

place n	*^{h}mɔn^{III}	^{h}mɔn^{III}	^{h}mɔn^{III}	mɔn^{III}	mɔn^{III}	mɔn^{III}	mɔn^{III}
sleep vi[400]	*$^{(h)}$mu^{I}	mu^{I}	^{h}mu^{I}	mu^{I}	mu^{I}	mu^{I}	mu^{I}
	*$^{(h)}$mɔt (< *$^{(h)}$mu^{I}-s)	mɔt	^{h}mut^{IIb}	mɔt	mɔt	mɔt	mɔt
see vt	*^{h}mu^{III} (< *^{h}mus)	^{h}mu^{III}	^{h}mu^{III}	mu^{III}	mu^{III}	mu^{III}	mu^{III}
	*^{h}mɔk (< *^{h}mu^{III}-s)	^{h}mɔʔ	^{h}mɔʔ	mɔʔ		mɔʔ	
	*^{h}mok-s						
lips, beak n[401]	*^{h}mur^{III}	^{h}mur^{III}	^{h}mur^{III}	mɔʔ	mɔa^{III}	muk^{III}	muk^{III}

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[400] Mi *lie down vi*; Za *sleepy vi*; Zo/Te/Si *fall asleep vi.*
[401] Mi *point, tip, teat, prow n.*

*n-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
smell vi[402]	*nɛm^{I} *nɛm^{III} (< *nam^{I}-s)	nɛm^{I} nɛm^{III}	nam^{I} nam^{III}	nam^{I} nam^{III}	nam^{I} nam^{III}	nam^{I} nɛm^{III}	nam^{I} nam^{III}
push vt[403]	*nɛm^{II} *nam^{III} (> *nam^{II}-s) *nam^{III}-s	nam^{IIa} nam^{III}	nam^{IIa} nam^{III}	nam^{II} / nɛm^{II} nɛm^{III} / nam^{II}	nam^{II} / nɛm^{II} nɛm^{II} / nam^{II} dau		nɛm^{II} nam^{III}
prop-up vt[404]	*ʄau^{I} *ʄau^{III} (> *ʄau^{III}-s)	ʄau^{I} ʄau^{III}		ʄau^{I} ʄau^{III}	ʄau^{I} ʄau^{III}	ʄau^{I} ʄau^{III}	ʄau^{I} ʄau^{III}
$\boxed{\text{young } n}$	*ʄau^{II}	ʄau^{IIa}	ʄau^{IIa}	ʄau^{II}	ʄau^{II}	ʄaŋ^{II}	ʄaŋ^{II}
hurt, ill v[405]	*na^{I} *nɛt (< *na^{I}-s)	na^{I} nɛt	na^{I} nɛt	na^{I} nɛt	na^{I} nɛt	na^{I} nɛt	na^{I} nɛt
smooth, slippery vi	*nal^{II} *nal^{III} (< *nal^{II}-s)	nal^{IIa} nal^{III}	nal^{IIa} nal^{III}	nal^{II} nal^{III}	nal^{II} nal^{III}	nal^{II} nal^{III}	nal^{II} nal^{III}
child n[406]	*naw^{I}	naw^{I}	naw^{I}	naw^{I}	naw^{I}	naw^{I}	naw^{I}

[402] See *ʰnɛm^{III} smell vt.

[403] Za compress vt, Th nɛm^{II} ~ nɛm^{III} push without hands vt, nom^{II} ~ nom^{III} squash into vt; Zo nɛm^{II} ~ nɛppush vt, nom^{II} ~ nom^{III} squash into vt.

[404] Mi catch in time (e.g train) vt.

[405] Mi/Th/Zo/Te/Si hurt, ill vi; Za na^{I} ~ nɛt hurt, ill vi, nɛt hurt vt.

[406] Si infant n.

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have vt[407]	$*nɛj^{III}$	$nɛj^{III}$	$nɛj^{III}$	$nɛj^{III}$	$nɛj^{III}$	$nɛj^{III}$
	$*nɛj^{III}\text{-s}$	$nɛjʔ$			$nɛjʔ$	
damp vi[407]	$*nɛl^{I}$	$nɛl^{I}$	$nɛl^{I}$	$nɛl^{I}$	$nɛl^{I}$	$nɛl^{I}$
	$*nɛl^{III}\,(<*nɛl^{I}\text{-s})$	$nɛl^{III}$	$nɛl^{III}$	$nɛl^{III}$	$nɛl^{III}$	$nɛl^{III}$
soft (as texture) vi, *sand* n[408]	$*nel^{I/II}$	nel^{I}	nel^{I}/nel^{IIa}	$nel^{I}/\text{-}nel^{II}$	nel^{I}/nel^{II}	$nɛal^{II}$
	$*nel^{III}\,(<*nel^{I}\text{-s})$	nel^{III}	nel^{III}	nel^{III}	nel^{III}	$nɛal^{III}$
soft vi[409]	$*nem^{I}$	nem^{I}	nem^{I}	nem^{I}	nem^{I}	$nɛam^{I}$
	$*nem^{II}\,(<*nem^{I}\text{-s})$	nem^{III}	nem^{III}	nem^{III}	nem^{III}	$nɛam^{III}$
tired of vt	$*nɪŋ^{II}$	$nɪŋ^{IIa}$	$nɪŋ^{II}$	$nɪŋ^{II}$	$nɪŋ^{II}$	$nɪŋ^{II}$
	$*nɪŋ^{III}\,(<*nɪŋ^{II}\text{-s})$	$nɪŋ^{III}$	$nɪŋ^{III}$		$nɪŋ^{III}$	$nɪŋ^{III}$
paternal-aunt n	$*ni^{I}$	ni^{I}	ni^{I}	ni^{I}	ni^{I}	ni^{I}
sun, day n	$*ni^{I}$	ni^{I}	ni^{I}	ni^{I}	ni^{I}	ni^{I}
young vi[410]	$*nɔw^{II}$	$nɔw^{IIa}$	$nɔw^{II}$	$nɔw^{II}$	$nɔw^{II}$	$nɔw^{II}$
	$*nɔw^{III}\,(>*nɔw^{II}\text{-s})$	$nɔw^{III}$	$nɔw^{III}$	$nɔw^{III}$	$(nɔw^{III})$	$nɔw^{III}$

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[407] Mi *pliant* vi; Zo *greasy, oily* vi.

[408] Mi *soft, intimate* vi; Za $nel^{I} \sim nel^{III}$ *intimate* vi; Th $nel^{I} \sim nel^{III}$ *soft* vi, nel^{III} / $\text{-}nel^{II}$ *sand* n; Zo $nel^{I} \sim nel^{III}$ *soft* vi, nel^{II} *sand* n; Te $nel^{I} \sim nel^{III}$ *soft* vi, nel^{II} *sand* n; Si $nɛal^{II}$ $\sim nɛal^{III}$ *soft* vi, $\text{-}nɛal^{II}$ *sand* n. Mizo has $^{h}nɔal^{IIa} \sim {}^{h}nɔal^{III}$ *soften (as steel)* vi.

[409] Te/Si *flexible* vi. Zahau has nem^{IIa} *soft area between hips and ribs* n. See $*^{h}nem^{III}$ *comfort* vt.

[410] Si *small* vi. Tedim glossed as *small* vi by Vul Za Thang & J. Gin Za Twang (1975:87).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
jostle vi[411]	*nok^{I} / *nok^{I}-s	nek^{I} / nok^{I} ; nek^{III} / nok^{III}		ne?^{I} / no?^{I} ; nɛ?^{I} / no?	no?^{I} / no?^{III}	nok^{I} / nok^{III}	nok^{I} / nok^{III}
brush vt[412]	*nol^{I} / *nol^{III} (< *nol^{I}-s)	nol^{I} / nol^{III}	nol^{I} / nol^{III}	nol^{I} / nol^{III}	nol^{I} / nol^{III}	nol^{I} / nol^{III}	nol^{I} / nol^{III}
rub vt	*not^{II} / *not^{II}-s	not^{IIb} / nɔ?		not^{II} / not^{III}	not^{II} / not^{III}	not^{II} / not^{III}	not^{II} / not^{III} ; not^{III} / no^{III}
rub between hands vt	*nʋaj^{I} / *nʋaj^{I} (< *nʋaj^{I}-s)	nʋaj^{I} / nʋaj^{III}	nʋaj^{I} / nʋaj^{III}	nʋoj^{I} / nʋoj^{III}	nʋej^{I} / nʋej^{III}	nʋaj^{I} / nʋaj^{III}	nuɛj^{I} / nuɛj^{III}
comfortable, happy vi[413]	*nʋam^{II} / *nʋam^{III} (< *nʋam^{II}-s) ; *nʋam^{II}-s	nʋam^{III} / ncm^{IIb}	nʋam^{III} / ncm^{IIb}	nʋoom^{II} / nʋoom^{III} ; dcu	nʋoom^{II} / nʋoom^{III} ; dcu	nʋam^{II} / nʋam^{III} ; dcu	nʋam^{II} / nʋam^{III}
alive vi	*nɔŋ^{II} / *nɔn^{III} (< *nɔŋ^{II}-s)	nɔŋ^{IIa} / nɔn^{III}	nɔŋ^{IIa} / nɔn^{III}	nɔj^{II}- / nɔn^{III}-	nɔj^{II}- / nɔn^{III}-	nɔŋ^{II}- / nɔn^{III}-	nɔŋ^{I} / nɔn^{III}
smear v[414]	*nu^{I} / *nɔt (< *nu^{I}-s) ; *nɔt-s	nu^{I} / nɔt		nu^{III}	nu^{III}	no?	nu^{I} / nɔt

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[411] Th no?^{I} ~ no?^{I} wade through water vi. Mizo has a variant nok^{IIb} ~ no?.

[412] Mi graze (as bullet etc), Za relocate vt. Mizo has ^{h}nol^{IIb} push sweep pile along vt

[413] Mi/Za comfortable vi; Th nʋoom^{II} ~ nʋoom^{III} / nɔp happy vi, nʋoom^{II} ~ nɔp comfortable vi; Zo nʋoom^{II} ~ nʋoom^{III} / nɔp comfortable vi; Te nʋam^{II} ~ nʋam^{III} happy vi, nʋam^{III} ~ nɔp comfortable vi; Si nuam^{II} ~ nuam^{III} / nɔp happy vi, nuam^{II} ~ nɔp comfortable vi.

[414] Mi murky vi; Th/Zo/Te smear vt; Si murky vi.

mother n[415]	*nu^{II}	nu^{IIb}	nu^{IIb}	nu^{II}	nu^{II}	nu^{II}	nu^{II}
female n[416]	*nu^{III} (< *nus)	nu^{III}	nu^{III}	nu^{III}	nu^{III}	nu^{III}	nu^{III}

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[415] See *nu^{III} *female n*.

[416] The reconstructed form *pas is provided for consistency but evidence in 6.5.3 suggests it to be a secondary derivation. See *nu^{II} *mother n*.

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	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
clan n	*ʰnam^{II}	ʰnam^{IIa}	ʰnem^{IIa}	nam^{II}	nam^{II}	nam^{II}	nam^{II}
smell vt[417]	*ʰnam^{III} / *ʰnam^{III}-s	ʰnem^{III} / ʰnim^{III} / ʰnam^{IIb} / ʰnim^{IIb}	ʰnem^{III} / ʰnim^{III} / ʰnam^{IIb} / (ʰnim^{IIb})		nem^{III} / nap	nem^{III} / nap	nam^{III} / nap
sluggish, exhausted vi[418]	*ʰnaŋ^{III} / *ʰnaŋ^{III}-s	ʰnaŋ^{III} / (ʰnau^{IIb})	ʰnaŋ^{III}	naŋ^{III} / naʔ	naŋ^{III} / naʔ	naŋ^{III} / net	nau^{III} / nek / net
snot n	*ʰnap	ʰnap	ʰnap	dap	dap	dap	dap
leaf n	*ʰnas	ʰneʔ	ʰneʔ	na^{III}	na^{III}	naʔ	-na^{III}
ear n[419]	*ʰna^{I}		ʰna^{I}	na^{I}			
pus, sap n; tap vt[420]	*ʰnaj^{I} / *ʰnaj^{III} (< *ʰnaj^{I}-s)	ʰnaj^{I} / ʰnaj^{III}	ʰnaj^{I}	naj^{I}	naj^{I}	naj^{I}	naj^{I}
near v[421]	*(ʰ)naj^{II}	ʰnaj^{IIa}	naj^{IIa}	naj^{II}	naj^{II}	naj^{II}	naj^{II}

[417] Mi/Za ʰnem^{III} ~ ʰnem^{IIb} *sniff affectionately vt*; ʰnim^{III} ~ ʰnim^{IIb} *smell vt.* See *nem^{I} *smell vi.*

[418] Mi/Za *sluggish vi*; Th/Te *exhausted vi*; Zo *be on one's deathbed vi*; Si naŋ^{III} ~ nek *sluggish vi*, naŋ^{III} ~ net *ill vi.* Thado and Zo have naŋ^{I} ~ nan^{III} *sluggish vi.*

[419] Th *inner-ear n*

[420] Mi ʰnaj^{I} *pus, sap n*, ʰnaj^{I} ~ ʰnaj^{III} *tap vt*; Za/Th/Zo/Te/Si *pus, sap n.*

gloss	Proto	Mi	Th	Za	Zo	Te	Si
near vi, approach vt[421]	*ʰnaj^{III} (< *ʰnaj^{II}-s) / *ʰnaj^{II}-s	ʰnaj^{III} / ʰnajʔ	naj^{III} / nɛj^{III} ; naj^{III}	naj^{III} / nɛjʔ	naj^{III} / nɛj^{III} ; naj^{III}	naj^{III} / nɛjʔ	naj^{III} / nɛjʔ
viscous vi[422]	*ʰnaj^{II} / *ʰnan^{III} (< *ʰnan^{II}-s)	ʰnaj^{IIa} / ʰnan^{III}	naj^{II} / nan^{III}	naj^{II} / nan^{III}	naj^{II} / nan^{III}		naj^{II} / nan^{III} / <u>nan^{III}</u>
nose n; breathe, snore vi[423]	*ʰnar^{I} / *ʰnar^{III} (< *ʰnar^{I}-s)	ʰnar^{I} / ʰnar^{III}	naʔ^{I} / nɛʔ	na^{I} / <u>naʔ</u> ; na^{III}		nak^{I} / nak^{III}	nak^{I} / nak^{III}
lip n[424]	*ʰnɛs	<u>ʰhɛʔ</u>	ne^{III}	ne^{III}	ne^{III}		ne^{III}
eat vt[425]	*ʰne^{II} (< *ʰne^{II}-s) / *ʰne^{II}-s	ʰne^{III} / ʰnek^{IIb}	ne^{II} / neʔ^{II}	ne^{II} / neʔ^{II}	ne^{II} / neʔ^{II}	ne^{II} / nek^{II}	ne^{II} / nɛak^{II}
comfort vt[426]	*ʰnem^{III} / *ʰnem^{II}-s	ʰnem^{III} / ʰnɛm^{IIb}		nem^{III} / nɛp	nem^{III} / nɛp	nem^{III} / nɛp	nɛam^{III} / nɛp
contradict vt[427]	*ʰnɪal^{II} / *ʰnɪal^{II} (< *ʰnɪal^{II}-s)	ʰnɪal^{IIa} / ʰnɪal^{III}	neɪ^{II} / neɪ^{III}	nɪal^{II} / nɪal^{III}	nɪal^{II} / nɪal^{III}	nɪal^{II} / nɪal^{III}	nɪal^{II} / nɪal^{III}

[421] Mi ʰnaj^{IIa} ~ ʰnaj^{III} near vi, ʰnɛjʔ approach vt; Th naj^{II} ~ naj^{II} near vi, nɛjʔ approach vt; Za naj^{IIa} ~ naj^{III} near vi, naj^{II} ~ naj^{III} / nɛj^{III} near vi, (naj^{II} ~) nɛj^{III} approach vt; Zo naj^{II} ~ naj^{III} near vi, (naj^{II} ~) nɛj^{III} approach vt; Te naj^{II} ~ naj^{III} near vi, (naj^{II} ~) nɛjʔ approach vt; Si naj^{II} ~ naj^{III} near vi, nɛj^{III} approach vt. Tedim glossed by Henderson (1965:83) as naj^{III} ~ nɛjʔ draw near vi, nɛjʔ draw sbdy near vt.

[422] Za/Th sticky vi; Si naj^{II} ~ nan^{III} / naj^{III} trickle vi.

[423] Mi ʰhar^{I} ~ ʰhar^{III} snore vi, ʰhar$^{I/III}$ nose n; Za nose n; Th naʔ^{I} nose n, nɛʔ smell vt; Zo naʔ^{I} nose n, na^{I} ~ na^{III} breathe vi; Te nak^{I} ~ nak^{III} breathe vi, nak^{III} nose n; Si nak^{I} ~ nak^{III} snore vi, nak^{III} nose n. Zo naʔ^{I} nose n is probably a Tedim loan used instead of the usual compound noun nepkoo^{III} nose n (lit. snot burrow).

[424] Mi lower-lip n. Initial *ʰn- is reconstructed on the basis of *ʰhpw^{III} tusk n and *ʰrat^{II} scratch, comb vt being irregularly reflected in Zahau and Mizo respectively with h-.

[425] Mi suck nipple vi.

[426] See *nem^{I} soft vi.

[427] Th deny vt; Zo/Te contradict, deny vt.

	*proto						
low vi	*^{h}ɲam^{II} / *^{h}ɲam^{III} (< ^{h}ɲam^{II}-s)	^{h}ɲam^{IIa} / ^{h}ɲam^{III}	ɲam^{IIa} / ɲam^{III}	nɛm^{II} / nɛm^{III}	nɛm^{II} / nɛm^{III}	ɲam^{II} / ɲam^{III}	niem^{II} / niem^{III}
malleable vi[428]	*^{h}nip	^{h}nip	^{h}nip	nip	nip	nip	nip
overcast vi[429]	*^{h}nim^{I} / *^{h}nim^{III} (< *^{h}nim^{I}-s)	^{h}nim^{I} / ^{h}nim^{III}	^{h}nim^{I} / ^{h}nim^{III}	nim^{I} / nim^{III}	nim^{I} / nim^{III}	nim^{I} / nim^{III}	nim^{I} / nim^{III}
`two vi`	*^{h}nis	^{h}niʔ	^{h}niʔ	ni^{III}	ni^{III}	niʔ	ni^{III}
gums n	*^{h}ni^{II}	^{h}ni^{IIb}	-ni^{IIb}	ni^{II}		-ni^{II}	-ni^{II}
`blow nose vi`	*^{h}nit$^{I/II}$ / *^{h}nit$^{I/II}$-s	^{h}nit^{I} / ^{h}nit^{III}	^{h}nit^{I} / ^{h}nit^{III}	nit^{II} / nit^{III}	nit^{II} / nit^{III}	nit^{II} / nit^{III}	nit^{II} / nit^{III} / ni^{III}
damp vi	*^{h}nom^{I} / *^{h}nom^{III} (<*nom^{I}-s)	^{h}nom^{I} / ^{h}nom^{III}		nɛm^{I} / nɛm^{III}	nɛn^{I} / nɛn^{III}	nɛn^{I} / nɛn^{III}	
reject v[430]	*^{h}non^{I} / *^{h}non^{III} (<*^{h}non^{I}) (s-) / *^{h}non^{III}-s	^{h}noɲ^{I} / ^{h}non^{III} / ^{h}non^{IIb}	^{h}nɛɲ^{I} / ^{h}nɛn^{III} / ^{h}nɛn^{IIb}			nɛn^{I} / nɛn^{III}	
murky vi; *breast, milk* n[431]	*^{h}noj^{II}		^{h}noj^{I}	noj^{II}	noj^{II}	noj^{II}	nɔaj^{II}

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[428] Te/Si *soft* vi.

[429] Mi/Th *overcast* vi, *immerse* vt; Za *immerse* vt.

[430] Mi *^{h}noj^{I} ~ *^{h}non^{II} *rejected* vi, ^{h}non^{IIb} *reject* vt.

[431] Mi *smear* vt; Za ^{h}noj^{I} ~ ^{h}noj^{III} *murky* vi, ^{h}noj^{IIb} *breast, milk* vi; Si nɔaj^{II} *breast, milk* n, nɔaj^{III} ~ noj^{III} *smear* vt.

	ᵸnɔj˧	nɔʃou˧		nɔʃoᵘ˧		nɔʃoᵘ˧		nɔʃoᵘ˧
	nɔj˧ᵗ ᵇ					nɔʃ / nɔʃoᵘ˧		nɔʃou˧
								nɔj˥
								nɔj˧
back (body/direction) n	*ᵸnɔj˧ (< *ᵸnɔʃou˧-s)	ᵸnɔj˥		nɔj˥		nɔj˥		nɔj˥
	*ᵸnɔj˧-s							
laugh v[432]	*⁽ᵸ⁾nuj˥	ᵸni˥	nuj˥	nuj˥	nuj˥	nuj˥	nuj˥	nɔj˥
	*⁽ᵸ⁾nuj˧ (< *⁽ᵸ⁾nuj˥-s)		nɔj˧	nuj˧	nuj˧	nuj˧ / nɔj˧		nɔj˧
	*⁽ᵸ⁾nuj˧-s		nɔjʔ		nɔjʔ		nɔjʔ	
wipe vt[433]	*⁽ᵸ⁾nul˥	ᵸnul˥	nul˥		nul˥		nul˥	
	*⁽ᵸ⁾nul˧ (< *⁽ᵸ⁾nul˥-s)	ᵸnul˧	nul˧		nul˧		nul˧	

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	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
shin n	*ŋal^I	ŋal^I	ŋal^I	ŋal^I	ŋel^I	ŋal^I	ŋal^I
dare v[434]	*ŋam^I *ŋam^III (< *ŋem^I-s) *ŋam^II-s	ŋam^I ŋam^III ŋam^IIb	ŋam^I ŋam^III ŋam^IIb	ŋam^I ŋam^III	ŋam^I ŋam^III	ŋam^I ŋam^III	ŋam^I ŋam^III
receive vt	*saŋ	ʔaŋ	ʔaŋ	ŋa^III	ŋa^III	ʔaŋʔ	ŋa^III
five vi	*ŋa^I *ŋat^I (< *ŋa^I-s)	ŋa^I ŋa^III	ŋa^I ŋat^IIb	ŋa^I ŋa^III	ŋa^I	ŋa^I	ŋa^I
love, listen vt[435]	*ŋaj^I *ŋaj^III (< *ŋaj^I-s) *ŋaj^III-s	ŋaj^I ŋaj^III ŋej?	ŋaj^I ŋaj^III ʔaj?	ŋaj^I ŋaj^IIII	ŋaj^I ŋaj^III	ŋaj^I ŋej?	ŋaj^I ŋaj^III
dare vi[436]	*ŋap^II *ŋap^II-s			ŋap^II ŋap^III	ŋap^II ŋap^III	ŋap^II ŋap^III	nap^II nap^III / na^III
monkey n	*ŋaw^I	ŋaw^I	ŋaw^I	ŋaw^I	ŋaw^I	ŋaw^I	ŋaw^I

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[434] Mi/Za ŋem^I ~ ŋem^III *quiet and subdued (as baby), tame (as domesticated animals)* vi, ŋem^IIb *dare vt*; Th/Zo/Te/Si *dare vt.*

[435] Mi ŋaj^I ~ ŋaj^III / ŋej? *love vt*, ŋaj^I ~ ŋej?- *listen vt*; Za ŋaj^I ~ ŋaj^III *love, pine vt*, ŋej? *palatable, pleasing vi*; Te ŋaj^I ~ ŋej? *love, listen vt*, ŋej^III *palatable, pleasing vi*; Th/Zo ŋaj^I ~ ŋej^III *love, listen vt*, ŋej^III *palatable, pleasing vi*; Si ŋaj^I ~ ŋej^III *love, pine vt.*

[436] See *ŋem^I *dare v* although without direct Mizo and Zahau evidence the possibility of *ʰŋ- cannot be excluded.

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dawdle vi	*ŋeŋ^{I} *ŋen^{III} (< *ŋeŋ^{I}-s)	ŋeŋ^{I} ŋen^{III}		ŋɔŋ^{I}-		
request vt	*ŋeŋ^{III} *ŋen^{III}-s	ŋeŋ^{III} ŋɛn^{IIb}	ŋeŋ^{III} ŋɛn^{IIb}		ŋen^{III} ŋɛt	ŋen^{III} ŋɛt
deaf vi[437]	*ŋcŋ^{I} *ŋcŋ^{III} (< *ŋcŋ^{I}-s)	ŋcŋ^{I} ŋcŋ^{III}	ŋeŋ^{IIa}	ŋcŋ^{I} ŋcŋ^{III}		ŋcŋ^{I} ŋcŋ^{III}
pale vi	*ŋɔw^{I} *ŋɔwcŋ^{III} (< *ŋɔw^{I}-s)	ŋɔw^{I} ŋɔwcŋ^{III}	ŋɔw^{I} ŋɔwcŋ^{III}	ŋcŋ^{I} ŋcŋ^{III}	ŋɔw^{I} ŋɔwcŋ^{III}	ŋɔw^{I} ŋɔwcŋ^{III}
run-down vi[438]	*ŋɔj^{II} *ŋɔj^{III} (< *ŋɔj^{II}-s)	ŋɔj^{IIa} ŋɔj^{III}		ŋuj^{II}	ŋɔj^{II}-	ŋɔj^{III}
spine n	*ŋum$^{I/III}$	ŋum^{III}		ŋum^{I}	ŋum^{I}	
silver n	*ŋun$^{I/III}$	ŋun^{I}	ŋun^{I}		ŋun^{III}	ŋun^{III}

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437 Za *deaf and stupid* vi.

438 Mi *miserable* vi; Th *sad, sleepy* vi; Zo/Te *tired out* vi; Si *nauseated (due to food/smell)* vi. Mizo ŋɔaj^{IIb}, Thado ŋɔŋ^{II} and Tedim ŋɔaj^{I} ~ ŋɔaj^{III} are semantically identical variants.

*ʰŋ-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
rude v[439]	*ʰŋal^I *ʰŋal^{III} (< *-ŋalʰ-s)	ʰŋal^I ʰŋal^{III}	ʰŋal^I ʰŋal^{III}	ŋal^I ŋal^{III}	ŋal^I ŋal^{III}	ŋel^I- ŋel^{III}	ŋel^I ŋel^{III}
wild boar n	*(ʰ)ŋal^{III}	ʰŋal^{III}	ŋal^{III}	ŋal^{III}	ŋal^{III}	ŋal^{III}	ŋal^{III}
fish n[440]	*(ʰ)ŋa^{II}	ʰŋa^{IIb}	ŋa^{IIb}	ŋa^{II}	ŋa^{II}	ŋa^{II}	ŋe-
wait vi	*ʰŋak^{II} *ʰŋak^{II}-s	ʰŋak^{IIb} ʰŋa?	ʰŋak^{IIb} ʰŋe?	ŋa?^{II} ŋa^{III}	ŋa?^{II} ŋa^{III}	ŋak^{II} ŋak^{III}	ŋak^{II} ŋak^{III} / ŋa^{III}
growl vi	*(ʰ)ŋir^{III}	ŋor^{III}	ʰŋir^{III}	ŋi?	ŋi?^{III}	ŋik^{III}	
tusk n[441]	*ʰŋcfw^{III}	ʰŋcw^{III}	ʰcw^{III}			ʰwcfw$^-$	
shake vt[442]	*ʰŋok^{II} *ʰŋok^{II}-s					ŋok^{II} ŋok^{III}	ŋok^{II}
snore vi	*ʰŋok$^{I/II}$ *ʰŋok^{III} (< *ʰŋok$^{I/II}$ -s)	ʰŋok^I ʰŋok^{III}	ʰŋok^{IIa} ʰŋok^{III}				ŋok^{III} / ŋo^{III}

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[439] Mi/Za *rude vi*; Th *be on informal terms with somebody vi*; Zo *barren (as ground) vi*; Te ŋel^I- *rude vi*, ŋel^{III} *stare in anger at vt*; Si *unabashed vi*.

[440] Sizang is reduced as prefix.

[441] Tedim is a song word.

[442] Mizo has ʰŋpk *elbow vt*, ʰŋpɲʰb *elbow, recoil (as gun) vt*; Zahau has ʰŋpɲʰb *clash horns/heads vi*.

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neck n *ʰɟoɲ ʰɟoɲ ʰɟoɲ ɟoɲ ɟoɲ ɟoɲ ɟoɲ

*p-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
go vi	*paɟᴵ *paɟᴵᴵᴵ (< *paɟᴵ-s)	paɟᴵ			pɛɟᴵᴵ pɟɛᴵᴵ	paɟᴵ paɟᴵᴵᴵ	paɟᴵ paɟᴵᴵᴵ
palisade n	*ɟaɗᴵ	ɟaɗᴵ		paɗᴵ	ɟaɗᴵ		
thin vi[443]	*panᴵ *panᴵᴵᴵ (< *panᴵ-s)	panᴵ panᴵᴵᴵ		panᴵᴵ / pɛnᴵᴵ	panᴵ	panᴵ panᴵᴵᴵ	pɛnᴵ pɛnᴵᴵᴵ
wall n[444]	*ʧaŋᴵᴵ	ʧaŋᴵᴵᵃ		baŋᴵᴵ	baŋᴵᴵ	baŋᴵᴵ	baŋᴵᴵ
wall n; waylay, stop vt[445]	*paŋᴵᴵ/ᴵ *panᴵᴵᴵ (< *paŋᴵ-s)			paŋᴵ panᴵᴵᴵ	paŋᴵ panᴵᴵᴵ	paŋᴵ / paɗᴵᴵ panᴵᴵᴵ / panᴵᴵᴵ	paŋᴵ / paŋᴵᴵ panᴵᴵᴵ / panᴵᴵᴵ
side n[446]	*ʧaŋᴵᴵᴵ	paŋᴵᴵᴵ		paŋᴵᴵᴵ	paŋᴵᴵᴵ	paŋᴵᴵᴵ	paŋᴵᴵᴵ
mushroom n	*paᴵᴵ	paᴵᴵᵃ	paᴵᴵᵃ	paᴵᴵ	paᴵᴵ	paᴵᴵ	-paᴵᴵ
thin vi	*paᴵᴵ *patᴵᴵ (< *paᴵᴵ-s)		paᴵᴵᵃ patᴵᴵᵇ	paᴵᴵ patᴵᴵ	paᴵᴵ patᴵᴵ	paᴵᴵ patᴵᴵ	paᴵᴵ patᴵᴵ

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[443] Tb/Si *very thin vi*. Tedim glossed as *very thin vi* by Henderson (1965:156) and Bhaskararao (1996:78). Saizang has penᴵᴵ *thin vi*.

[444] Te *door n*; Si *main-entrance n*.

[445] Th *waylay vt*; Zo paŋᴵ *wall n*, paŋᴵ ~ penᴵᴵᴵ *waylay, stop vt*; Te paŋᴵ/ᴵᴵ ~ penᴵᴵᴵ *waylay, stop vt*; Si paŋᴵ *wall n*, paŋᴵ ~ penᴵᴵᴵ *waylay vt*, paŋᴵᴵ ~ penᴵᴵᴵ *stop vt*.

[446] Mi/Th *side of body n*; Si *side of body/head n*.

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father n[447]	$*pa^{II}$	pa^{IIb}	pa^{IIb}	pa^{II}	pa^{II}	pa^{II}	pa^{II}
male n[448]	$*pa^{III}\,(<*pas)$	pa^{III}	pa^{III}	pa^{III}	pa^{III}	pa^{III}	pa^{III}
sheath n[449]	$*paj^{I}$	paj^{I}	paj^{I}	paj^{I}	paj^{I}	paj^{I}	paj^{I}
carry on oneself vt[450]	$*paj^{II}$ / $*paj^{III}\,(<*paj^{II}\text{-}s)$	paj^{IIa} / paj^{III}	paj^{IIa} / paj^{III}		paj^{II} / paj^{III}	paj^{II} / paj^{III}	paj^{II} / paj^{III}
discard vt[451]	$*paj^{III}$ / $*paj^{III}\text{-}s$	$paj\text{ʔ}$	$paj\text{ʔ}$	paj^{III} / ʃad^{III}	paj^{III} / ʃad^{III}	paj^{III} / ʃad^{III}	paj^{III} / ʃad^{III}
bloom v[452]	$*pal^{I}$ / $*pal^{III}\,(<*pal^{I}\text{-}s)$ / $*pal^{III}\text{-}s$			pal^{III}	pal^{I} / pal^{III} / $pal\text{ʔ}$	pal^{III}	pal^{III}
pelvis, forehead n[453]	$*panj^{I}$	$panj^{I}$	$panj^{I}$	$panj^{I}$	$panj^{I}$	$\text{-}panj^{I}$	$panj^{I}$
white vi[454]	$*par^{I}$ / $*par^{III}\,(<*par^{I}\text{-}s)$			$pa\text{ʔ}^{I}$ / $pe\text{ʔ}$	pa^{I} / pa^{III}	pak^{I} / pak^{III}	pak^{I} / pak^{III}

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[447] See $*pa^{III}$ *male* n.

[448] The reconstructed form *pas is provided for consistency but evidence in 6.5.3 suggests it to be a secondary derivation. In all languages but Thado $*pa^{III}$ occurs verbally as the second part of a compound with $*\text{ʔu}^{I}$ *elder sibling* n to mean *elder vi* with an irregular form 2 pʌt. See $*pa^{II}$ *father* n.

[449] See $*paj^{II}$ *carry on oneself vt.*

[450] Laizo has poj^{IIa} ~ poj^{III} *carry on oneself vt.* See $*paj^{I}$ *sheath* n.

[451] Za *put refuse on fire vi*; Si *misplace vt.*

[452] Th *in full bloom vi*; Zo pal^{I} ~ pal^{III} *over-bloom vi*; Te pal^{I} ~ pal^{III} *in prime of life vi*, $pɛl^{III}$ *over-bloom vi*; $pɛl^{III}$ *blossom, bloom vi*, $pɛl\text{ʔ}$ *flower vi*; Si *blossom, bloom vi.*

[453] Mi/Za *pelvis* n; Th/Zo *forehead* n.

[454] Th *white-spotted vi*; Zo *brilliant white vi.*

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flower n/vi[455]	*par^{I} *par^{III} (< *par^{I}-s) *par^{III}-s	par^{I} par^{III} parʔ	par^{I} par^{III}	paʔ^{I} paʔ	pa^{I} pa^{III}	pak^{I} pak^{III}	pak^{I} pak^{III}
speak vi[456]	*paw^{I} *paw^{III} (< *par^{I}-s)	paw^{I}-		paw^{I} paw^{III}		paw^{I} paw^{III}	paw^{I} paw^{III}
revolve vt, wheel n[457]	*pɛj^{I} *pɛj^{III} (< *pɛj^{I}-s)			pɛj^{I} pɛj^{III}	pɛj^{I} pɛj^{III}	pɛj^{I} pɛj^{III}	pɛj^{I} pɛj^{III}
detach vi[458]	*pɛl^{II} *pɛl^{III} (< *pɛl^{II}-s) *pɛl^{III}-s	pɛlʔ	pɛlʔ	pɪl^{II} pɪl^{III}	pɛl^{II} pɛl^{III}		pɛal^{II} pɛal^{III}
catapault v[459]	*pɛr^{I} *pɛr^{III} (< *pɛr^{I}-s) *pɛr^{III}-s	pɛr^{I} pɛr^{III} pɛrʔ		peʔ^{I} peʔ	peʔ^{I} peʔ^{III}	pek^{I} / pek^{II} pek^{III}	pɛak^{I} pɛak^{III}
pierce (ox nose) vi[460]	*pɛs	pɛʔ					

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455 Mi par^{I} *flower* n, par^{I} ~ par^{III} *flower* vi, parʔ *unfurl (as flower)* vi; Za -par^{I} *flower* n, par^{I} ~ par^{III} *flower* vi; Th paʔ^{I} ~ pɛʔ *flower* vi, pɛʔ- *flower* n; Zo pa^{I}- *flower* n, pa^{I} ~ pa^{III} *flower* vi; Te/Si pak^{I} *flower* n, pak^{I} ~ *pak^{III} *flower* vi. See *pʰar^{III}-s *unfurl* vt.

456 Mi *speech, word* n.

457 Th/Zo pɛj^{I} *wheel* n, pɛj^{I} ~ *pɛj^{III} *revolve* vi; Te *revolve* vi/t; Si *revolve* vt.

458 Thado vocalism may be influenced by *pɪl^{III}-s *peel* v/n. See *pʰɛl^{II} *detach, dismantle* vt.

459 Mi pɛr^{I} ~ pɛr^{III} *catapault, stomp* vi, pɛrʔ *catapault* vt; Zo/Th *back-kick* vi; Te pek^{I} ~ pek^{III} *back-kick* vi; Te pek^{I} ~ pek^{III} *wag tail, pop-up (as fish), kick feet in air (as baby)* vi, pek^{II} ~ pek^{III} *back-kick* vi; Si *stomp, back-kick* vi.

460 See *pʰɛs *pierce (ox nose)* vt.

gloss							
bite vt[461]	*pɛt / *pɛt-s	pɛt / pɛʔ		pɛt / peᴵᴵᴵ	pɛt / peᴵᴵᴵ	pɛt / peᴵᴵᴵ	pɛt / peᴵᴵᴵ
flat v[462]	*perᴵᴵ / *perᴵᴵᴵ (< *perᴵᴵ-s) / *perᴵᴵ-s	perᴵᴵᴵ / pɛrʔ	perᴵᴵᴵ	peʔᴵᴵ / pɛʔ	peʔᴵᴵᴵ	peʔᴵᴵ / pɛʔ	pɛakᴵᴵᴵ
avoid vt[463]	*pelᴵᴵᴵ / *pelᴵᴵᴵ-s	pelᴵᴵᴵ / pɛlʔ		pelᴵᴵᴵ / pɛlᴵᴵᴵ	pelᴵᴵᴵ / pɛlᴵᴵᴵ	pelᴵᴵᴵ / pɛlʔ	pɛalᴵᴵᴵ / pɛlᴵᴵᴵ
migrate v[464]	*pemᴵ / *pemᴵᴵ (< *pemᴵ-s) / *pemᴵᴵ-s	pemᴵ / pemᴵᴵᴵ		pemᴵ / pemᴵᴵᴵ		pemᴵ / pemᴵᴵᴵ	pɛamᴵ / pɛamᴵᴵᴵ / pɛp
give vt	*pɪaᴵᴵ / *pɪakᴵᴵ (< *pɪaᴵᴵ-s)	peᴵᴵᴵ / pekᴵᴵᵇ	peᴵᴵᵇ / pekᴵᴵᵇ	perᴵᴵ / peʔʔᴵᴵ	pɪeᴵᴵ / pɪeʔᴵᴵ	pɪaᴵᴵ / pɪakᴵᴵ	pɪeᴵᴵ / pɪakᴵᴵ
deviate vi[465]	*pɪalᴵᴵ / *pɪalᴵᴵᴵ (< *pɪalᴵᴵ-s)	pɪalᴵᴵᵃ / pɪalᴵᴵᴵ	pɪalᴵᴵᵃ / pɪalᴵᴵᴵ	perlᴵᴵ	pɪelᴵᴵ / pɪelᴵᴵᴵ	pɪalᴵᴵ / pɪalᴵᴵᴵ	pɪelᴵᴵ / pɪelᴵᴵᴵ
come into being vi	*pɪaŋᴵ / *pɪaŋᴵᴵᴵ (< *pɪaŋᴵ-s)	pɪaŋᴵ / pɪanᴵᴵᴵ	pɪaŋᴵ / pɪanᴵᴵᴵ	peɪŋᴵ / pemᴵᴵᴵ	pɪeŋᴵ / pɪenᴵᴵᴵ	pɪaɪᴵ / pɪanᴵᴵᴵ	pɪaɪᴵ / pɪanᴵᴵᴵ

[461] Mi graze/browse/nibble vt; Zo bite (by humans) vt. Zahau has pɛt ~ pɛʔ hop (as frog/flea) vi.

[462] Mi/Za/Si flatten vt; Th/Te flat vi; Zo plank n.

[463] Mi pass over, allow to pass vt

[464] Mi migrate vi; Th pemᴵ ~ pemᴵᴵᴵ migrate vi, pemᴵᴵᴵ extension n; Te pemᴵ ~ pemᴵᴵᴵ migrate vi, pemᴵᴵᴵ ~ pɛp extend house vt; Si pɛamᴵ ~ pɛamᴵᴵᴵ migrate vi, pɛamᴵᴵᴵ ~ pɛp extend house vt.

[465] Za pɪalᴵᴵᵃ stopover vi, pɪalᴵᴵᴵ deviate vi; Si pɪalᴵᴵ ~ pɪalᴵᴵᴵ deviate vt, pɪalᴵᴵᴵ deviate vi.

sink vi[466]	*pɪlˡ *pɪlᴵᴵᴵ (< *pɪlˡ-s)	pɪlˡ pɪlᴵᴵᴵ	pɪlˡ pɪlᴵᴵᴵ			pɪlˡ pɪlᴵᴵᴵ
peel v/n[467]	*pɪlᴵᴵᴵ-s	pɪlʔ / pɪlᴵᴵᴮ	pɪlʔ		pɪlʔ	pɪlʔ
grandmother n	*pɪˡ	pɪˡ	pɪˡ	pɪˡ	pɪˡ	pɪˡ
big (female-animal) vi[468]	*pɪˡ *pitᴵᴵ (< *pɪᴵᴵ-s)	pɔjᴵᴵᵃ pɔjᴵᴵᴵ	pɪᴵᴵᵃ pitᴵᴵᴮ	pɪᴵᴵ pitᴵᴵᴮ	-pɪᴵᴵ	pɪᴵᴵ pitᴵᴵᴮ
put on end vi[468]	*pɔk *pɔk-s	pɔk pɔʔ	pɔk pɔʔ			
hug vt	*pɔmˡ *pɔmᴵᴵᴵ (> *pɔmᴵ-s)	pɔmˡ pɔmᴵᴵᴵ	pɔmˡ pɔmᴵᴵᴵ	pɔmˡ pɔmᴵᴵᴵ	pɔmˡ pɔmᴵᴵᴵ	pɔmˡ pɔmᴵᴵᴵ
perforation n, perforate vi	*pɔp *pɔp-s	pɔp ʔɔd	pɔp ʔɔd	dɔd		
comb vt[469]	*pɔt *pɔt-s	pɔt ʔɔd	pɔt pɔʔ	pɔt pɔᴵᴵᴵ	pɔt pɔᴵᴵᴵ	pɔt pɔᴵᴵᴵ
sprout vi[470]	*pɔwˡ	tɔwˡ	tɔwˡ	pɔwˡ	pɔwˡ	pɔwˡ

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[466] See *pʰlⁱ despose vt.
[467] Mi pɪlʔ peel-off vi/t, pɪlᴵᴵᴮ rind n; Za peel n; Te peel-off vi.
[468] See *pʰɔk put on end vt.
[469] Mi pluck vt.
[470] Mizo has pɔwʔ poke out vi, poke into vt.

	*pɔw^{II} (< *pɔw^{I}-s)	tɕɔw^{II}	pɔw^{III}	pɔw^{III}	pɔw^{II}	pɔw^{II}
group n, *associate* v [471]	*pol^{I} *pol^{III} (< *pol^{I}-s) *pol^{III}-s	pol^{I} pol^{III} pɔl?	pol^{I} pol^{III} pɔl?	pol^{I} pol^{III}	pol^{I} pol^{III}	pol^{I} pol^{III} pɔl^{III}
piebald vi [472]	*pol^{II} *pol^{III} (< *pol^{II}-s)	pol^{IIa} pol^{III}	pol^{IIa}	pol^{II} pol^{III}	pol^{II} pol^{III}	pol^{II} pol^{III}
swell v [473]	*pom^{II} *pom^{III} (< *pom^{II}-s) *pom^{III}-s			pom^{II} pom^{III} pɔp	pom^{II} pom^{III}	pom^{II} pom^{III} pɔp
bulge vi [474]	*pɔɲ^{II} *pɔn^{III} (< *pɔɲ^{II}-s)	pɔɲ^{IIa} pɔn^{III}	pɔɲ^{IIa} pɔn^{III}			
carry on back vt [475]	*pɔa^{II} *pɔak^{III} (< *pɔa^{II}-s)	pɔa^{III} pɔak^{IIb}	po^{IIb} pok^{IIb}	pɔo^{II} pɔo?^{II}	pɔa^{II} pɔak^{II}	pɔa^{II} pɔak^{II}
burst v [476]	*pɔak^{II} *pɔak^{II}-s	pɔak^{IIb} pɔa?	pɔak^{IIb} pɔa?		poak^{II} poak^{III} / poa?	puak^{II} puak^{III} / puak^{III}

[471] Mi/Za pol^{I} *group* n, pol^{I} ~ pol^{III} *associate* vi, pol? *mix* vt; Th pol^{I} ~ pol^{III} *associate* vi, pol^{III} *mix* vt; Zo pol^{I} *group* n, pol^{I} ~ pol^{III} *associate* vi; Te pol^{I} *group* n, pol^{III} *associate* vi; Si pol^{I} *group* n, pol^{I} ~ pol^{III} *associate* vi, pol^{III} *add water (when cooking)* vt.

[472] Mi *blue, bloom/dust-covered* vi; Za *off-colour* vi.

[473] Th *swell (due to impact)* vi; Zo pom^{II} ~ pom^{III} *swell (due to impact)* vi, pom^{III} ~ pɔp *exaggerate* vt; Te pom^{II} ~ pom^{III} *swell (due to rot/water)* vi, pom^{III} ~ pɔp *join-in* vt, Si pom^{II} ~ pom^{III} *swell (due to rot/water)* vi, pom^{III} ~ pɔp *encourage, exaggerate, participate* vt.

[474] Tedim and Sizang have pɔɲ^{III} *bulge (as navel)* vi.

[475] Mi/Za *carry baby on back* vt.

[476] Mi/Te/Si *burst* vi/t; Za pɔak^{IIb} *burst* vi/t; Za pɔak^{IIb} *burst* vi, pɔa? *burst* vt.

Comparative table (daughter-language reflexes with reconstructed Proto-forms; tone categories marked by superscript Roman numerals I, II, III):

Gloss	Proto					
unripe but swollen vi[477]	*pʊam^I / *pʊam^{III} (< *pʊam^I-s)	pɔam^I / pɔam^{III}	pɔam^I / pɔam^{III}	pɔɔm^I / pɔɔm^{III}	pɔam^I / pɔam^{III}	pʊam^I / pʊam^{III}
garment n	*pʊan^{II}	pɔan^{IIa}	pɔan^{IIa}	pɔɔn^{II}	pɔan^{II}	pʊan^{II}
divulge vi[478]	*pɔaŋ^I / *pɔan^{III} (< *pɔaŋ^I-s)	pɔaŋ^I / pɔan^{III}	pɔaŋ^I / pɔan^{III}			
grey vi	*pɔaŋ^I / *pɔan^{III} (> *pɔaŋ^I-s)	bɔaŋ^I / bɔaŋ^{III}	bɔaŋ^I / bɔaŋ^{III}	bɔaŋ^I / bɔɔn^{III}	pɔaŋ^I / pɔan^{III}	pɔaŋ^I / pɔan^{III}
bloat vi	*pɔar^I / *pɔar^{III} (< *pɔar^I-s)	pɔar^I / pɔar^{III}	pɔar^I / pɔar^{III}	pɔɔʔ^I / pɔɔʔ^{III}	pɔak^I / pɔak^{III}	pʊak^{III} / pʊak^{III}
spherical vi; belly, body n[479]	*pɔm^I / *pɔm^{III} (< *pɔm^{II}-s)	pum^{IIa} / pɔm^{III}	pum^{IIa} / pɔm^{III}	pɔm^{II} / pɔm^{III}	pɔm^{II} / pɔm^{III}	pɔm^{II} / pɔm^{III}
multiply vi	*pɔŋ^I / *pɔn^{III} (< *pɔŋ^I-s)	pɔŋ^I / pɔn^{III}	pɔŋ^I / pɔn^{III}	pɔŋ^I / pɔn^{III}	pɔŋ^I / pɔn^{III}	pɔŋ^I / pɔn^{III}
grandfather n	*pu^I	pu^I	pu^I	pu^I	pu^I	pu^I

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[477] Za swell (as bean/seed in water) vi; Th/Zo unripe vi.

[478] Mi divulge vi/t. See *pʰʊaŋ divulge vt.

[479] Mi pum^{IIa} forge-pot n, pɔm^{III} belly n; Za pum^{IIa} spherical vi, pɔm^{III} belly n; Zo pɔm^{II} ~ pɔm^{III} spherical vi, pɔm^{III} body n; Th/Si pɔm^{II} forge-pot n, pɔm^{II} ~ pɔm^{III} spherical vi, pɔm^{III} body n; Te pɔm^{II} ~ pɔm^{III} spherical vi, pɔm^{III} upper-body n. Schuessler (2007:229) has Mizo pɔm^I whole, all, spherical count-noun n, and Bright (1957a:28) and Weidert (1975:20) have Mizo pɔm^{IIb} filled-out (as fruit) vi; Zahau has pɔm^I spherical count-noun n.

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carry on shoulder vt[480]	$*pu^{I}$	pu^{I}	pu^{I}	pu^{I}		pu^{I}
	$*pɔt\ (<*pu^{I}\text{-s})$	$pɔt$	$pɔt$	$pɔt$		$pɔt$
concave vi[481]	$*puk^{II}$	puk^{IIb}	puk^{IIb}			
die-out, drop-off vi[482]	$*puɭ^{III}$	$puɭ^{III}$	$puɭ^{III}$	$puɭ^{III}$	$puɭ^{III}$	$puɭ^{III}$
	$*puɭ^{III}\text{-s}$	$pɔɭʔ$	$pɔɭʔ$	$pɔɭ^{III}$	$pɔɭ^{III}$	$pɔɭ^{III}$
fall vi[483]	$*pur^{II}$	pur^{IIb}	pur^{IIb}		$pɔa^{II}$	puk^{II}
	$*pur^{III}\ (<*pur^{II}\text{-s})$	$pɔʔ$			$pɔa^{III}$	puk^{III}/pu^{III}
trickle out, emerge vi[484]	$*put^{II}/*pɔt^{II}$	put^{IIb}	put^{II}/pot^{II}	put^{II}/pot^{II}	pot^{II}	pot^{II}
	$*put^{II}\text{-s}/pot^{II}\text{-s}$	$pɔʔ$	put^{III}/pot^{III}	put^{III}/pot^{III}	pot^{III}	pot^{III}/po^{III}

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480 Mi *carry on shoulder/head* vt; Si *carry on head* vt.

481 Mi *concave* vi, *cave* n.

482 Mi/Za *die-out* vi; Th $puɭ^{III}$ *die-out* vi, $puɭ^{III} \sim pɔɭ^{III}$ *drop-off* vi; Te $puɭ^{III} \sim pɔɭʔ$ *die-out* vi, $pɔɭʔ$ *drop-off* vi; Si $puɭ^{III} \sim pɔɭ^{III}$ *die-out* vi, $pɔɭ^{III}$ *drop-off* vt.

483 See $*p^{h}ur^{II}$ *fell* vt.

484 Mi/Za *trickle-out* vi; Th $puɭ^{II}$ *trickle-out* vi, pot^{II} *leave, spurt a lot* vi; Zo *leave* vi; Te *leave, emerge* vi; Si *emit popping sound (as some firewoods when burning)* vi. This may be related to $*p^{h}it^{II}$ *snort, spew* v.

*pʰ-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
piece n; share, permit vt[485]	*pʰɛl^{I} / pʰɛl^{I} *pʰɛl^{III} (< *pʰɛl-s)	pʰɛl^{I} / pʰɛl^{I} pʰɛl^{III} / pʰɛl^{III}	pʰɛl^{I} / pʰɛl^{I} pʰɛl^{III} / pʰɛl^{III}	pʰɛl^{I} / pʰɛl^{I} pʰɛl^{III}	pʰɛl^{I} pʰɛl^{III}	pʰɛl^{I} / pʰɛl^{I} pʰɛl^{III}	pʰɛl^{I} / pʰɛl^{I} pʰɛl^{III}
winter n	*pʰɛl^{III}	pʰɛl^{III}		pʰɛl^{III}	pʰɛl^{III}-	pʰɛl^{III}-	pʰɛl^{III}-
die vi[486]	*pʰɛm^{I} *pʰɛm^{III} (< *pʰɛm^{I}-s)	fem^{I} fem^{III}		pʰɛm^{I} pʰɛm^{III}	pʰɛm^{I} pʰɛm^{III}	pʰɛm^{I} pʰɛm^{III}	pʰɛm^{I} pʰɛm^{III}
weave a net vt	*pʰɛn^{II} *pʰɛn^{III}-s	pʰɛn^{IIa} pʰɛn^{III}			pʰɛn^{II} pʰɛn^{III}	pʰɛn^{II} pʰɛn^{III}	
splay vt	*pʰɛs	pʰɛʔ	pʰaʔ	pʰa^{III}	pʰa^{III}	pʰaʔ	pʰa^{III}
unfurl vt[487]	*pʰar^{III}-s	pʰɛrʔ	pʰɛrʔ / pʰɛrʔ				
level (as road) vi	*pʰɛj^{I} *pʰɛj^{III} (< *pʰɛj-s)	pʰɛj^{I} pʰɛj^{III}	pʰɛj^{I} pʰɛj^{III}	pʰɛj^{I}	pʰɛj^{I} pʰɛj^{III}	pʰɛj^{I}	pʰɛj^{I} pʰɛj^{III}
leg n[488]	*pʰɛj^{III}	pʰɛj^{III}	pʰɛj^{III}-	pʰɛj^{III}	pʰɛj^{III}	pʰɛj^{III}	pʰɛj^{III}

[485] Mi pʰɛl^{I} ~ pʰɛl^{III} *share-out, permit vt*, pʰɛl^{I} ~ pʰɛl^{III} *split vt*, pʰɛl^{I} *piece n*; Za pʰɛl^{I} ~ pʰɛl^{III} *pay someone to do vt*, pʰɛl^{I} ~ pʰɛl^{III} *share/split food vt*, pʰɛl^{III} *piece n*; Th pʰɛl^{I} / pʰɛl^{I} *piece n*, pʰɛl^{I} ~ pʰɛl^{III} *permit vt*; Zo pʰɛl^{I} *piece n*, pʰɛl^{I} ~ pʰɛl^{III} *permit vt*; Te pʰɛl^{I} ~ pʰɛl^{III} *permit vt*; Si pʰɛl^{I} *piece n*, pʰɛl^{I} ~ pʰɛl^{III} *split into big chunks vt*. Laizo has pʰɛl^{III} *share/split food vt*.

[486] Song word in all five languages.

[487] Zahau pʰarʔ *unfurl vt*, pʰɛrʔ *lay out meat to dry vt*. See *par^{I} *flower n/vi*.

detach, dismantle vt[489]	*pʰɛl^{II} / *pʰɛl^{III} (< *pʰɛl^{II}-s) / *pʰɛl^{III}-s	pʰɛlʔ	pʰɛlʔ	pʰɛl^{II} / pʰɛl^{III}	pʰɛl^{II} / pʰɛl^{III}	pʰɛl^{II} / pʰɛl^{III} / pʰɛlʔ	pʰɛl^{II} / pʰɛl^{III}
divaricate v[490]	*pʰɛn^{II} / *pʰɛn^{III} (< *pʰɛn^{II}-s) / *pʰɛn^{III}-s	pʰɛn^{IIa} / pʰɛn^{III}	pʰɛn^{IIa} / pʰɛn^{III} / pʰɛn^{IIb}		pʰɛn^{II} / pʰɛn^{III}	pʰɛn^{II} / pʰɛn^{III}	pʰɛn^{II} / pʰɛn^{III}
mat n, braid vt[491]	*pʰɛr^I / *pʰɛr^{III} (< *pʰɛr^I-s), *pʰɪar^I / pʰɪar^{III}	pʰɛr^I / pʰɪar^I, pʰɪar^{III}	pʰɛr^I / pʰɪar^I, pʰɪar^{III}	pʰeʔ^I / pʰɛʔ	pʰeʔ^I / pʰeʔ^{III}	pʰek^I / pʰek^{III}	pʰɛak^I / pʰɛak^{III}
pierce (ox nose) vt[492]	*pʰɛs				pʰɛʔ	pʰɛʔ	pʰe^{III}
flash, twinkle, blink v[493]	*pʰe$^{I/II}$ / *pʰɛt / *pʰet (< *pʰe$^{I/II}$-s) pʰet	pʰe^{IIa} / pʰet^{IIb}			pʰe^I / pʰɛt	pʰe^I / pʰɛt	pʰe^I / pʰet
flat vi[494]	*pʰeɲ^I / *pʰen^{III} (< *pʰeɲ^I-s)	pʰeɲ^I / pʰen^{III}	pʰeɲ^I / pʰaɲ^I	pʰeɲ^I / pʰaɲ^I	pʰeɲ^I / pʰen^{III}	pʰeɲ^I / pʰen^{III}	pʰɛaɲ^I / pʰaɲ^I

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488 Mi lower-leg, foot n; Za calf n; Th/Zo/Te/Si upper-leg n

489 Mi pʰɛlʔ untie, dismantle vt; Za pʰelʔ detach vt; Th/Zo/Si pʰɛl^{II} ~ pʰɛl^{III} dismantle vt, pʰɛl^{III} extinguish, defuse vt; Te pʰɛl^{II} ~ pʰɛl^{III} dismantle vt, pʰɛlʔ extinguish, defuse vt. Mizo has tʰɛlʔ extinguish vt. See *pel^{II} detach vi.

490 Mi/Zo/Te/Si pʰɛn^{II} ~ pʰɛn^{III} divaricate vt; Za pʰɛn^{IIa} ~ *pʰɛn^{III} divaricate vt, *pʰɛn^{IIb} divaricate vb.

491 Mi/Za pʰɛr^I mat n, pʰɪar^I ~ pʰɪar^{III} braid vt; Zo braid vt. Zo also has pʰeʔ mat n.

492 Mi pierce vi/t. Thado has pʰe^{II} nose-piercing (of ox) n. See *pɛs pierced (ox nose) vi.

493 Mi pʰe^{IIa} ~ pʰet^{IIb} flash vi, pʰet^{IIb} flash vt; Th pʰe^I ~ pʰet twinkle vi, pʰet blink vi; Zo/Te twinkle, blink vi; Si flash, blink vi. The Tedim diphthong may well represent the original vocalism.

494 Th/Zo pʰeɲ^I ~ pʰen^{III} flat vi, pʰaɲ^I palm, sole n; Si pʰɛaɲ^I flat vi, pʰaɲ^I slice n. Mizo and Zahau have pʰek palm n; Sizang has pʰɛak^{II} flat vi, slice n.

gloss						
sweep vt, broom n[495]	*pʰɪat^II *pʰɪat^II-s *pʰɪat^II(t)-s	pʰɪat^IIb pʰɪaʔ	pʰɪet^II pʰɪet^III	pʰɪet^II pʰɪet^III -pʰɪe^III	pʰɪat^II pʰɪat^III pʰɪaʔ	pʰɪet^II pʰɪet^III / pʰɪe^III -pʰɪe^III
despose vt[496]	*pʰɪl^I *pʰɪl^II (< *pʰɪl-s)	pʰɪl^I pʰɪl^III	pʰɪl^I pʰɪl^III			pʰɪl^I pʰɪl^III
snout, butt vt[497]	*pʰɪl^II *pʰɪl^II (< *pʰɪl-s)			pʰɪl^II pʰɪl^III	pʰɪl^II / pʰul^II pʰɪl^III / pʰul^III	pʰɔl^II pʰɔl^III
snort, spew v[498]	*pʰɪt^II *pʰɪt^II-s *pʰɪt^III(t)-s	pʰɪt^IIb pʰɪʔ	pʰɪt^II pʰɪt^III pʰɪ^III	pʰɪt^II pʰɪt^III pʰɪ^III	pʰɪt^II pʰɪt^III pʰɪʔ	pʰɪt^II pʰɪt^III / pʰɪ^III pʰɪ^III
put on end vt[499]	*pʰɔk *pʰɔk-s	pʰɔk pʰɔʔ	pʰɔk (pʰɔʔ)			
arise vt[500]	*pʰɔŋ^III *pʰɔŋ^III-s	pʰɔŋ^III pʰɔn^IIb	pʰɔŋ^III pʰɔʔ	pʰɔŋ^III pʰɔʔ / pʰɔt	pʰɔŋ^III pʰɔt	pʰɔŋ^III pʰɔk / pʰɔt

[495] Mi pʰɪat^IIb ~ pʰɪaʔ sweep vt, -pʰɪaʔ broom n; Za pʰɪat^IIb ~ pʰɪaʔ sweep vt, pʰɪaʔ wash face vt, -pʰɪaʔ broom n; Th sweep, wash face vt, -pʰɪaʔ broom n; Te pʰɪat^IIb ~ pʰɪat^III sweep, wash face vt, pʰɪaʔ broom n; Si pʰɪet^II ~ pʰɪet^III / pʰɪe^III sweep vt, -pʰɪe^III broom n.

[496] Mi assassinate vt; Za do secretely vt; Th assassinate, make disappear vt; Si push away in annoyance vt. See *pɪl sink vi.

[497] Th snout vt; Te pʰɪl^II snout vt, pʰul^II butt vt; Si butt, barge vt.

[498] Mi pʰɪt^IIb snort vi, pʰɪʔ wash face vt; Th pʰɪt^II ~ pʰɪt^III spew (as water) vi, pʰɪ^III spew out/at vt; Zo pʰɪt^III spew (as water) vi, pʰɪ^III spew out/at vt; Si pʰɪt^II ~ pʰɪt^III / pʰɪ^III spew (as water) vi, *pʰɪ^II-s spew out/at vt; Mizo wash face vt from Weidert (1975:16). This may be related to *puɪl / pot^III blow air between lips to show disgust vi, pʰɪ^III spew out/at vi, trickle out, emerge vi.

[499] See *pɔk put on end vi.

[500] Mi open up, remove cover vt.

gloss						
shell n	pʰoᴵᴵ	pʰoᴵᴵ	pʰoᴵᴵ	pʰoᴵᴵ	pʰoᴵᴵᵇ	*pʰoᴵᴵ
recall vt	pʰokᴵᴵ / pʰokᴵᴵᴵ / pʰoᴵᴵᴵ	pʰokᴵᴵ / pʰokᴵᴵᴵ	pʰoʔᴵᴵ / pʰoᴵᴵᴵ	pʰoʔᴵᴵ / pʰoᴵᴵᴵ		*pʰokᴵᴵ / *pʰokᴵᴵ-s
startle vt[501]	pʰoŋᴵ / pʰonᴵᴵᴵ	pʰoŋᴵ / pʰonᴵᴵᴵ	pʰoŋᴵ / pʰonᴵᴵᴵ		pʰokᴵ / pʰokᴵᴵᴵ	*pʰoŋᴵ / *pʰonᴵᴵᴵ (< *pʰoŋᴵ-s)
compose vt	pʰʊakᴵᴵ / pʰʊakᴵᴵᴵ / pʰuaᴵᴵᴵ	pʰʊakᴵᴵ / pʰʊakᴵᴵᴵ / pʰʊaʔ	pʰʊoᴵᴵᴵ	pʰʊoᴵᴵᴵ	pʰʊaʔ	*pʰʊakᴵᴵ / *pʰʊakᴵᴵ-s
froth vi[502]	pʰʊanᴵᴵᴵ / pʰɔtᴵᴵᴵ	pʰʊanᴵᴵᴵ / pʰʊatᴵᴵᴵ	pʰʊonᴵᴵᴵ / pʰʊotᴵ	pʰʊonᴵᴵᴵ / (pʰʊotᴵ)	pʰʊanᴵᴵᴵ / pʰɔnᴵᴵᵇ	*pʰʊanᴵᴵᴵ / *pʰʊanᴵᴵᴵ-s
divulge vt[503]	pʰʊaŋᴵ / pʰʊanᴵᴵᴵ	pʰʊaŋᴵ / pʰʊanᴵᴵᴵ	pʰʊoŋᴵ / pʰʊonᴵᴵᴵ	pʰʊoŋᴵ / pʰʊonᴵᴵᴵ		*pʰʊaŋᴵ / *pʰʊanᴵᴵᴵ (< *pʰʊaŋᴵ-s)
sprinkle vt					pʰʊlʔ / pʰʊlᴵᴵᵇ	*pʰʊlᴵᴵᴵ-s
carry on back vt[504]					pʰʊrʔ	*pʰʊrᴵ / *pʰʊrᴵᴵᴵ (< *pʰʊrᴵᴵᴵ-s) / *pʰʊrᴵᴵᴵ-s
					pʰʊrʔ	
bubble n/vi[505]	pʰulᴵ	pʰulᴵ	pʰulᴵ	pʰulᴵ	pʰulᴵ	*pʰulᴵ

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[501] Zo break news about someone's death to someone vt; Si wake up accidentally vt.
[502] Za float vi.
[503] See *pʊaŋᴵ divulge vi.
[504] Za carry on shoulder/head/back vt.

	*p^hul^{III} (< *p^hul^{I}-s) *p^hul^{III}-s	p^hul^{III}	p^hul^{III}	p^hul^{III}	p^hul^{III} $p^ho l^{III}$
					p^hul^{III} $p^ho l^{?}$
bury vt	*p^hum^{I} *p^hum^{III} (*p^hum^{I}-s)	p^hum^{I} p^hum^{III}	p^hum^{I} p^hum^{III}	p^hum^{I} p^hum^{III}	p^hum^{I} p^hum^{III}
paunch n	*p^hur^{I}		$p^ho a^{I}$	$p^hu^{?}$	p^huk^{I}
fell vt[506]	*p^hur^{II} *p^hur^{III} (< *p^hur^{II}-s)		$p^ho a^{II}$ $p^ho a^{III}$	$p^hu^{?II}$ p^hu^{III}	p^huk^{II} p^huk^{II}
					p^huk^{II} p^huk^{III} / p^hu^{III}

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[505] Mi/Za p^hul^{I} *bubble, froth* n, p^hul^{I} ~ p^hul^{III} *bubble, froth* vi; Th/Zo p^hul^{I} ~ p^hul^{III} *gush-out* vi, p^hul^{III} ~ $p^ho l^{III}$ *boil over* vi; Te p^hul^{I} ~ p^hul^{III} *gush-out* vi, p^hul^{III} ~ $p^ho l^{?}$ *boil over* vi; Si p^hul^{I} ~ p^hul^{III} *gush-out* vi, p^hul^{III} ~ $p^ho l^{III}$ *boil over* vi.
[506] See *pur^{II} *fall* vi.

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	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
forest, territory n	*rem^{I}	rem^{I}	rem^{I}	gam^{I}	gam^{I}	gam^{I}	ŋam^{I}
brittle vi[507]	*reŋ^{II} *reŋ^{III} (< *reŋ^{II}(s-)) *rem^{III}-s	reŋ^{IIa} reŋ^{III}	 rem^{IIb}	gem^{II} gem^{III}	gem^{II} gem^{III}	gem^{II} gem^{III}	ŋaŋ^{II} ŋaŋ^{III}
snatch vt[508]	*rem^{III}-s	rem^{IIb}	rem^{IIb}				
mantel n	*dar	dar	dar	daŋ	daŋ		daŋ
animal n[509]	*uar^{I}	uar^{I}	uaŋ^{III}	uaŋ^{I}	uaŋ^{I}	uaŋ^{I}	uaŋ^{I}
father's sister's husband n	*raŋ^{I}		raŋ^{I}	gaŋ^{I}	gaŋ^{I}	geŋ^{I}	t͡saŋ^{I}
fast vi	*raŋ^{II} *raŋ^{III} (< *raŋ^{II}(s-s))	raŋ^{IIa} raŋ^{III}	raŋ^{IIa} raŋ^{III}	geŋ^{II} gaŋ^{III}	geŋ^{II} gaŋ^{III}	geŋ^{II} gaŋ^{III}	ŋaŋ^{II} ŋaŋ^{III}
fruit n, bear fruit vi	*ras	raʔ	reʔ	ga^{III}	ga^{III}	geʔ	ŋa^{III}
pregnant v[510]	*raj^{I}	raj^{I}	raj^{I}	gaj^{I}	gaj^{I}	gaj^{I}	ŋaj^{I}

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[507] Za decrepit (as house/village) vi.
[508] Mi despoil vt. Thado, Zo and Tedim have gem^{III} *inheritance n*; Sizang has ŋem^{III} *inheritance n*.
[509] Mi/Si domesticated animal n.

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Gloss	Proto						
pregnant v[510]	*raŋ^{III} (< *raŋ^{I}-s)	raŋ^{III}	raŋ^{III}	gaŋ^{III} / geŋ^{III}	gaŋ^{III}	gaŋ^{III}	ŋaŋ^{III}
	*raŋ^{III}-s	reŋʔ	reŋʔ	geŋ^{III}	geŋ^{III}	geŋʔ	ŋeŋ^{III}
tight v[511]	*rak^{II}	rek^{IIb}	rek^{IIa}	gaʔ^{II}	gak^{II}	gak^{II}	ŋak^{II} / ŋaŧ^{II}
	*rak^{II}-s	rɛʔ	rek^{III}	ga^{III}	ga^{III}	gak^{III}	ŋak^{III} / ŋaŧ^{III} / ŋa^{III}
opposite-side n[512]	*ral^{III}	ral^{III}	ral^{III}	gal^{III}	gal^{III}	gal^{III}	ŋal^{III}
enemy n[513]	*ral^{I}	ral^{I}	ral^{I}	gal^{I}	gal^{I}	gal^{I}	ŋal^{I}
bones n	*raŋ^{I}		raŋ^{I}				
white vi[514]	*raŋ^{I}	raŋ^{I}	raŋ^{I}				
	*ran^{III} (< *raŋ^{I}-s)	ran^{III}	ran^{III}				
darken (as leaf/fruit) vi[515]	*raw^{I}	raw^{I}	raw^{I}	gaw^{I}	gaw^{I}	gaw^{I}	ŋaw^{I}
	*raw^{III} (< *raw^{I}-s)	raw^{III}	raw^{III}	gaw^{III}	gaw^{III}	gaw^{III}	ŋaw^{III}
spirit n[516]	*raw^{II}	raw^{IIa}	raw^{IIa}	gaw^{II}	gaw^{II}	gaw^{II}	ŋaw^{II}
sneak off vi[517]	*rɛl^{II}	rɛl^{II}		gɛl^{II}	gɛl^{II}	gɛl^{II}	ŋɛl^{II}

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510 Mi/Za raŋ^{I} ~ raŋ^{III} pregnant vi, reŋʔ impregnate vt; Th gaŋ^{I} ~ gaŋ^{III} / geŋ^{III} pregnant vi, gaŋ^{III} ~ geŋ^{III} impregnate vt; Zo gaŋ^{I} ~ gaŋ^{III} pregnant vi, gaŋ^{III} ~ geŋ^{III} impregnate vt; Te gaŋ^{I} ~ gaŋ^{III} pregnant vi, gaŋ^{III} ~ geŋ^{III} impregnate vt; Si ŋaŋ^{I} ~ ŋaŋ^{III} pregnant vi, ŋaŋ^{III} ~ ŋeŋ^{III} impregnate vt.

511 Mi/Th/Zo tight vi; Za tight vi, tighten vt; Te tighten vt; Si ŋaŧ^{II} tight vi, ŋak^{II} tighten vt. Zahau tone II compares with Mizo rek^{IIa} ~ rek^{III} slender (in one place) vi.

512 See *ral^{I} enemy n.

513 See *ral^{III} opposite n.

514 Mi white/grey spotted vi.

515 Za dry (as leaves, laundry) vi.

516 Mi/Za/Th evil-spirit n; Th spirit n, divine future vi; Zo spirit, soul n; Te/Si spiritual force n.

[517]	*ʰrɛl^{III} (< *rɛl^{II}-s); *rɛl^{III}-s	rɛlʔ	rɛlʔ		gɛl^{III}	gɛl^{III}	ŋɛl^{III}
harmonise, combine v [518]	*rɛm^{I} / *rom^{II}; *rɛm^{III} / *rom^{III}; *rɛm^{III}-s / *rom^{III}-s	rɛm^{I}, rɛm^{III}, rɛm^{IIb}	rɛm^{I}, rɛm^{III}, rɛm^{IIb}	gom^{II}, gɔp	gom^{II}, gom^{III}	gom^{II}, gom^{III}	ŋom^{II}, ŋom^{III}
plan vt [519]	*rɛl^{I}; *rɛl^{III} (< *rɛl-s)	rɛl^{I}, rɛl^{III}	rɛl^{I}, rɛl^{III}	gel^{I}, gel^{III}	gel^{I}, gel^{III}	gel^{I}, gel^{III}	ŋɛal^{I}, ŋɛal^{III}
stay over night vi	*rrak^{II}; *rrak^{II}-s	rrak^{IIb}, rraʔ	rrak^{IIb}, rraʔ	gɛrʔ^{II}, gɛr^{III}	gɹɛʔ^{II}, gɹɛ^{III}	gɹak^{II}, gɹak^{III} / gɹaʔ	ŋiark^{I}, ŋiɛk^{III} / ŋiɛ^{III}
hail n	*rral^{I}	rral^{I}	rral^{III}	gerl^{I}	gɹel^{I}	gɹal^{I}	ŋiel^{II}
eight vi	*rrat^{II}	rrat^{IIb}	rrat^{IIb}	gert^{II}	gɹet^{II}	gɹat^{II}	liet^{II}
heavy vi	*rɪk; *rɪk-s	rɪt, rɪʔ	rɪt, rɪʔ	gɹʔ	gɹʔ	gɹk, gɹʔ	ŋɪt, ŋɪ^{III}
intestines, belly n [520]	*rɪl^{I}	rɪl^{I}	rɪl^{I}	gɹɪl^{I}	gɹɪl^{I}	gɹɪl^{I}	ŋɪl^{I}
loud, emit sound vi [521]	*rɪŋ^{I}	rɪŋ^{I}	rɪŋ^{I}	gɹɪŋ^{I}	gɹɪŋ^{I}	gɹɪŋ^{I}	ŋɪŋ^{I}

[517] Za hide vi. See *ʰrɛl^{III}-s leave behind accidentally vt.

[518] Mi/Za rɛm^{I} ~ rɛm^{III} harmonise vi, rɛm^{IIb} harmonise vt; Th/Zo/Te/Si combine vt.

[519] Za discuss vt. Mizo has rɛl^{I} ~ rɛl^{III} design vt.

[520] Mi/Za/Th intestines n; Zo/Te/Si belly n. Thado, Zo and Tedim have gɹɪ^{I} belly n; Sizang has ŋɪ^{II} birdcoup n.

[521] Mi/Za loud vi; Th/Zo/Te/Si emit sound vi.

lac n[522]	*rɩŋ^III (< *rɩŋ^I-s)	rɩŋ^III	rɩŋ^III	gɩŋ^III	gɩŋ^III	gɩŋ^III	ŋɩŋ^III
seven vi[523]	*rɩp			gɩp	gɩp	gɩp	ŋɩp
boundary n	*rɩs	-rɩʔ	-rɩʔ	-gɩ^III	-gɩʔ	-gɩʔ	-lɩ^II
	*rɩ^II	rɩ^IIa	rɩ^IIa	gɩ^II	gɩ^II	gɩ^II	ŋɩ^II
roll along/down vi[524]	*rɩl^III *rɩl^III-s		rɩl^III rɩlʔ				
delineate vt[525]	*rɩt^I *rɩt^III (< *rɩt^I-s)	rɩt^I / rɩn^I rɩt^III / rɩn^III	rɩt^I rɩt^III	gɩt^I gɩt^III	gɩt^I gɩt^III	gɩt^I gɩt^III	ŋɩt^I ŋɩt^III
scare vi[526]	*rɩŋ^II *rɩn^III (< *rɩŋ^II-s)		-rɩŋ^IIa -rɩn^III	gɩŋ^II gɩn^III	gɩŋ^II gɩn^III	lɩn^II lɩn^III	lɩn^II lɩn^III
neck (of bottle) n	*rɛŋ^I	rɛŋ^I	rɛŋ^I	gɛŋ^I	ɟɩɛŋ^I		
dry v[527]	*ro^I *rɔt (< *ro^I-s)	rɔw^I rɔw^III	rɔw^I rɔw^III	go^I gɔt / gɔw^III	go^I gɔt / gɔt^II	go^I gɔt / gɔt^II	ŋo^I ŋɔt

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[522] The possibility of *ʰr- cannot be excluded without Mizo and Zahau evidence, although the correspondences of *ʰr- with Thado, Zo, Tedim and Sizang g-/ŋ- are much rarer than with h-.

[523] Sizang tone II is due to sandhi.

[524] See *ʰrɩl^III roll along/down vt.

[525] Mi/Za rɩt^I ~ rɩt^III hoe vt, rɩn^I ~ rɩn^III delineate vt, rɩn^III line n.

[526] Te/Si frozen with fear/excitement vi. Mizo rɩk^Iᵇ, Thado gɩʔ^II and Zo gɩʔ^II, with a variant gɩt^II sometimes used in form 2, mean threaten vt.

[527] Mi rɔw^I ~ rɔw^III dry vi, rɔʔ roast vt; Za dry vi; Th gɔ^I ~ gɔt dry vi; Th gow^III ~ go^III roast vt; Zo gɔ^I ~ gɔ^I dry vi; Te gɔ^I ~ gɔt / gɔt^II; Si dry vi. Zahau from Osburne (1975:123); Tedim gɔt from Bhaskararao (1996:45).

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gloss							
stiff (as limb) vi[528]	*rol^{III}-s	rɔʔ		go^{III}	go^{III}	golʔ	ɲol^{III}
grind vt[529]	*rot^{I} / *rot^{I}-s	rol^{IIb}	rot^{I} / rot^{III}	gɔl^{III}	gɔl^{III}		
bamboo n	*roa^{I}	roa^{I}	roa^{I}	goo^{I}	goo^{I}	goa^{I}	ɲua^{I}
individual n, empty vi[530]	*roak^{II} / *roak^{II}-s	roak^{IIb} / roaʔ		gooʔ^{II} / goo^{III}	gooʔ^{II}	goak^{II}	ɲuak^{II}
rain n[531]	*r-wes^{III}[531]	roaʔ	roaʔ	goo^{III}	goo^{III}	goaʔ	ɲu^{III}
six vi	*rok	rok	rok	gup^{III}	goʔ	gok	lok
desire vt	*rol^{III}-s			gol^{III}	gol^{III}	-gɔlʔ	ŋɔl^{III}
bone n[532]	*ros	roʔ	roʔ	gu^{III}	gu^{III}	goʔ	ɲu^{III}
poison n[533]	*ru^{II}	ru^{III}	ru^{III}	gu^{II}	gu^{II}	gu^{II}	ɲu^{II}
steal vt	*ru^{II}	ru^{III}	ru^{IIb}	gu^{II}	gu^{II}	gu^{II}	ɲu^{II}

[528] Th swell up in a line vi (e.g. when hit by stick).
[529] Za rub vt. Tedim has got^{II} ~ got^{III} torture vt; Sizang has ŋot^{II} ~ ŋot^{III} torture vt.
[530] Mi roak^{IIb} ~ roaʔ empty, vacant vi; Th gooʔ^{II} individual n, goo^{II} ~ goo^{III} empty, have time vi; Zo individual n, empty vi; Te/Si individual n.
[531] See the discussion under Rain (#46).
[532] Mi/Za bone n, firm vi; Si stubborn vi.
[533] Za intoxicant drink n.

	*ruk^II (< *ru^III-s)	ruk^IIb	ruk^IIb	gu?^II	gu?^II	guk^II	ŋuk^II
snake n[534]	*rul^I	rul^I	rul^I	gul^I	gul^I	gul^I	ŋul^I
river n[535]	*run^I	run^I	run^I	gun^I	gun^I	gun^I	ŋun^I

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[534] Mizo has ʰrul¹ ~ ʰrul^III *follow along side of vt.*
[535] *Za Manipur River.*

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*ʰr- (1)

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
<u>otter n</u>[536]	*ʰrɛm^{II}	-ʰrɛm^{IIa}	-ʰrɛm^{IIa}	-hɛm^{II}	-hɛm^{II}	-hɛm^{II}	-hɛm^{H}
weedy, rough vi; weed n[537]	*ʰrɛm^{II} *ʰrɛm^{III} (< *ʰrɛm^{I}-s)	ʰrɛm^{IIa} ʰrɛm^{III}	ʰrɛm^{IIa} ʰrɛm^{III}	hɛm^{II} hɛm^{III}	hɛm^{II} hɛm^{III}	hɛm^{II} hɛm^{III}	hɛm^{II} hɛm^{III}
yam n	*ʰra^{I}	-ʰra^{I}	ʰra^{I}	ha	ha-	ha-	ha-
ten n	*ʰra^{I}		ʰra^{I}				
haggard vi[538]	*ʰram^{I} *ʰram^{III} (< *ʰram^{I}-s)	ʰram^{I} ʰram^{III}	ʰram^{I}	ham^{I} ham^{III}	ham^{I} ham^{III}	ham^{I} ham^{III}	ham^{I} ham^{III}
howl vi[539]	*ʰram^{II} *ʰram^{III} (< *ʰram^{II}-s)	ʰram^{IIa} ʰram^{III}	ʰram^{IIa} ʰram^{III}	ham^{II} ham^{III}	ham^{II} ham^{III}	ham^{II} ham^{III}	ham^{II} ham^{III}
audacious, brave vi[540]	*ʰraŋ^{I} *ʰran^{III} (< *ʰraŋ^{I}-s)	ʰraŋ^{I} ʰran^{III}	ʰraŋ^{I} ʰran^{III}	haŋ^{I} han^{III}	haŋ^{I} han^{III}	haŋ^{I} han^{III}	haŋ^{I} han^{III}

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[536] Sizang tone H is due to sandhi.
[537] Mi ʰrɛm^{IIa} ~ ʰrɛm^{III} *weedy, rough vi*, ʰrɛm^{III} *weed n*; Za ʰrɛm^{IIa} *tree-root, base n*, ʰrɛm^{I} ~ ʰrɛm^{III} *weed n*; Th hɛm^{II} ~ hɛm^{III} *rough vi*, hɛm^{III} *weed n*; Zo hɛm^{II} ~ hɛm^{III} *weedy, rough vi*, hɛm^{III} *weed n*; Te hɛm^{II} *weed n*, hɛm^{II} ~ hɛm^{III} *rough vi*; Si hɛm^{II} *weed n*, hɛm^{II} ~ hɛm^{III} *rough, weedy vi*. Mizo has ʰrap^{IIb} *rough (in speech) vi*; Zahau has ʰrap^{I} ~ ʰrap^{III} *rough vi*.
[538] Mi *dry (as hair) vi*; Za *rough vi*.
[539] Za *complain vt*.
[540] Mi/Za *audacious vi*; Th/Zo/Te/Si *brave vi*

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gloss	reconstruction						
resolute, strong vi[541]	*ʰratᴵᴵ / *ʰratᴵᴵ-s	ʰratᴵᴵᵇ	ʰratᴵᴵᵇ	hatᴵ / hatᴵᴵ	hatᴵᴵ / hatᴵᴵᴵ	hatᴵᴵ / hatᴵᴵᴵ	hatᴵᴵ / hatᴵᴵᴵ / haᴵᴵᴵ
axe n	*ʰrɛjᴵᴵᴵ	ʰrɛjᴵᴵᴵ	ʰrɛjᴵᴵᴵ	hɛjᴵᴵᴵ	hɛjᴵᴵᴵ	hɛjᴵᴵᴵ	hɛjᴵᴵᴵ
leave behind accidentally vt[542]	*ʰrɛlᴵᴵᴵ-s		ʰrɛlʔ				
averse, angry vi[543]	*ʰrɛs	ʰrɛʔ	ʰrɛʔ		hɛʔ		heᴵᴵᴵ
tether vt[544]	*ʰrenᴵ / *ʰrenᴵᴵᴵ (< *ʰrenᴵ-s)	ʰrenᴵ / ʰrenᴵᴵ	ʰrenᴵ / ʰrenᴵᴵ	henᴵ / henᴵᴵᴵ	henᴵ / henᴵᴵᴵ	henᴵ / henᴵᴵᴵ	henᴵ / henᴵᴵᴵ
sense vt	*ʰrɪaᴵᴵ / *ʰrɪat (< *ʰrɪaᴵᴵ-s)	ʰrɪaᴵᴵᵃ / ʰrɪatᴵᴵᵇ		(heᴵᴵ) / hetᴵᴵ			heᴵᴵ / hɛakᴵᴵ
grease n	*ʰrɪakᴵᴵ	ʰrɪakᴵᴵᵇ	ʰrɪakᴵᴵᵇ				
stop going temporarily vi	*ʰrɪalᴵ / *ʰrɪalᴵᴵᴵ (< *ʰrɪalᴵ-s)	rɪalᴵᴵᴵ	ʰrɪalᴵᴵ	hɪalᴵ / hɪalᴵᴵᴵ	hɪalᴵ / hɪalᴵᴵᴵ	hiɛlᴵ / hiɛlᴵᴵᴵ	hiɛlᴵ / hiɛlᴵᴵᴵ
sharp v[545]	*ʰramᴵ / *ʰramᴵᴵᴵ (< *ʰramᴵ-s) / *ʰramᴵᴵᴵ-s	ʰramᴵ / ʰramᴵᴵᴵ	ʰramᴵ / ʰramᴵᴵᴵ	hiɛmᴵ / hiɛmᴵᴵᴵ	hiɛmᴵ / hiɛmᴵᴵᴵ / hiɛp	hramᴵ / hiamᴵᴵᴵ / hrap	hiɛmᴵ / hiɛmᴵᴵᴵ / hiɛp

[541] Mi/Za resolute vi; Th/Zo/Te/Si strong vi.
[542] See *rɛlᴵᴵ sneak off vi.
[543] Mi/Za averse vi; Te angry vi; Si sad, angry vi.
[544] Te/Si bind vt.
[545] Mi/Za/Th sharp vi; Zo hiemᴵ ~ hiemᴵ ~ hiemᴵᴵᴵ sharp vi, hiemᴵᴵᴵ ~ hiep sharpen vt; Te hramᴵ ~ hramᴵᴵᴵ sharp vi, hramᴵᴵᴵ ~ hrap sharpen vt; Si hiemᴵ ~ hiemᴵ sharp vi, hiemᴵᴵᴵ ~ hiep sharpen vt.

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scratch, comb vt[546]	*ʰrɪat^II *ʰrɪat^III-s	ʰrɪat^IIb (underlined) hɪaʔ	ʰrɪat^IIb hɪaʔ	heɪt^II heɪt^III	hɪet^II hɪet^III	hɪat^II hɪat^III	hieɬ^II hieɬ^III / hie^III
louse n	*ʰrɪk	ʰrɪk	ʰrɪk	hɪt (underlined)	hɪt (underlined)	hɪk	hɪk
roll along/down vt[547]	*ʰrɪl^III *ʰrɪl^III-s		ʰrɪl^III ʰrɪlʔ				
inform, choose v[548]	*ʰrɪl^I *ʰrɪl^III (< *ʰrɪl^I-s) *ʰrɪl^III-s	ʰrɪl^I ʰrɪl^III ʰrɪlʔ	ʰrɪl^I ʰrɪl^III ʰrɪlʔ	hɪl^I hɪl^III	hɪl^I hɪl^III	hɪl^I hɪl^III hɪlʔ	hɪl^I hɪl^III
beget vt, green vi[549]	*ʰrɪŋ^I *ʰrɪn^III (< *ʰrɪŋ^I-s) *ʰrɪn^III-s	ʰrɪŋ^I ʰrɪn^III	ʰrɪŋ^I ʰrɪn^III ʰrɪn^IIb	hɪŋ^I hɪn^III	hɪŋ^I hɪn^III	hɪŋ^I hɪn^III	hɪŋ^I hɪn^III
slurp vt[550]	*ʰrop^II *ʰrop^III-s		ʰrop^II ʰrop^III	hop^II hop^III	hop^II hop^III	hop^II hop^III	hop^II hop^III / ho^III
escort, care for vt[551]	*ʰrɔaj^I *ʰrɔaj^III (< *ʰrɔaj^I-s)	ʰrɔaj^I ʰrɔaj^III	ʰrɔaj^I ʰrɔaj^III	hɔɔj^I hɔɔj^III	hɔej^I hɔej^III	hɔaj^I hɔaj^III	huɛj^II huɛj^III

[546] Mi scratch at, itch vt; Za scrape, scratch, comb vt; Th scrape vt; Zo scrape, comb vt; Si prune vt. Zahau has ʰrɪat^I ~ ʰrɪat^III accidentally scratch vt.

[547] See *rɪl^III roll along/down vi.

[548] Mi ʰrɪl^I ~ ʰrɪl^III inform vt, ʰrɪlʔ teach vt; Za ʰrɪl^I ~ ʰrɪl^III choose vt, ʰrɪlʔ choose vb; Th/Zo/Si hɪl^I ~ hɪl^III inform vt, hɪl^III teach vt; Te hɪl^I ~ hɪl^III inform vt, hɪlʔ teach vt. See footnote 299 of the main text for a discussion of the semantics.

[549] Mi beget vt, green, fresh, raw vi; Za ʰrɪŋ^I ~ ʰrɪn^III beget vt, green, fresh, raw vi, ʰrɪn^IIb beget (as by midwife) vb; Th/Zo/Te/Si beget vt, green, alive vi. Hillard (1975:8) has Mizo ʰrɪŋ ~ ʰrɪn^IIb beget vt.

[550] Za eat from ladle vt; Northern Chin drink thick liquids (e.g. soup) vt. See *hup^I slurp vt.

[551] Mi/Za/Th escort vt; Zo/Te/Si take care of someone vt.

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	(reconstruction)						
twine, roll up vt	*ʰɾʊɑl^{I} / *ʰɾʊɑl^{III} (< *ʰɾʊɑl-s)	ʰɾʊɑl^{I} / ʰɾʊɑl^{III}	ʰɾʊɑl^{I} / ʰɾʊɑl^{III}	hʊʊl^{I} / hʊʊl^{III}	hʊʊl^{I} / hʊʊl^{III}	hʊɑl^{I} / hʊɑl^{III}	huɑl^{I} / huɑl^{III}
enclosure n [552]	*ʰɾʊɑɲ^{I}	<u>hʊɑɲ^{I}</u>	ʰɾʊɑɲ^{I}	hʊʊɲ^{I}	hʊʊɲ^{I}	hʊɑɲ^{I}	huɑɲ^{I}
nit n	*ʰɾu^{I}	-ʰɾu^{I}		-hu^{I}			

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[552] Mi/Za enclosure, fence n.

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*ʰr- (2)

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
pheasant n	*(ʰ)rɪk	ʰrɪt	-rɪt	-grʔ	-grʔ	-grk	-hk
big vi	*ʰrɔl^{II} *ʰrɔl^{III}	ʰrɔl^{I} ʰrɔl^{III}		gɔl^{II} gɔl^{III}	gɔl^{II} gɔl^{III}	gɔl^{II} gɔl^{III}	
throat n[553]	*ʰrɔŋ^{III}	ʰrɔk	ʰrɔŋ^{II}-	gɔŋ^{III}	gɔŋ^{III}	gɔŋ^{III}	
rope, creeper n[554]	*ʰrɔj^{II}	ʰrɔj:^{IIa}	ʰrɪ:^{IIa}	gʊj^{II}	guj^{II}	gɔj^{II}	ŋʊj^{II}

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[553] Mizo has rɪŋ^{rɪb} *nape n.*
[554] Za *rope n.* Zo guj^{I} and Sizang ŋʊj^{I} mean *necklace, reef n.*

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Gloss	PKC						
hard vi [555]	*sɨk	sɨk		sa?		sɨk	sɨk
captive n	*səl^{II}	səl^{IIa}	səl^{IIa}	səl^{II}	ɲaas^{II}	səl^{II}	səl^{II}
requite, recite vt [556]	*sem^{I}		sem^{I}	sem^{I}	-sem^{I}	sem^{I}	sem^{I}
	*sem^{I} (< *sem^{III}-s)		sem^{III}	sem^{III}	-ɲaas^{III}	sem^{III}	ɲaas^{III}
hair (head) n	*sem^{II}	sem^{IIa}	sem^{IIa}	ɲaas^{II}	sem^{II}	sem^{II}	ɲaas^{II}
call over vt [557]	*sem^{III}		sem^{IIa}	sem^{II}		sem^{II}	sem^{II}
	*sem^{III} (< *sem^{II}-s)						ɲaas^{III}
	*sem^{III}-s						ɲaas^{III}
hot vi	*sa^{I}	sa^{I}	sa^{I}	sa^{I}	sa^{I}	sa^{I}	sa^{I}
	*sa^{I}-s	sa-s	sɛt	tat	sɛt	sɛt	sɛt
meat n	*sa^{II}	sa^{IIb}	sa^{IIb}	sa^{II}	sa^{II}	sa^{II}	sa^{II}
sing, build vt [558]	*sa^{II} (< *sas)	sa^{III}	sa^{III}	sa^{III}	sa^{III}	sa^{III}	sa^{III}
	*sak (< *sa^{III}-s)	sɨk	sɨk	sa?	ʃa?	sɨk	sɨk
	*sak-s	sa?					

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[555] Zahau has hɛk ~ hɛʔ *hard* vi.

[556] Za *return favour/money*; Th/Zo/Te/Si *recite incantation*.

[557] Si sem^{II} ~ sem^{III} / səp *call over* vt. Without Mizo evidence there is no way of knowing whether this was originally *tsʰ-.

[558] Zo *sing* vt; Te *sing, brew alcohol* vt. The Teizang correlate of Tedim means *build* vt.

gloss	Proto						
elephant n	*saj^{I}	saj^{I}	saj^{I}	saj^{I}	saj^{I}	saj^{I}	saj^{I}
slingshoot vt	*saj^{I} / *saj^{III}	saj^{I} / saj^{III}	saj^{I} / saj^{III}	saj^{I} / saj^{III} / saj^{III}	saj^{I} / saj^{III}	saj^{I} / saj^{III}	saj^{I} / saj^{III}
high vi	*saŋ^{I} / *san^{III}	saŋ^{I} / san^{III}	saŋ^{I} / san^{III}	saŋ^{I} / san^{III}	saŋ^{I} / san^{III}	saŋ^{I} / san^{III}	saŋ^{I} / san^{III}
thousand n^{559}	*saŋ^{II}	saŋ^{IIa}	saŋ^{IIa}	saŋ^{II}		saŋ^{II}	saŋ^{II}
chop, strike vt^{560}	*sat^{II} / *sat^{II}-s	sat^{IIb} / saʔ	sat^{IIb} / saʔ	sat^{II} / sat^{III}	sat^{II} / sat^{III}	sat^{II} / sat^{III}	sat^{II} / sat^{III} / sa^{III}
long vi^{561}	*saw^{II} / *saw^{III} (< saw^{II}-s)	saw^{IIa} / saw^{III}	saw^{IIa} / saw^{III}	saw^{II} / saw^{III}	saw^{II} / saw^{III}	saw^{II} / saw^{III}	saw^{II} / saw^{III}
red v^{562}	*sen^{I} / *sen^{III} (< *sen^{I}-s) / *sen^{III}-s	sen^{I} / sen^{III}	sen^{I} / sen^{III} / sen^{IIb}	san^{I} / sɛn^{I} / san^{III} / sɛn^{III}	san^{I} / san^{III}	san^{I} / san^{III}	san^{I} / san^{III}
young vi^{563}	*sen^{I} / *sen^{III} (< *sen^{I}-s)	sen^{I} / sen^{III}	sen^{I} / sen^{III}-	sen^{I} / sen^{III}	sen^{I} / sen^{III}	sen^{I} / sen^{III}	sɛn^{I} / sɛn^{III}
cockspur n	*siak^{II}	siak^{IIb}	siak^{IIb}	seit^{II}	siet^{II}	siak^{II}	siek^{II}

559 Te/Si hundred thousand n. Mizo has siŋ^{IIa} ten thousand n; Zahau has tʰoŋ^{IIa} thousand n which appears to be a Burmese loanword; Zo, Tedim and Sizang have tul^{III} thousand n.
560 Mi/Za chop vt; Th strike, chop vt; Zo strike with stick, chop vt; Te/Si strike with stick vt.
561 Mi long (as stride/step) vi.
562 Mi/Th/Zo/Te/Si red vi; Za sen^{I} ~ sen^{III} red vi; sen^{IIb} redden vt.
563 Mi/Th/Zo very young vi. Tedim is a song word; Sizang is possibly associated with red v.

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mithun n[564]	$*sial^{I}$	$sial^{I}$	$-sial^{II}$	$serl^{I}$	$siel^{I}$	$sial^{I}$
clear (a road) vt	$*sial^{II}$ $*sial^{III}$ $(<*sial^{II}\text{-}s)$	$sial^{IIa}$ $sial^{III}$	$sial^{IIa}$ $sial^{III}$	$serl^{II}$ $serl^{III}$	$siel^{II}$ $siel^{III}$	$sial^{II}$ $sial^{III}$
compose, create vt[565]	$*siam^{I}$ $*siam^{III}$ $(<*siam^{I}\text{-}s)$	$siam^{I}$ $siam^{III}$	$siam^{I}$ $siam^{III}$	$serm^{I}$ $serm^{III}$	$siem^{I}$ $siem^{III}$	$siam^{I}$ $siam^{III}$
hew vt[566]	$*siam^{I}$ $*siam^{III}$ $(<*siam^{I}\text{-}s)$	$siam^{I}$ $siam^{III}$	$siam^{I}$ $siam^{III}$		$siem^{I}$ $siem^{III}$	$siam^{I}$ $siam^{III}$
pinch vt	$*sik$ $*sik\text{-}s$	sik $siʔ$	sik $siʔ$	$siʔ$ si^{III}	$siʔ$ si^{III}	sik $siʔ$
cold vi	$*sik$	sik	sik	$siʔ$		sik
wash vt	$*sil^{II}$ $*sil^{III}$ $(<*sil^{II}\text{-}s)$	sil^{II} sil^{III}		sil^{II} sil^{III}	sil^{II} sil^{III}	sil^{II} sil^{III}
put on (above waist) vt[567]	$*sil^{III}\text{-}s$	$siʔ$	$siʔ$	sil^{III}	sil^{III}	$siʔ$
count, read vt[568]	$*sim^{I}$	sim^{I}	sim^{I}	sim^{I}	sim^{I}	sim^{I}

$siel^{I}$
$siel^{II}$ $siel^{III}$
$siem^{I}$ $siem^{III}$
$siem^{I}$ $siem^{III}$
sik si^{III}
sik
sil^{II} sil^{III}
sil^{III}
sim^{I}

564 Zahau is a song word and the tone II is due to sandhi.
565 Za *create* vt; Th *compose* vt; Zo *create, decorate* vt; Te/Si *bless* vt.
566 Mizo has sam^{IIa} ~ sam^{III} *hew* vt.
567 Za *refill a hole* vt.
568 Za sim^{I} ~ sim^{IIb} *say, tell* vt. Without Mizo evidence there is no way of knowing whether this was originally $*ʦ^{h}\text{-}$.

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Gloss	Proto						
spring (salt-water) n[569]	*sim^{III} (< *sim^{I}-s), *sim^{III}-s	siʔ	sim^{IIb}	sim^{III} / si^{III}	sim^{III} / si^{III}	sim^{III} / siʔ-	sim^{III} / si^{III}
gather (to eat) vi[570]	*sim^{I}, *sim^{III} (< *sim^{I}-s)			sim^{I} / sim^{III}	sim^{I} / sim^{III}	sim^{I} / sim^{III}	sim^{I} / sim^{III}
tread vi[571]	*sir^{II}, *sir^{III} (< *sir^{II}-s)				sia^{III}	sik^{II} / sik^{III}	sik^{II} / sik^{III} / si^{III}
say vt[572]	*sɔj^{II}, *sɔj^{III} (> *sɔj*^{II}-s)		sɔj^{IIa} / sɔj^{III}	sɛj^{II} / sɔj^{III}	sɔj^{IIa} / sɔj^{III}		
season vi[573]	*sɔs		sɔʔ	so^{III}	so^{III}	sɔʔ	so^{III}
panji n	*sɔw^{I}		sɔw^{I}	sɔw^{I}	sɔw^{I}	sɔw^{I}	sɔw^{I}
boil v[574]	*sɔw^{I}, *sɔw^{III} (< *sɔw^{I}-s), *sɔw^{III}-s		sɔw^{I} / sɔw^{III} / sɔwʔ	sɔw^{I} / sɔw^{III}	sɔw^{I} / sɔw^{III}	sɔw^{I} / sɔw^{III}	sɔw^{I} / sɔw^{III}
askew vi	*sɔj^{II}			sɔj^{II}	sɔj^{II}		

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[569] Laizo has siʔ- *spring (salt-water)* n.

[570] Without Mizo evidence there is no way of knowing whether this was originally *tsʰ- but there is a conceivable association with *sum^{I} *clench* vt, *fist-measure* n.

[571] Without Mizo evidence there is no way of knowing whether this was originally *tsʰ-.

[572] Za *criticise* vt. Teizang has sɔj^{II} ~ sɔj^{II} *say* vt.

[573] Mi *pound, dump, prod* vt; Za *prod, poke, collide* vi/t.

[574] Mi *boil* vi/t; Za sɔw^{I} ~ sɔw^{III} *boil* vi, sɔwʔ *boil* vt; Th/Zo/Te/Si *boil* vi.

Table (continuation; language varieties across columns, reconstructed forms marked with *):

gloss	reconstructed						
take up/out vt[575]	*soj^{III} (< *soj^{II}-s) / *soj^{II}-s	soj^{III} / sɔjʔ	soj^{III} / sɔjʔ	soʃ^{III} / sɔʃ^{III}	soʃ^{III}	soj^{III} / sɔjʔ	soj^{III}
invite, bind vt, ten n[576]	*som^{I} / *som^{III} (< *som^{I}-s)	som^{I} / som^{III}	som^{I} / som^{III}	som^{I} / som^{III}	som^{III}	som^{III}	som^{I} / som^{III}
bastard, grandchild n[577]	*son^{I}	son^{I}	-son^{I}			son^{I}	
shrivel vi	*soj^{I} / *son^{III} (< *soj^{I}-s)	soj^{I} / son^{III}	soj^{I} / son^{III}				
launder vt[578]	*sop^{II} / *sop^{II}-s	sop^{IIb} / sɔʔ	sop^{IIb}	sop^{II} / sop^{III}	sop^{II} / sop^{III}	sop^{II} / sop^{III}	sop^{II} / sop^{III}
wring vt	*sor^{I} / *sor^{III} (< *sor^{I}-s)	sor^{I} / sor^{III}	sor^{I} / sor^{III}			suk^{I} / suk^{II}	suk^{I} / suk^{II}
ladle out vt	*sʋak^{II} / *sʋak^{II}-s	sʋak^{IIb} / sʋaʔ	sʋak^{IIb} / sʋaʔ			sʋak^{II} / sʋak^{III} / sʋaʔ	sʋak^{II} / sʋak^{III} / sʋa^{III}
wicked vi	*sʋal^{II}	sʋal^{IIa}	sʋal^{IIa}	sʋol^{II}	sʋol^{II}		

[575] Mi take a pinch vt; Za pick up sticky object vt; Th/Te/Si take-out vt; Zo take-out, take a pinch vt.

[576] Mi som^{I} ~ som^{III} invite vt, *som^{III} invite vt, Za som^{I} ~ som^{III} ten vi; Za som^{I} ~ som^{III} invite vt, *som^{III}- ten vi; Th/Si som^{I} ~ som^{III} bind together vt, som^{III} ten vi; Zo/Te ten vi. Zahau only means ten in compounds from thirty to ninety nine.

[577] Mi/Za bastard n; Te grandchild n. Tedim is a song word.

[578] Mi pound on ground (clothes for washing or otherwise) vt; Th/Zo/Te/Si launder, wash-hair vt.

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fight vt[579]	*sɔal^{III} (< *sɔal^{II}-s)	sɔal^{III}	sɔal^{III}	sɔɔl^{III}		sɔal^{III}	ʃuans^{II}
	*sɔal^{I}	sɔal^{I}	sɔal^{I}			sɔal^{I}	ʃuans^{III}
	*sɔal^{III}	sɔal^{III}	sɔal^{III}			sɔal^{III}	suans^{I}
plunder, assassinate vt[580]	*sɔam^{I}	sɔam^{I}	sɔam^{I}	sɔɔm^{I}	sɔɔm^{I}	sɔam^{I}	suans^{III}
	*sɔam^{II} (< *sɔam^{I}-s)	sɔam^{III}	sɔam^{III}	sɔɔm^{III}	sɔɔm^{III}	sɔam^{III}	suans^{III}
[onion, garlic] n[581]	*sɔan^{II}			-sɔn^{II}	-sɔn^{II}	-sɔan^{II}	-suans^{II}
			-sɔan^{III}				
usurp, entrust vt[582]	*sɔan^{II}	sɔan^{IIa}	sɔan^{II}	sɔɔn^{II}	sɔɔn^{II}	sɔan^{II}	suans^{II}
	*sɔan^{III} (< *sɔan^{II}-s)	sɔan^{III}	sɔan^{III}	sɔɔn^{III}	sɔɔn^{III}	sɔan^{III}	suans^{III}
	*sɔan^{III}-s	sɔn^{IIb}	sɔn^{IIb}			sɔat^{III}	sɔt
stone n[583]	*sɔaŋ^{II}	sɔaŋ^{IIa}		sɔɔŋ^{II}	sɔɔŋ^{II}	sɔaŋ^{II}	ʃuans^{II}
[mortar] n	*sɔm^{II}	sɔm^{IIa}	sɔm^{IIa}	sɔm^{II}	sɔm^{II}	sɔm^{II}	sɔm^{II}
[launder, wash-hair] vt	*su^{II}	su^{III}					su^{II}
	*suk^{II} (< *su^{II}-s)	suk^{IIb}					suk^{II}
pound vt, *pestle* n[584]	*su^{III} (< *sus)	su^{III}	su^{I}	su^{III}	su^{III}	su^{III}	su^{III}

[579] Mi *rape* vt.

[580] Za *have low opinion* vt; Th/Te/Si *assassinate* vt; Zo *plunder, assassinate* vt.

[581] Tedim from Table B in Luce (1962a).

[582] Mi sɔan^{IIa} ~ sɔan^{III} *usurp* vt, sɔn^{IIb} *shift* vi/t; Za *contaminate* vt; Th sɔɔn^{II} ~ sɔɔn^{III} *usurp* vt, sɔɔn^{III} *entrust* vt; Zo sɔɔn^{II} ~ sɔɔn^{III} *usurp* vt, sɔɔn^{III} *entrust* vt; Te sɔan^{II} ~ sɔan^{III} *usurp* vt, sɔan^{III} ~ sɔat *entrust* vt; Si suen^{II} ~ suen^{III} *usurp* vt, suen^{III} ~ sot *entrust* vt.

[583] Mizo is a song word.

[584] Mi/Te/Si su^{III} ~ sok *pound* vt, sok *pestle* n; Za su^{I} ~ sot *pound* vt, sok *pestle* n; Th/Zo su^{III} ~ soʔ *pound* vt, soʔ *pestle* n. Zahau is possibly associated with Mizo su^{I} ~ sot *collide* vi/t.

whittle / clench / rain / untie	Reconstruction						
whittle vt[585]	*sɔk (< *suj^{III}-s)	sɔk	sɔt / sɔk	sɔʔ	sɔʔ	sɔk	sɔk
	*suj^{II}			suj^{II}	suj^{II}	suj^{II}	sɔj^{II}
	*suj^{III} (< *suj^{II}-s)	sɔj^{nb} / sɔjʔ		suj^{III} / sɔj^{III}	suj^{III}	sɔjʔ	sɔj^{III}
	*suj^{III}-s						
clench vt, *fist-measure* n[586]	*sum^{I}	sum^{I}					sum^{I}
	*sum^{III} (< *sum^{I}-s)	sum^{III}	sum^{III}				sum^{III}
rain v[587]	*sur^{I}	sur^{I}	sur^{I}				
	*sur^{III} (< *sur^{I}-s)	sur^{III}	sur^{III}				
	*sur^{III}-s		sɔrʔ				
untie vt[588]	*sut^{II}	sut^{IIb}	sut^{IIb}	sut^{II}	sut^{II}	sut^{II}	sut^{II}
	*sut^{II}-s	sɔʔ	(sɔʔ)	sut^{III}	sut^{III}	sut^{III}	sut^{III} / su^{III}

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[585] Mi sɔj^{nb} ~ sɔjʔ *whittle vt*; Te suj^{II} ~ sɔjʔ *whittle vt*.

[586] Mi sum^{I} ~ sum^{III} *withold vt*, sum^{III} *clench vt*, *grasp vt*, *fist-measure n*; Si *clench, grasp vt*. Zahau has sup^{III} *withhold vt*; Thado has sim^{III} ~ sip *clench vt*, Tedim has sɔm^{II} ~ sɔm^{III} *clench vt*.

[587] Mi *rain vi*, Za sur^{I} ~ sur^{III} *rain vi*, sɔrʔ *rain on vt*.

[588] Mi *undo vt*.

*t-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
real vi, right-side n [589]	$*tɛk$	tɛk	tɛk	ʃaʔ	ʃaʔ	tɛk	tɛk
flesh, muscle n [590]	$*tɛk$	tɛk	tɛk	taʔ-	ʃaʔ	-kat	tɛk
weave vt [591]	$*tɛk$ $*tɛk$-s	ʃaʔ	taʔ	ta^{III}			tɛk ta^{III}
muscle n [592]	$*tal^{I}$	-tal^{I}		$tɛl^{I}$			
many vi	$*tam^{II}$ $*ŋaɹ^{III}$ (< $*ŋaɹ^{II}$-s)	tam^{IIa} $ŋaɹ^{III}$	tam^{IIa} tam^{III}	tam^{II} tam^{III}	tam^{II} tam^{III}	tam^{II} tam^{III}	tam^{II} tam^{III}
saw, cut vt [593]	$*tan^{II}$ $*ŋaɹ^{III}$ (< $*ŋaɹ^{II}$-s)	tan^{IIa} $ŋaɹ^{III}$	tan^{IIa} tan^{III}	tan^{II} tan^{III}	tan^{II} tan^{III}	tan^{II} tan^{III}	tan^{II} tan^{III}
winter n [594]	$*taŋ^{I}$		$taŋ^{I}$			$taŋ^{I}$	
hearth n	$*taɹ$	daɹ	daɹ	daɹ	daɹ	daɹ	daɹ

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[589] Mi/Za real vi.

[590] Mi/Za/Zo flesh n; Te/Si muscle n.

[591] Th pull beam when weaving vt; Si weave with loom vt.

[592] Mizo means muscle n when preceded by $*sa^{II}$ meat n or stalk n when preceded by *bos rice n.

[593] Te/Si cut horizontally vt.

[594] Te dry/hot weather n. Tedim is a song word.

elderly, firm vi[595]	*ter^{I} / *ter^{III}-s	ter^{I} / ter^{III}	ter^{I} / ter^{III}	taʔ^{I} / teʔ^{I} teʔ^{I} / tɛʔ^{III}	ta^{I} / teʔ^{I} ta^{III} / teʔ^{III}	tak^{I} / tek^{I} tak^{III} / tek^{III}	tɕak^{I} tɕak^{III}
waist, underbelly n[596]	*taj^{II}	taj^{IIa}	taj^{IIa}	taj^{II}	taj^{II}	taj^{II}	taj^{II}
slither vi[597]	*tal^{II} *tal^{III} (< *tal^{II}-s)	tal^{IIa} tal^{III}	tal^{IIa} tal^{III}	tɕal^{I} tɕal^{III}	tal^{II} tal^{III}	tal^{II} tal^{III}	tal^{I} tal^{III}
display (on pole) vt[598]	*tar^{I} *tar^{III} (< *tar-s) *tar^{III}-s	tar^{I} tar^{III} terʔ	tar^{I} tar^{III} terʔ	taʔ ʔaʔ	ta^{I} ta^{III}	teʔ	tak^{I} tak^{III} ta^{III}
sharpen vt	*tat^{II} *tat^{II}-s	tat^{IIb} teʔ	tat^{IIb}	tat^{II} tat^{III}	tat^{II} tat^{III}	tat^{II} tat^{III}	tat^{II} tat^{III}
moan, sulk vi[599]	*taw^{II} *taw^{III} (< *taw^{II}-s) *taw^{III}-s	taw^{III} tewʔ	taw^{III} tewʔ	taw^{II} taw^{III}	taw^{II} taw^{III}	taw^{II} taw^{III}	taw^{II} taw^{III}
bundle n, *include* v[600]	*tɛl^{II}	tɛl^{IIa}	tɛl^{IIa}	tɛl^{II}			

[595] Mi/Za/Si elderly vi; Th taʔ^{I} ~ teʔ^{I} hard vi, teʔ^{I} ~ teʔ^{III} elderly vi; Zo ta^{I} ~ ta^{III} firm vi, teʔ^{I} ~ teʔ^{III} elderly vi; Te tak^{I} ~ tak^{III} firm vi, teʔ^{I} ~ teʔ^{III} elderly vi; Te tak^{I} ~ tak^{III} firm vi, tek^{I} ~ tek^{III} elderly vi.

[596] Mi/Za waist n; Th/Zo/Te/Si underbelly n.

[597] Mi/Za wriggle vi. Mizo has tel^{IIb} slither vi; Zahau has -tɕel^{III} earthworm n; Thado, Zo and Tedim have -tel^{III} earthworm n; Sizang has -tɕal^{II} earthworm n whose tone II may be due to sandhi.

[598] Mi/Za tar^{I} ~ tar^{III} stick on display pole vt, tɛrʔ bait vt; Te teʔ bait vt; Si tak^{I} ~ tak^{III} stick on display pole vt, ta^{III} bait vt. Tedim teʔ and Sizang ta^{III} bait vt could alternatively derive from Mizo tsaʔ bait vt.

[599] Mi/Zo moan vi; Th/Zo/Te/Si sulk vi.

[600] Mi/Za tɛl^{IIa} bundle n, tɛl^{IIa} ~ tɛl^{III} include vi, teʔ include vt; Th bundle n. Mizo has Mi tel^{I} bunch n, tel^{I} ~ tel^{III} bunch vi; Za has tel^{III} bunch n.

	*recon						
taste vt	*tɛl^{III} (< *tɛl^{III}-s) *tɛl^{III}-s	tɛl^{III} tɛlʔ	tɛl^{III} tɛlʔ	tɛp te^{II}			tɛp te^{II}
small vi[601]	*tɛp *tɛp-s	tɛp	tɛp tɛʔ	te^{I} tɛt			te^{II} tet^{II}
			te^{IIa} tet^{IIb}				
promise vt[602]	*tram^{I} *tram^{III} (< *tram^{I}-s) *tram^{III}-s	tram^{III}	-tram^{III}	tem^{I} tem^{III} tɛrp	tʃɛm^{I} tʃɛm^{III}	tʃram^{I} tʃram^{III}	tʃɛm^{I} tʃɛm^{III}
taste vt[603]	*tram^{III} *tram^{III}-s			tem^{III} tɛrp	tʃɛm^{III} tʃɛp	tʃram^{III} tʃrap	
stick n[604]	*traŋ^{II}	traŋ^{IIa}		teŋ^{II}	tʃɛŋ^{II}	tʃraŋ^{II}	tʃɛŋ^{II}
testicle n	*tɪl^{II}	tɪl^{IIa}	tɪl^{IIa}	tɪl^{II}	tʃɪl^{II}	tʃɪl^{II}	tʃɪl^{II}
nail, claw n	*tɪm^{II}	tɪm^{IIa}	tɪm^{IIa}	tɪm^{II}	tʃɪm^{II}	tʃɪm^{II}	tʃɪm^{II}
nervous vi	*tɪ^{II}	tɪ^{IIb}-	tɪ^{II}-	tɪ^{II}-	tʃɪ^{II}-		tʃɪ-

[601] Si *granular* vi.
[602] Th term^{I} ~ term^{III} / tɛrp *promise* vt.
[603] Th *try-out* vt. Mizo has tem^{I} ~ tem^{III} *taste* vt.
[604] Th *javelin* n.

say vt[605]	*tiᴵᴵᴵ (< *tis)	tiᴵᴵᴵ	tiᴵᴵᴵ	tiᴵᴵᴵ	tʃiᴵᴵᴵ	tʃiᴵᴵᴵ
	*tik (< *tiᴵᴵᴵ-s)					
	*tik-s					
slide vi[606]		tiʔ			tʃiʔ	tʃiʔ
	*tɔlᴵᴵᴵ-s	tɔlʔ / tɔlⁿᵇ	tɔlʔ	tɔlᴵᴵᴵ	tɔlʔ	tɔlᴵᴵᴵ
cubit n	*tɔɲᴵᴵᴵ	tɔɲᴵᴵ	dɔɲᴵᴵᴵ	tɔɲᴵᴵ	tɔɲᴵᴵᴵ	tɔɲᴵᴵᴵ
sit v[607]	*tɔwᴵ	-tɔwᴵ	tɔwᴵ	tɔwᴵ		tɔwᴵ
	*tɔwᴵᴵᴵ (< *ɟwɑɟᴵ)	-tɔwᴵᴵᴵ	ɟwɑɟᴵᴵᴵ	ɟwɑɟᴵᴵᴵ		ɟwɑɟᴵᴵᴵ
	*ɟwɑɟᴵᴵᴵ-s		ɟwɑɟʔ			
short vi	*tɔɟᴵᴵ	tɔɟᴵᴵᵃ	tɔɟᴵᴵᵃ			
touch (with hand) vt[608]	*tɔk	tɔk	tɔk	tɔʔ-		
	*tɔk-s	tɔʔ	tɔʔ			
meet vt[609]	*tʃɔɟᴵ	tɔɟᴵ	tɔɟᴵ	tɔɟᴵ		
	*tɔnᴵᴵᴵ (< *tɔɟʃᴵ-s)	tɔnᴵᴵᴵ	tɔnᴵᴵᴵ			
fight vt[610]	*tɔɲᴵᴵᴵ	tɔɲᴵᴵᴵ	tɔɲᴵᴵᴵ			
	*tɔɲᴵᴵᴵ-s	tɔɲⁿᵇ				

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[605] Mi/Za do, say vt; Th say vt, happen vi; Zo/Te/Si say (reported speech) vi.
[606] Mi tɔlʔ / tɔlⁿᵇ slide vi/t; Si slide down vi. Th/Zo/Te have tɔlᴵᴵ ~ tɔlⁿ slide out vi. See *tʰɔlᴵᴵᴵ-s slide vt.
[607] Mi stand/sit up/down vi; Za tɔwᴵ ~ tɔwᴵᴵᴵ sit vi, tɔwʔ seat vt; Th/Zo/Si sit vi. Mizo has tʰuᴵ ~ tʰotᴵᴵᴵ sit vi and Tedim has tuᴵ ~ tɔt sit vi.
[608] Za knock down fruit with stick vt, point vt.
[609] Th speak vt. Thado is a song word.
[610] Tedim and Sizang have tɔɲᴵᴵ ~ tonᴵᴵᴵ provoke vt.

young vi [611]	*tʊaj^I / *tʊaj^III (< *tʊaj^I-s)	tʊaj^I / tʊaj^III	tʊaj^I / tʊaj^III	toɔj^I / toɔj^III	toɔj^I / toɔj^III	tʊaj^I / tʊaj^III	tʊɛj^I
meet vt, pair n [612]	*tʊak^II / *tʊak^II-s	tʊak^IIb	tʊak^IIb	toɔʔ^II / toɔ^III	toɔʔ^II / toɔ^III	tʊak^II / tʊak^III / toaʔ	tʊek^II / tʊek^III / tua^III
locality n	*tʊal^I	tʊal^I	tʊal^I	toɔl^I	toɔl^I	tʊal^I	tʊel^I
wrap vt [613]	*tʊam^II / *tʊam^III (< *tʊam^II-s)	tʊam^IIa / tʊam^III	tʊam^IIa / tʊam^III	toɔm^II / toɔm^III	toɔm^II / toɔm^III	tʊam^II / tʊam^III	tʊem^II / tʊam^III
hair-bob n [614]	*tɔk	tɔk	tɔk	toʔ	toʔ	tɔk	tɔk
make fist/bob vt, fist/bob n [615]	*tɔm^I / *tɔm^III (< *tɔm^I-s)	tɔm^I / tɔm^III / tɔm^III	tɔm^I / tɔm^III / tɔm^III	tɔm^I / tɔm^III	tɔm^I / tɔm^III	tɔm^I / tɔm^III	tɔm^I / tɔm^III
drum vt	*tɔm^II / *tɔm^III (< *tɔm^II-s)	tɔm^IIa / tɔm^III	tɔm^IIa / tɔm^III	tɔm^II / tɔm^III	tɔm^II / tɔm^III	tɔm^II / tɔm^III	tɔm^II / tɔm^III
wish vt [616]	*tɔm^I/II / *tɔm^III	tɔm^I / tɔm^III	tɔm^II / tɔm^III	tɔm^III	tɔm^III	tɔm^II / tɔm^III	tɔm^III

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[611] Tedim and Sizang are song words.

[612] Mi/Za pair n; Th/Zo/Te/Si meet vi. Mizo has tok^IIb ~ toʔ encounter vi.

[613] See *tʰʊam^III put on (best clothes) vt.

[614] Za crown of head n; Si indent at back of head n.

[615] Mi tɔm^I ~ tɔm^III crouch, huddle up, tie hair-bob vt, tɔm^III hair-bob n, tɔm^III make fist vt, fist/block n; Za tɔm^I ~ tɔm^III bind up vt, tɔm^III make fist vt, fist/block n, tɔm^III hair-bob n; Th/Zo tɔm^I fist, hair-bob n, tɔm^I ~ tɔm^III make fist vt, tɔm^III block, hair-bob n; Si tɔm^I fist, block, hair-bob n; Te tɔm^I ~ tɔm^III make fist vt, tɔm^III fist, block, hair-bob n; Si tɔm^I fist, hair-bob n, tɔm^I ~ tɔm^III make fist vt, tɔm^III top-knot n. Laizo has tum^I make fist vt.

[616] Mi intend, wish vt; Za intend vt; Zo have an ambition vt.

	Proto						
warp n, erect v [617]	*tom^III-s	*tom^III-s		top	top	top	top
pulsate v [618]	*toŋ^I / *ton^III (<*toŋ^I-s)	toŋ^I / ton^III	toŋ^I / ton^III	toŋ^I / ton^III	toŋ^I / ton^III	toŋ^I / ton^III	toŋ^I / ton^III
	*toɾ^I / *tor^III (<*tor^I-s) / *tor^II-s	tor^I / tor^III	toɾ^IIb				
plant (seed) vt [619]	*tos	toʔ	toʔ	toʔ	tu^III	toʔ	tu^III
jungle n [620]	*tu^I		tu^I	tu^I	tu^I	tu^I-	-tu^I
grandchild n	*tu^II	tu^IIb	tu^IIb	tu^II	tu^II	tu^II	tu^II
now n	*tu^II	tu^II	tu^II	tu^II	tu^II	tu^II	tu^II
chop vt [621]	*tu^III (<*tus) / *tu^II-s	tok	tok	tu^III / toʔ	tu^III / toʔ	tu^III / tok	
small hoe n [622]	*tu^III (<*tus)	tu^III-	tu^III	tu^III	tu^III	tu^III	tu^III-
delicious vi	*tuj^I	toj^I	tuj^I	tuj^I	tuj^I	-tuj^I	-toj^I

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[617] Mi/Za/Th/Zo/Te/Si toŋ^I warp n, toŋ^I ~ ton^III erect vi/t.
[618] Mi urge, give pulsating pain vt; Za pulsate vi.
[619] Mizo has toʔ- hoe n.
[620] Te area of big grasses n.
[621] Mi carve, fell vt; Za carve vt.
[622] Mi hammer n.

egg n, lay egg vi[623]	*tɯj^{IIII} (< *tuj^{I}-s)	tɔj^{III}		tuj^{III} / tɔj^{III}	tuj^{III}	-tuj^{III}	-tɔj^{III}
	*tuj^{I} / *tɯj^{III} (< *tuj^{I}-s)	tɔj^{I} / tɔj^{III}	ti^{I} / tit^{IIb}	tɔj^{I} / tɔj^{III}	tuj^{I} / tuj^{III}	tuj^{I} / tuj^{III}	tɔj^{I} / tɔj^{III}
water n, melt vi[624]	*tuj^{II} / *tɯj^{III} (< *tuj^{I}-s)	tɔj^{IIa} / tɔj^{III}	ti^{IIa}	tɔj^{II} / tɔj^{III}	tuj^{II} / tuj^{III}	tuj^{II} / tuj^{III}	tɔj^{II} / tɔj^{III}
heel n	*tul^{I}		dil^{II}	tal^{I}	tul^{I}	-tul^{I}	-tul^{I}
skewer n	*tul^{I}	tul^{I}	-tul^{I}	tul^{I}	tul^{I}	tul^{I}	
pungent vi	*tur^{III}	tur^{III}		tɔʔ	tɔa^{III}	tuk^{III}	tuk^{III}

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[623] Mi/Th/Si tɔj^{I} egg n, tɔj^{I} ~ tɔj^{III} lay egg vi; Za ti^{I} egg n, ti^{I} ~ tit^{IIb} lay egg vi; Zo/Te tuj^{I} egg n, tuj^{I} ~ tuj^{III} lay egg vi.
[624] Mi/Th/Si tɔj^{II} water n, tɔj$^{III(a)}$ ~ tɔj$^{III(a)}$ melt vi; Za ti^{IIa} water n, melt vi; Zo/Te tuj^{II} water n, tuj^{II} ~ tuj^{III} melt vi.

*tʰ-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
itch, spicy vi	*tʰɐk *tʰɐk-s	tʰɐk^I tʰɛʔ^I	tʰɐk tʰɛʔ	tʰaʔ	tʰaʔ	tʰɐk^I ʔaʔ	tʰɐk
oak n	*tʰaɭ^I	tʰaɭ^I	tʰaɭ^I		tʰaɭ^{III}	tʰaɭ^{III}	tʰaɭ^{III}
arrow, bow n[625]	*tʰɐɭ^{II}	tʰɐɭ^{IIa}	tʰɐɭ^{IIa}	tʰaɭ^{II}	tʰɐɭ^{II}	tʰɐɭ^{II}	tʰaɭ^{II}
handle, touch vt[626]	*tʰɐm^{II} *ⁿmaɭ^{III}(< *tʰɐm^{III}-s)	tʰɐm^{IIa} ⁿmaɭ^{III}	tʰɐm^{IIa} ⁿmaɭ^{III}	tʰɐm^{II} tʰɐm^{III}	tʰɐm^{II} ⁿmaɭ^{III}		tʰɐm^{II} ⁿmaɭ^{III}
famous vi[627]	*tʰɐŋ^I *tʰen^{III}(< *tʰɐŋ^I-s) *tʰen^{III}-s-	tʰɐŋ^I tʰen^{III}	tʰɐŋ^I tʰen^{III} tʰɐn^{IIb}	tʰɐŋ^I tʰen^{III}	tʰɐŋ^I tʰen^{III}	tʰɐŋ^I tʰen^{III}	tʰɐŋ^I tʰɐn^{III}
serow n	*tʰɐɭ^I	<u>tʰaɭ^I</u>	<u>tʰɐɭ^{IIa}</u>				
new vi	*tʰɐɭ^I *tʰɐɭ^{III}(< *tʰɐɭ^I-s)	tʰɐɭ^I tʰɐɭ^{III}	tʰɐɭ^I tʰɐɭ^{III}	tʰaʔ^I ʔaʔ	tʰa^I tʰa^{III}	tʰɐk^I	tʰɐk^I tʰɐk^{III}
kill vt	*tʰɐt *tʰɐt-s	tʰɐt ʔaʔ	tʰɐt ʔaʔ	tʰɐt tʰa^{III}	tʰɐt tʰa^{III}	tʰɐt tʰaʔ	tʰɐt tʰa^{III}

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[625] Mi/Za arrow n, Th/Zo/Te/Si bow n.
[626] Mi/Za handle vt; Th/Zo/Te/Si touch with hand vt. Zahau is a song word.
[627] Mi/Th/Zo/Te/Si famous vi; Za tʰɐŋ^I ~ tʰen^{III} famous vi, tʰen^{IIb} broadcast vt.

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gloss							
sinew n	*tʰa^{II}	tʰa^{IIb}	tʰa^{IIb}	tʰa^{II}	tʰa^{II}	tʰa^{II}	tʰa^{II}
pour into funnel vt[628]	*tʰal^{I} / *tʰal^{III} (< *tʰal^{I}-s)	tʰal^{I} / tʰal^{III}			tʰal^{I} / tʰal^{III}		tʰal^{I} / tʰal^{III}
reek (of flesh/blood) vi[629]	*tʰaŋ^{I} / *tʰan^{III} (< *tʰaŋ^{I}-s)	tʰaŋ^{II} / tʰan^{II}	tʰeŋ^{II} / tʰaŋ^{I} ; tʰen^{III} / tʰan^{III}	tʰaŋ^{I} / tʰan^{III}	tʰaŋ^{I} / tʰan^{III}	tʰaŋ^{I} / tʰan^{III}	tʰaŋ^{I} / tʰan^{III}
trap n	*tʰaŋ^{II}	tʰeŋ^{IIa}	tʰeŋ^{IIa}	tʰaŋ^{II}	tʰaŋ^{II}	tʰaŋ^{II}	tʰaŋ^{II}
fat vi/n[630]	*tʰaw^{I} / *tʰaw^{III} (< *tʰaw^{II}-s)	tʰaw^{I} / tʰaw^{II}	tʰaw^{I} / tʰaw^{III}	tʰaw^{I} / tʰaw^{III}	tʰaw^{I} / tʰaw^{III}	tʰaw^{I} / tʰaw^{III}	tʰaw^{I} / tʰaw^{III}
know how to vt[631]	*tʰiam^{II} / *tʰiam^{III} (< *tʰiam^{II}-s) / *tʰiam^{III}-s	tʰiam^{IIa} / tʰiam^{III}	tʰiam^{IIa} / tʰiam^{III}	tʰeim^{II} / tʰeim^{III} ; tʰeip	siem^{II} / siem^{III}	siam^{II} / siam^{III}	tɕʰiem^{II} / tɕʰiem^{III}
fruit, fig n[632]	*tʰɛj^{II}	tʰɛj^{IIa}	tʰɛj^{IIa}	tʰɛj^{II}	tʰɛj^{II}	tʰɛj^{II}	tʰɛj^{II}
know, able to vt[633]	*tʰɛj^{III} / *tʰɛj^{III}-s	tʰɛj^{III} / tʰɛjʔ	tʰɛj^{III} / tʰɛjʔ	tʰɛj^{III}	tʰɛj^{III}	tʰɛj^{III} / tʰɛjʔ	tʰɛj^{III}

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[628] Mi bale vt.
[629] Za tʰeŋ^{IIa} ~ tʰen^{III} reek (of flesh/blood) vi, tʰaŋ^{I} ~ tʰan^{III} flavoursome vi.
[630] Mi/Za/Th/Zo/Te/Si tʰaw^{I} ~ tʰaw^{III} fat vi, tʰaw^{II} fat n.
[631] Za understand vt; Th tʰeim^{II} ~ tʰeim^{II} / tʰeip know how to vt.
[632] Zo/Te/Si fig n.
[633] Mi capable vi; Za know, hear vt; Tha/Zo know vt; Si able to vt.

deflate vi	*tʰep^{II} / *tʰep^{II}-s	tʰep^{IIb}	tʰep^{I} / tʰep^{II}	tʰep^{II} / tʰep^{III}	tʰep^{II} / tʰep^{III}	tʰɛap^{II} / tʰɛap^{III} / tʰe^{III}
diminish v[634]	*tʰew^{II} / *tʰew^{III} (< *tʰew^{II}-s) / *tʰew^{III}-s	tʰɛw?	tʰew^{II} / tʰew^{III} / tʰɛw^{III}	tʰew^{II} / tʰew^{III} / tʰɛw^{III}	tʰew^{II} / tʰew^{III}	tʰɛaw^{II} / tʰɛaw^{III}
clean vi	*tʰɩaŋ^{I} / *tʰɩan^{III} (< *tʰɩaŋ^{I}-s)	tʰɩaŋ^{I} / tʰɩan^{III}	tʰeiŋ^{I} / tʰein^{III}	sɩeŋ^{I} / sɩen^{III}	sɩaŋ^{I} / sɩan^{III}	tʃʰiaŋ^{I} / tʃʰien^{III}
relocate, wipe vt[635]	*tʰɩar^{I} / *tʰɩar^{III} (< *tʰɩar^{I}-s)	tʰɩar^{I} / tʰɩar^{III}	tʰeɪʔ^{I} / tʰeɪʔ^{III}	sɩa^{I} / sɩa^{III}	sɩak^{I} / sɩak^{III}	tʃʰiek^{I} / tʃʰiek^{III}
thread vt	*tʰɩl^{I} / *tʰɩl^{III} (< *tʰɩl^{I}-s)	tʰɔl^{I} / tʰɔl^{III}	tʰɩl^{I} / tʰɩl^{III}	sɩl^{I} / sɩl^{III}	xɩl^{I} / xɩl^{III}	kʰɩl^{I} / kʰɩl^{III}
quiet v[636]	*tʰɩm^{I} / *tʰɩm^{III} (< *tʰɩm^{I}-s) / *tʰɩm^{III}-s	tʰɩm^{I} / tʰɩm^{III}	tʰɩm^{I} / tʰɩm^{III} / tʰɩp	-sɩm^{I} / sɩp	-sɩm^{I} / sɩp	tʃʰɩm^{I} / tʃʰɩm^{III} / tʃʰɩp
liver n	*tʰɩn^{III}	tʰɩn^{III}	tʰɩn^{III}	sɩn^{III}	sɩn^{III}	tʃʰɩn^{III}
shake vt[637]	*tʰɩŋ^{I}	tʰɩŋ^{I}	tʰɩŋ^{I}	tʰɩŋ^{I}	sɩŋ^{I}	tʃʰɩŋ^{I}

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[634] Za *plane vt, graze vi*; Th/Zo tʰew^{II} ~ tʰew^{III} *diminish (as rain) vi*, *tʰew^{III} *graze vi*; Te/Si *diminish (as rain) vi*. Thado *graze vi* has an irregular form 1 tʰew^{II} *graze vi* possibly as an analogical back-formation.

[635] Mi/Za *relocate vt*; Th/Zo/Te/Si *wipe vt*.

[636] Mi *dark vi*; Za tʰɩm^{I} ~ tʰɩm^{III} *dark vi*, tʰɩm^{IIb} *black (inside of fruit) vi*; Th tʰɩm^{I} ~ tʰɩm^{III} *dark vi*, tʰɩp *quiet vi*; Zo/Te -sɩm^{I} *soul (dark heart) n*, sɩp *quiet vi, quieten vi*; Si tʃʰɩm^{I} ~ tʃʰɩm^{III} *dark (as sky), quiet (as people) vi*, tʃʰɩp^{III} *quieten vt*. Tedim has xɩm^{III}- *extremely dark vi* corresponding to the song words Zo xɩm^{III}- and Sizang kʰɩm^{III}- *dark vi*.

[637] Te/Si *shake (an anchored rod e.g. tree/post) vt*. The Zo form is presumably borrowed from another Northern Chin language.

	Proto						
wood *n*	*tʰɪn^{III} (< *tʰɪŋ^{I}-s)	tʰɪn^{III}	tʰɪn^{III}	tʰɪn^{III}	tʰɪn^{III}	sɪn^{III}	tʃʰɪn^{III}
comb *n*[638]	*tʰɪŋ^{II}	tʰɪŋ^{IIa}	tʰɪŋ^{IIa}	tʰɪŋ^{II}	sɪŋ^{II}	sɪŋ^{II}	tʃɪŋ^{II}
die *vi*	*tʰɪ^{I} / *tʰɪt^{I} (< *tʰɪ^{I}-s) / *tʰɪt-s	tʰɪʔ	tʰɪʔ	tʰɪ^{I}	sɪ^{I}	sɪ^{I}	tʃʰɪ^{I}
blood *n*, **bleed** *vi*[639]	*tʰɪ^{II} / *tʰɪt^{II} (< *tʰɪ^{II}-s)	tʰɪ^{IIa} / tʰɪt^{IIb}	tʰɪ^{IIa} / tʰɪt^{IIb}	tʰɪ^{III}	sɪ^{III}	sɪ$^{?}$	tʃʰɪ^{III}
jealous *vi*	*tʰɪk^{II}	tʰɪk^{IIb}	tʰɪk^{IIb}	tʰɪʔ^{II}			
boxed: **ginger** *n*	*tʰɪŋ^{I}	tʰɪŋ^{I}	tʰɪŋ^{I}	tʰɪŋ^{I}	sɪŋ^{I}	sɪŋ^{I}	tʃɪŋ^{I}
sting *vi*	*tʰɪp^{II} / *tʰɪp^{II}-s	tʰɪp^{IIb}	tʰɪp^{IIb}	tʰɪp^{II} / tʰɪp^{III}	sɪp^{II} / sɪp^{III}	sɪp^{II} / sɪp^{III}	tʃʰɪp^{II} / tʃʰɪp^{III}
iron *n*	*tʰɪr^{II}	tʰɪr^{IIa}	tʰɪr^{IIa}	tʰɪʔ^{II}	sɪa^{II}	sɪk^{II}	tʃɪk^{II}
appease nats *vt*	*tʰɔj^{III}-s	t̲ʰ̲ɔ̲j̲^{IIb}	tʰɔj^{IIb}	tʰɔj^{III}	tʰɔj^{III}	tʰɔjʔ	tʰɔj^{III}
slide *vt*[640]	*tʰɔl^{III}-s	tʰɔlʔ / t̲ʰ̲ɔ̲l̲^{IIb}	tɔlʔ / tʰɔl^{IIb}	tʰɔl^{III}	tʰɔl^{III}	tʰɔlʔ	tʰɔl^{III}

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[638] Mi *put oil in hair vt.*

[639] Mi/Za tʰɪⁿᵃ *blood n*, tʰɪᵐᵃ ~ tʰɪt^{II} *bleed vi*; Th/Zo/Te/Si *blood n.*

[640] Mi tʰɔlʔ / tʰɔl^{IIb} *slide under/between vt*, Si *slide down vt.* See *tɔl^{III}-s *slide vi.*

Gloss	Proto						
arise v[641]	$*t^h\text{ɔw}^{II}$, $*t^h\text{ɔw}^{III}$ (< $*t^h\text{ɔw}^{II}$-s), $*t^h\text{ɔw}^{III}$-s	$t^h\text{ɔw}^{IIa}$	$t^h\text{ɔw}^{IIa}$	$t^h\text{ɔw}^{II}$	$t^h\text{ɔw}^{II}$	$t^h\text{ɔw}^{II}$	$t^h\text{ɔw}^{II}$
breath n, *breathe* vi[642]	$*t^h\text{o}^{II}$, $*t^h\text{ok}^{II}$ (< $*t^h\text{o}^{II}$-s)	$t^h\text{o}^{IIb}$ / $t^h\text{o}^{III}$, $t^h\text{ok}^{IIb}$	$t^h\text{o}^{IIb}$ / $t^h\text{o}^{III}$, $t^h\text{ot}^{IIb}$	$t^h\text{ɔʔ}$	$t^h\text{o}^{III}$	$t^h\text{o}^{III}$	$t\text{ɔ}^{III}$
loose, able to fit vi[643]	$*t^h\text{ol}^{I}$, $*t^h\text{ol}^{III}$ (< $*t^h\text{ol}^{I}$-s)	$t^h\text{ol}^{I}$, $t^h\text{ol}^{III}$	$t^h\text{ol}^{I}$, $t^h\text{ol}^{III}$	$t^h\text{ol}^{I}$, $t^h\text{ol}^{III}$	$t^h\text{ol}^{I}$, $t^h\text{ol}^{III}$	$t^h\text{ol}^{I}$, $t^h\text{ol}^{III}$	$t^h\text{ol}^{I}$, $t^h\text{ol}^{III}$
sound n	$*t^h\text{om}^{II}$	$t^h\text{om}^{IIa}$	$t^h\text{om}^{IIa}$		$t^h\text{om}^{II}$	$t^h\text{om}^{II-}$	$t^h\text{om}^{II}$
echo, resound vi[644]	$*t^h\text{oɲ}^{II}$, $*t^h\text{on}^{III}$ (< $*t^h\text{oɲ}^{II}$-s), $*t^h\text{on}^{III}$-s	$t^h\text{æɲ}^{I}$, $t^h\text{æn}^{II}$	$t^h\text{æɲ}^{I}$, $t^h\text{æn}^{II}$	$t^h\text{oɲ}^{II}$, $t^h\text{on}^{III}$	$t^h\text{on}^{III}$, $t^h\text{ɔt}$	$t^h\text{on}^{III}$, $t^h\text{ɔt}$	$t^h\text{oɲ}^{II}$, $t^h\text{on}^{III}$
fly n	$*t^h\text{ɔw}^{III}$	$t^h\text{ɔw}^{III}$	$t^h\text{ɔw}^{III}$	$t^h\text{ɔw}^{III}$	$t^h\text{ɔw}^{III}$	$t^h\text{ɔw}^{III}$	$t^h\text{ɔw}^{II}$
put on (best clothes) vt[645]	$*t^h\text{ʋam}^{III}$, $*t^h\text{ʋam}^{III}$-s	$t^h\text{ʋam}^{III}$, $t^h\text{om}^{IIb}$	$t^h\text{ʋam}^{III}$				
layer, pile-up vt[646]	$*t^h\text{ʋap}^{II}$			$t^h\text{oop}^{II}$	$t^h\text{oop}^{II}$	$t^h\text{ɔap}^{II}$	$t^h\text{uap}^{II}$

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[641] Mi/Th *arise* vi/t; Za $t^h\text{ow}^{IIa}$ ~ $t^h\text{ɔʔ}$ *arise* vi, $t^h\text{ɔʔ}$ *arise* vt; Zo/Te/Si *arise* vi.

[642] Mi $t^h\text{o}^{IIb}$ *breath* n, $*t^h\text{o}^{III}$ ~ $*t^h\text{ok}^{IIb}$ *breathe* vi; Za *breathe* vi. Zahau tone III is confirmed in Osburne (1975:3;134) and it may be a Mizo loan.

[643] Mi/Za *loose* vi; Th/Zo/Te/Si *able to fit* vi.

[644] Mi/Si *resound* vi; Za/Th/Zo/Te *echo* vi. Bhaskararao (1996:98) has Tedim $t^h\text{oɲ}^{II}$ ~ $t^h\text{on}^{III}$ *hear an echo* vt.

[645] See $*t^h\text{ʋam}^{II}$ *wrap* vt.

	* (proto)						
stove n	*tʰoap^{II}-s	tʰoaʔ	tʰoaʔ		tʰoop^{III}	tʰoap^{III}	tʰuep^{III}
three vi	*tʰok	tʰok		tʰoʔ	tʰoʔ	tʰok	tʰok
insert lengthwise vt[647]	*tʰom^{I} / *tʰom^{I} (< *tʰom^{I}-s)	tʰom^{I} / tʰom^{III}	tʰom^{I} / tʰom^{IIb}	tʰom^{I} / tʰom^{III}	tʰom^{I}	tʰom^{I}	tʰom^{I}
	*tʰon^{I} / *tʰon^{III} (< *tʰon^{I}-s)	tʰon^{I} / tʰon^{III}	tʰon^{I} / tʰon^{III}	tʰon^{I} / tʰon^{III}	tʰon^{I} / tʰon^{III}	tʰon^{I} / tʰon^{III}	tʰon^{I} / tʰon^{III}
hide vt	*tʰop / *tʰop-s	tʰop / tʰoʔ	tʰop / tʰoʔ				
ladle v[648]	*tʰor^{I} / *tʰor^{III} (< *tʰor^{I}-s) / *tʰor^{III}-s	tʰor^{I} / tʰor^{III}	tʰor^{I} / tʰor^{III} / tʰorʔ	tʰuʔ / tʰoʔ	tʰoa^{I} / tʰoa^{III}	tʰuk^{I} / tʰuk^{III}	tʰuk^{I} / tʰuk^{III}
news n	*tʰu^{II}	tʰu^{IIa}	tʰu^{IIa}	tʰu^{II}	tʰu^{II}	tʰu^{II}	tʰu^{II}
rot vi[649]	*tʰu^{II} / *tʰuk^{II} (< *tʰu^{II}s)		tʰu^{IIb} / tʰut^{IIb}				
rotten discharge n[650]	*tʰu^{II} (< *tʰus)	tʰu^{III}		-tʰu^{III}	-tʰu^{III}	-tʰu^{III}	-tʰu^{III}

[646] Mi/Za layer vt/n; Zo pile-up vt; Si tʰuep^{II} layer n, tʰuep^{II} ~ tʰuep^{III} layer, pile-up vt. There is a possible derivative in Zo tʰoo^{III} pair-up vt, Tedim tʰoaʔ repeat vt, Sizang tʰue^{III} repeat, pile-up vt.
[647] Th pour into vt; Te/Si insert lengthwise, pour into vt.
[648] Mi/Th/Zo/Te/Si ladle vt; Za tʰor^{I} ~ tʰor^{III} ladle vt, tʰorʔ ladle vb.
[649] Schuessler (2007:451) has Mizo tʰu^{IIb} dried, rotten vi.
[650] Th pickled/dried food n; Si messy, disorganized vi.

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deep vi	$*t^huk^{II}$ $*t^huk^{II}\text{-}s$	$\underline{t^huk^{IIb}}$ $\underline{t^huk^{III}}$	$\underline{t^huk^{IIb}}$ $\underline{t^huk^{III}}$	$t^hu\text{ʔ}^{II}$ $\underline{t^h\text{oʔ}}$	$t^hu\text{ʔ}^{II}$ $\underline{t^hu\text{ʔ}^{III}}$	t^huk^{II} t^huk^{III}	t^huk^{II} $t^huk^{III}\,/\,t^hu^{III}$
request vt[651]	$*t^hum^{II}$ $*t^hum^{III}\,(<*t^hum^{II}\text{-}s)$			t^hum^{II} t^hum^{III}	t^hum^{II} t^hum^{III}	t^hum^{II} t^hum^{III}	t^hum^{II} t^hum^{III}
deep (as voice) vi[652]	$*t^hum^{II}$ $*t^hum^{III}\,(<*t^hum^{II}\text{-}s)$	t^hum^{II} t^hum^{III}	t^hum^{II} t^hum^{III}				
sour vi	$*t^hur^{II}$ $*t^hur^{III}\,(<*t^hur^{II}\text{-}s)$	t^hur^{IIa} t^hur^{III}	t^hur^{IIa} t^hur^{III}	$t^hu\text{ʔ}^{II}$ $t^h\text{oʔ}$	$t^h\text{o}a^{II}$ $t^h\text{o}a^{III}$	t^huk^{II} t^huk^{III}	t^huk^{II} t^huk^{III}

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[651] Th/Si *apologise vt.*
[652] Mizo has t^him^{IIa} ~ t^him^{III} *dull (colour) vi.*

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
sturdy vi	*tsɛk *tsɛk-s	tsɛk tsɛʔ	tsɛk tsɛʔ	tʃɛʔ tʃa$^{\mathrm{III}}$		tɛk	tɛk
male n	*tsa$^{\mathrm{I}}$	tsa$^{\mathrm{I}}$		tʃɛ$^{\mathrm{I}}$ / tʃɛ$^{\mathrm{I}}$	ta$^{\mathrm{I}}$	ta$^{\mathrm{I}}$	tɛ$^{\mathrm{I}}$
small bamboo n	*tsa$^{\mathrm{II}}$	tsa$^{\mathrm{IIa}}$	tsa$^{\mathrm{IIa}}$	tʃa$^{\mathrm{I}}$			ᵗʰɛ$^{\mathrm{II}}$
forehead n	*tsɛ$^{\mathrm{III}}$	tsɛ$^{\mathrm{III}}$	tsɛ$^{\mathrm{III}}$	tʃɛ$^{\mathrm{III}}$	tɛ$^{\mathrm{III}}$	ta$^{\mathrm{III}}$	tɛ$^{\mathrm{III}}$
level vi	*tsɛm$^{\mathrm{I}}$ *tsam$^{\mathrm{III}}$ (< *tsam$^{\mathrm{I}}$-s)	tsɛm$^{\mathrm{I}}$ tsam$^{\mathrm{III}}$		tʃɛm$^{\mathrm{I}}$ tʃam$^{\mathrm{III}}$	tam$^{\mathrm{I}}$ mam$^{\mathrm{III}}$	tam$^{\mathrm{I}}$ tam$^{\mathrm{III}}$	tɛm$^{\mathrm{I}}$ tɛm$^{\mathrm{III}}$
sojourn vi	*tsam$^{\mathrm{I}}$ *tsam$^{\mathrm{III}}$ (< *tsam$^{\mathrm{I}}$-s)	tsam$^{\mathrm{I}}$ tsam$^{\mathrm{III}}$	tsam$^{\mathrm{I}}$ tsam$^{\mathrm{III}}$	tʃam$^{\mathrm{I}}$ tʃam$^{\mathrm{III}}$	tam$^{\mathrm{I}}$ tam$^{\mathrm{III}}$	tam$^{\mathrm{I}}$ tam$^{\mathrm{III}}$	tam$^{\mathrm{I}}$ tam$^{\mathrm{III}}$
slice vt/n[653]	*tsɛn$^{\mathrm{II}}$ *tsɛn$^{\mathrm{III}}$ (< *tsɛn$^{\mathrm{II}}$-s)	tsɛn$^{\mathrm{IIa}}$ tsɛn$^{\mathrm{III}}$	tsɛn$^{\mathrm{IIa}}$ tsɛn$^{\mathrm{III}}$	tʃɛn$^{\mathrm{II}}$ tʃɛn$^{\mathrm{III}}$ / tʃɛn$^{\mathrm{III}}$	tɛn$^{\mathrm{II}}$ tɛn$^{\mathrm{III}}$ / tɛn$^{\mathrm{III}}$	tɛn$^{\mathrm{II}}$ tɛn$^{\mathrm{III}}$ / tɛn$^{\mathrm{III}}$	tɛn$^{\mathrm{II}}$ tɛn$^{\mathrm{III}}$ / tɛn$^{\mathrm{III}}$
joint n	*tsaŋ$^{\mathrm{I}}$	tsaŋ$^{\mathrm{I}}$	tsaŋ$^{\mathrm{I}}$	tʃaŋ$^{\mathrm{I}}$	taŋ$^{\mathrm{I}}$	taŋ$^{\mathrm{I}}$	taŋ$^{\mathrm{I}}$
straight vi	*tsaŋ$^{\mathrm{I}}$	tsaŋ$^{\mathrm{I}}$		tʃaŋ$^{\mathrm{I}}$	taŋ$^{\mathrm{I}}$	taŋ$^{\mathrm{I}}$	taŋ$^{\mathrm{I}}$

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[653] Mi ten$^{\mathrm{IIa}}$ ~ ten$^{\mathrm{III}}$ *slice vt*, ten$^{\mathrm{III}}$ *slice n*; Za ten$^{\mathrm{IIa}}$ ~ ten$^{\mathrm{III}}$ *slice vt*; Th tʃɛn$^{\mathrm{II}}$ ~ tʃɛn$^{\mathrm{II}}$ *slice vi*, tʃɛn$^{\mathrm{III}}$ *portion n*; Zo tɛn$^{\mathrm{II}}$ ~ tɛn$^{\mathrm{III}}$ *slice vt*, tɛn$^{\mathrm{III}}$ *portion n*; Te tɛn$^{\mathrm{II}}$ ~ tɛn$^{\mathrm{II}}$ *cut lengthwise vt*, tɛn$^{\mathrm{III}}$ *portion n*; Si ten$^{\mathrm{II}}$ ~ ten$^{\mathrm{II}}$ *quit an addiction vt*, ten$^{\mathrm{III}}$ *portion n*.

	Proto						
obtain vt[654]	*tsaan^{III} (<*tʃaŋ^{I}-s)			tʃɛn^{III}	ŋaɪ^{III}	ŋaɪ^{II}	ʈɛn^{III}
adze vt/n[655]	*tsaŋ^{II} *tsaan^{III} (< *tsaŋ^{II}-s)	tsaŋ^{IIa} tsan^{III}	tsaŋ^{IIa} tsan^{III}	tʃaŋ^{II} tʃan^{III}	taŋ^{II} tan^{III}	taŋ^{II} tan^{III}	ʈaŋ^{II} / ʈan^{II} ʈaŋ^{II} / tan^{III}
snap (as rope) vi[656]	*tsap	tsap	tsap	tʃap	tsɔp		ʈap
	*tsɛt *tsɛt-s	tsɛt tsɛʔ	tsɛt / tsɛt tsɛʔ / tsɛʔ	tʃɛt tʃa^{III}	tɛt ʈa^{II}	tɛt ʈaʔ	tɛt ʈa^{II}
scare vi[657]	*tsa^{II} *tsat^{II}-s (< *tsat^{II}-s)			tʃa^{II} tʃat^{II}		ʈa^{II} tat^{II} / tak^{II}	ʈa^{II} tat^{II} / tak^{II}
play vi[658]	*tsaj^{II} *tsaj^{III} (< *tsaj^{II}-s)	tsaj^{IIa} tsaj^{III}	tsaj^{IIa} tsaj^{III}				
wait for prey vt[659]	*tsaŋ^{II} *tsan^{III} (< *tsaŋ^{II}-s)	tsaŋ^{IIa} tsan^{III}	tsaŋ^{IIa} tsan^{III}	tʃaŋ^{II} tʃan^{III}	taŋ^{II}	taŋ^{II} tan^{III}	
tire vi[660]	*tsaw^{III} *tsaw^{III}-s	tsaw^{III} tsew^{ʔ}	tsaw^{III} tsew^{ʔ}	tʃaw^{III}	-ʈaw^{III} -ʈaw^{III}	-ʈaw^{III} -ʈaw^{III}	ʈaw^{III} ʈwaɪ^{II}

654 Za mature (in age) vi; Si repossess vt.
655 Mi adze vt, Za adze n; Th felled tree n.
656 Th snap (as chicken's neck) vi.
657 Stern (1963:245) treats Sizang form 2 tat^{II} as intransitive and tak^{II} as transitive.
658 Za play tug-of-war vi. See *tsʰaj^{III}-s tease vt.
659 Zo place where animals to be found when hunting n. Saizang has taŋ^{II} ~ tan^{III} wait for prey vt.
660 Zo/Te worry vi; Si grieve vi. Sizang is a song word.

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axe vt[661]	*tsek^{II} / *tsek-s	tsek^{IIb} / tsɛʔ	tsek^{IIb} / tsɛʔ				
knife n	*tsɛm^{I}	tsɛm^{I}	tsɛm^{I}	tʃɛm^{I}	tɛm^{I}-	tɛm^{I}	tɛm^{I}
clamp vt	*tsɛp / *tsɛp-s	tsɛp / tsɛʔ	tsɛp / tsɛʔ	tʃɛp / tʃe^{III}	tɛp / te^{III}	tɛp / teʔ	tɛp / te^{III}
soak v[662]	*tsɪap^{II} / *tsɪap^{II}-s	tsɪaʔ	tsɪap^{IIb} / tsɪaʔ				
bubble v[663]	*tsɪar^{I} / *tsɪar^{III} (< *tsɪar^{I}-s)	-tsɪar^{I} / (-)tsɪar^{III}	-tsɪar^{I} / -tsɪar^{III}	tʃer?^{I} / tʃer?^{III}	tʃɹe?^{I} / tʃɹe?^{III}	tʃɹak^{I} / tʃɹak^{III}	tʃɹek^{I} / tʃɹek^{III}
saliva n	*tsɪl^{I}	tsɪl^{I}	tsɪl^{I}	tʃɪl^{I}	tʃɪl^{I}	tʃɪ^{I}	tʃɪ^{I}
trample, squash vt[664]	*tsɪl^{I} / *tsɪl^{III} (< tsɪl^{I}-s) / *tsɪl^{III}-s	tsɪl^{I} / tsɪl^{III} / tsɛlʔ	tsɪl^{I} / tsɪl^{III} / tsɛlʔ	tʃɪl^{I} / tʃɪl^{III}	tʃɪl^{I} / tʃɪl^{III}	tʃɪl^{I} / tʃɪl^{III}	tʃɪl^{I} / tʃɪl^{III}
collapse vi[665]	*tsɪm^{II} / *tsɪm^{II}-s			tʃɪm^{II} / tʃɪm^{III}	tʃɪm^{II} / tʃɪp	tʃɪm^{III} / tʃɪp	tʃɪm^{III} / tʃɪp

[661] Mizo has tsʰɔk ~ tsʰɔʔ *lop off, sever* vt.
[662] Mi *soak* vt; Za tsɪap^{IIb} *soak* vi, tsɪaʔ *soak* vt.
[663] Mi -tsɪar^{I} ~ -tsɪar^{III} *chatter* vi, tsɪar^{III} *boil* vt; Za -tsɪar^{I} ~ -tsɪar^{III} *grumble* vi; Th/Zo/Te/Si *grumble, chatter, wheeze, bubble* vi.
[664] Mi tsɪl^{I} ~ tsɪl^{III} *trample* vt, *throng* vi, tsɪlʔ *squash* vt; Za tsɪl^{I} ~ tsɪl^{III} *trample* vt, tsɛlʔ *squash* vt; Th/Zo/Te/Si *trample* vt.
[665] Thado has tʃɪp *crushed to powder* vi.

	Proto					
guard vt[666]	*tsiŋ^{II} / *tsin^{III} (< *tsiŋ^{II}-s)	tsiŋ^{IIa} / tsin^{II}		tʃiŋ^{II} / tʃin^{III}	tʃiŋ^{II} / tʃin^{III}	tʃiŋ^{II} / tʃin^{III}
nibble, shut vt[667]	*tsip / *tsip-s	tsip / tsiʔ	tsip / tsiʔ	tʃip / tʃiʔ	tʃip / tʃiʔ	tʃip / tʃiʔ
seed n	*tsi^{II}	tsi^{IIb}	tsi^{IIb}	tʃi^{II}	tʃi^{II}	tʃi^{II}
salt n	*tsi^{III} (< *tsis)	tsi^{III}	tsi^{III}	tʃi^{III}	tʃi^{III}	tʃi^{III}
condense vi[668]	*tsik^{II} / *tsik^{II}-s	tsik^{IIa} / tsik^{II}		tʃiʔ^{II} / tʃiʔ^{III}	tʃik^{III}	tʃik^{III}
downpour vi	*tsin^{II} / *tsin^{III} (< *tsin^{II}-s)	tsen^{IIa} / tsen^{III}	tsen^{IIa} / tsen^{III}	tʃin^{II} / tʃin^{III}	tʃin^{II} / tʃin^{III}	tʃin^{II} / tʃin^{III}
short (length) v[669]	*tsiŋ^{II} / *tsin^{III} (< *tsiŋ^{II}-s) / *tsin^{III}-s		tsiŋ^{IIa} / tsin^{II} / tsin^{IIb}			
compact vi[670]	*tsip^{IIb} / *tsip^{II}-s	tsip^{IIb}	tsip^{IIb}	tʃip^{II} / tʃip^{III}	tʃip^{II} / tʃip^{III}	tʃip^{II} / tʃip^{III}
stir vt	*tsɔk	tsɔk	tsɔk	tʃɔʔ	tɔʔ	tɔk

666 Mi tend vt.
667 Zo/Te shut from two sides vt.
668 Mi disproportionately small vi; Th narrow vi; Te concentrated vi; Si concentrated, pure vi.
669 Za tsiŋ^{IIa} ~ tsin^{II} short vi, tsin^{IIb} shorten vt.
670 Mi shut from two sides vt.

	proto					
yeast n	*tsɔk-s	tsɔʔ	tsɔʔ	tʃɔ[III]	to[III]	tɔʔ	to[III]
short, shrink vi[671]	*tsɔl[II]	tsɔl[IIb]	tsɔl[IIa]	tʃɛl[II]	tɔl[II]	tɔl[II]	tɔl[II]
dig vt	*tsɔm[II] *tsɔm[III] (< *tsɔm[II]-s)	tsɔm[IIa] tsɔm[III]	tsɔm[IIa] tsɔm[III]	tʃɔm[II] tʃɔm[III]	tɔm[II] tɔm[III]	tɔm[II] tɔm[III]	tɔm[II] tɔm[III]
	*tsɔw[II] *tsɔw[III] (< *tsɔw[II]-s) *tsɔw[II]-s	tsɔw[IIa]		tʃɔw[II]	tɔw[II]	tɔw[II]	tɔw[II]
heft vt[672]	*tsɔj[I] *tsɔj[III] (< *tsɔj[I]-s) *tsɔj[III]-s	tsɔj[I] tsɔj[III] tsɔj[ʔ]	tsɔj[I] tsɔj[III]	tʃɔj[I] tʃɔj[III] / tʃɔj[III]	tɔj[I] tɔj[III]	tɔj[I] tɔj[III]	tɔaj[I] tɔaj[III]
tire vi[673]	*tsɔl[II] *tsɔl[III] (< *tsɔl[II]-s) *tsɔl[III]-s	tsɔl[III] tsɔl[ʔ]	tsɔl[III] tsɔl[ʔ]	tʃɔl[II] tʃɔl[III]	tɔl[II] tɔl[III](-)	tɔl[II] tɔl[III]	tɔl[III]-
peer vt	*tsʋan[III]	tsʋan[III]	tsʋan[III]				
stamp vi	*tsʋan[III] *tsʋan[III]-s			tʃʋɔn[III] tʃɔt	tʋɔn[III] tɔt	tʋan[III] tʋat	tuan[III] tɔt

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671 Mi *shrink vi*; Za tsɔm[II] *shrink vi*, tsɔm[II] ~ tsɔm[III] *curl up vi*; Th/Zo/Te/Si *short vi*.

672 Mi tsɔj[I] ~ tsɔj[I] / tsɔj[ʔ] *heft vt*.

673 Mi *rest, stop vi*; Za tsɔl[III] ~ tsɔl[ʔ] *rest, stop vi*, tsɔl[ʔ] *stop vi*; Th tʃɔl[II] ~ tʃɔl[III] *tired vi*, tʃɔl[III] *rest, stop vi*; Zo tol[II] ~ tol[III] *tired vi*, tol[III] *rest, stop vi*; Te tol[II] ~ tol[III] *tired vi*, tol[III] *rest, stop vi*; Si tol[III] *rest, stop vi*.

ride vt [674]	*tsɔaŋ^I	tsɔaŋ^I		tʃɔɔŋ^I	tɔɔŋ^I	tɔaŋ^I	tɯaŋ^I
	*tsɔan^III (< *tsɔaŋ^I-s)	tsɔan^III		tʃɔɔn^III	tɔɔn^III	tɔan^III	nɑn^III
lungs n	*tsɔap^II	tsɔap^IIb	tsɔap^IIb	tʃɔɔp^II	tɔɔp^II	tɔap^II	dɑɱ^II
top, above n	*tsɔŋ^II	tsɔŋ^IIa	-tsɔŋ^IIa	tʃɔŋ^II	tɔŋ^II	tɔŋ^II	tɔŋ^II
peck vt	*tsu^III (< *tsus)	tsu^III		tʃu^III	tu^III	tu^III	tu^III
	*tsɔk (< *tsu^II-s)	tsɔk	tsɔk	tʃɔʔ	tɔʔ	tɔk	tɔk
	*tsɔk-s		tsɔʔ				
flood, punch v [675]	*tsum^II	tsum^III	tsum^III	tʃum^III	tum^III	tum^III	tum^II
	*tsum^II (< *tsum^II-s)						tum^III
	*tsɔm^III-s	tsɔm^IIb	tsɔm^IIb	tʃɔp	tɔp	tɔp	tɔp

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674 Zahau has tsɔaŋ^IIa *exalted vi.*
675 Mi *punch vt;* Za *thump fist down vt;* Th *flood vi/t, punch vt;* Zo *flood vi, punch vt;* Te *flood vi/t, punch vt;* Si tum^II ~ tum^III *increase (as water) vi,* tum^III ~ *top punch vt.*

*tsʰ-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
tease vt [676]	*tsʰaj^{III}-s	tsʰaj?	saj?				
north, east n [677]	*tsʰɛk	tsʰɛk	sɛk	sɛ?	sɛ?	sɛk	sɛk
need vi	*tsʰɛm^{III} *tsʰɛm-s	tsʰɛm^{III} tsʰɛm^{IIb}	sɛm^{III} sɛmas^{IIb}	sɛm^{III} sap	sɛm^{III} sap	sɛm^{III} sap	sɛm^{III} sap
thick vi	*tsʰas	tsʰa?	sɛ?	sa^{III}	sa^{III}	sɛ?	sa^{III}
accede v [678]	*tsʰaŋ^{I} *tsʰan^{III} (< *tsʰaŋ^{I}-s) *tsʰan^{III}-s	tsʰaŋ^{I} tsʰan^{III}	saŋ^{I} san^{III} sɛn^{IIb}	saŋ^{I} san^{III}	saŋ^{I} san^{III}	saŋ^{I} san^{III}	saŋ^{I} san^{III}
hatchet, hammer n [679]	*tsʰɛk	tsʰɛk	sɛk	sɛ?	sɛ?	sɛk	sɛk
forge vt	*tsʰɛr^{I} *tsʰɛr^{III} (< *tsʰɛr^{I}-s)	tsʰɛr^{I} tsʰɛr^{III}	sɛr^{I} sɛr^{III}			sɛk^{I} sɛk^{III}	sɛak^{I} sɛak^{III}
store vt	*tsʰɛk^{II} *tsʰɛk-s	tsʰɛk^{IIb} tsʰɛ?	sɛk^{IIb}				

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[676] Za *kick (as animal does or as people do in jest)* vt. See *tsaj^{II} *play* vi.

[677] Mi *east* n; Za/Th/Zo/Te/Si *north* n.

[678] Mi *requite* vt; Za saŋ^{I} ~ san^{III} *borrow* vt, sɛn^{IIb} *lend* vt; Th/Zo/Te/Si *accept* vt.

[679] Mi/Za *hatchet* n; Th/Zo/Te/Si *hammer* n.

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Gloss	Proto	Mi	Za	Th	Zo	Te	Si
blow, fan flame vt[680]	*tsʰem^{I} / *tsʰem^{II} (< *tsʰem^{I}-s) / *tsʰem^{III}-s	tsʰem^{I} / tsʰem^{III} / tsʰɛm^{IIb}	sem^{III} / sɛm^{IIb}	sem^{I} / sem^{III}	sem^{I} / sem^{III}	sem^{I} / sem^{III}	sɛam^{I} / sɛam^{III}
ruin v[681]	*tsʰɪa^{II} / *tsʰɪat^{II} (< *tsʰɪa$^{II(a)}$-s) / *tsʰɪat$^{II(f)}$-s	tsʰɪa^{III} / tsʰɪat^{IIb} / tsʰɪaʔ	sɪa^{IIb} / sɪat^{IIb} / sɪaʔ	seɪ^{II} / seɪt^{II} / seɪ^{III}	sɪe^{II} / sɪet^{II} / sɪe^{III}	sɪa^{II} / sɪat^{II} / sɪaʔ	sɪe^{II} / sɪet^{II} / sɪet^{III} / sɪe^{II}
shut (eye) vt, short vi[682]	*tsʰiŋ^{I} / *tsʰin^{III} (< *tsʰiŋ^{I}-s)	tsʰiŋ^{I} / tsʰin^{III}	siŋ^{I} / sin^{III}	siŋ^{I} / sin^{III}	siŋ^{I} / sin^{III}	siŋ^{I} / sin^{III}	siŋ^{I} / sin^{II}
make bonfire vt	*tsʰɔm^{IIb}-s	tsʰɔm^{IIb}	sɔm^{IIb}				
reply vt	*tsʰon^{III} / *tsʰon^{IIb}-s	tsʰon^{III} / tsʰɔn^{IIb}	son^{III} / sɔn^{IIb}				
emerge v[683]	*tsʰʊak^{II} / *tsʰʊak$^{II(f)}$-s	tsʰʊak^{IIb} / tsʰʊaʔ	sʊak^{IIb} / sʊaʔ	sʊok^{II} / sʊo^{III}	sʊok^{II} / sʊo^{III}	sʊak^{II} / sʊak^{III} / sʊaʔ	suek^{II} / suek^{III} / sue^{III}
cockscomb n, put high up vt[684]	*tsʰʊaŋ^{I}	tsʰʊaŋ^{I}	sʊaŋ^{I}	sooŋ^{I}	sooŋ^{I}	soaŋ^{I}	suaŋ^{I}

[680] Mi tsʰem^{I} ~ tsʰem^{II} / tsʰem^{IIb} blow, fan flame vt; Za/Th/Zo blow vt; Te/Si fan flame vt.

[681] Mi tsʰɪa^{III} ~ tsʰɪat^{IIb} ruin, bad vi, tsʰɪaʔ offer food to deceased vt, tax n; Za sɪa^{IIb} ~ sɪat^{IIb} ruin, bad vi, sɪaʔ ruin, offer food to deceased vt; Th seɪ^{II} ~ seɪt^{II} ruin, bad vi; Zo sɪe^{II} ~ sɪet^{II} ruin, bad vi, sɪet^{III} speak badly of vt, sɪe^{III} set aside food vt, tax n; Te sɪa^{II} ~ sɪat^{II} ruin, bad vi, sɪat^{II} blame vt, sɪaʔ set aside for somebody vt, tax n; Si sɪe^{II} ~ sɪet^{II} ruin, bad vi, sɪet^{II} ~ sɪet^{III} / sɪe^{III} blame vt, sɪe^{III} set-aside/offer food vt, tax n. The semantic link may be found in Lehman's gloss (1963:141) for Lai as render precincts taboo, impure, by performing a sacrifice.

[682] Mi/Th/Zo/Te/Si short in length vi, shut eye vt; Za shut (eye) vt.

[683] Mi tsʰʊak^{IIb} ~ tsʰʊaʔ emerge vi, tsʰʊaʔ produce vt; Za sʊak^{IIb} ~ sʊaʔ emerge vi, sʊaʔ produce vt; Th sʊok^{II} ~ sʊo^{III} emerge vi, sʊo^{III} produce vt; Zo sʊok^{II} ~ sʊo^{III} emerge vi, sʊo^{III} unload vt; Te sʊak^{II} ~ sʊak^{III} / sʊaʔ emerge vi, sʊaʔ produce vt; Si suek^{II} ~ suek^{III} / sue^{III} emerge vi, sue^{III} produce, unload vt.

			ucs / scs^{IIb}	soon^{II}	soon^{III}	sɔan^{III}	sʋans^{III}
boil v [685]	*tsʰʋan^{III} (< *tsʰʋaŋ^{I}-s) tsʰʋan^{III} / *tsʰʋan^{III}-s	*tsʰʋaŋ^{II} / *tsʰʋan^{III} (< *tsʰʋaŋ^{I}-s) / *tsʰʋan^{III}-s	sʋaŋ^{IIa} / sʋan^{III} / sʋn^{IIb}				
descend vi	*tsʰʋk / *tsʰʋk-s	tsʰʋk / tsʰʋʔ	sok / sʋʔ	sʋʔ	sʋʔ	sok	sok
prick vt	*tsʰʋn^{III} / *tsʰʋn^{III}-s	tsʰʋn^{III} / tsʰʋn^{IIb}	sʋn^{III} / sʋn^{IIb}	sʋn^{III} / sʋt	sʋn^{III} / sʋt	sʋn^{III} / sʋt	sʋn^{III} / sʋt
inside n	*tsʰʋŋ^{I}	tsʰʋŋ^{I}	sʋŋ^{I}	sʋŋ^{I}	sʋŋ^{I}	sʋŋ^{I}	sʋŋ^{I}
pour vt [686]	*tsʰʋŋ^{II} / *tsʰʋn^{III} (< *tsʰʋŋ^{II}-s)	tsʰuŋ^{IIa} / tsʰun^{III}	suŋ^{IIa} / sun^{III}	sʋŋ^{II} / sʋn^{III}	sʋŋ^{II} / sʋn^{III}	sʋŋ^{II} / sʋn^{III}	sʋŋ^{II} / sʋn^{III}
snatch vt	*tsʰʋt / *tsʰʋt-s	tsʰʋʔ	sʋt	sʋt	sʋt	sʋt / sʋʔ	sʋt / su^{III}
vagina n	*tsʰul^{II}	tsʰul^{IIb}	sul^{IIb}	su^{II}	su^{II}	su^{II}	su^{II}
womb n	*tsʰul^{III}	tsʰul^{III}	sul^{III}	sɔl^{III}	sul^{III}	sul^{III}	sɔl^{III}

[684] Mi tsʰʋaŋ *cockscomb* n, tsʰʋaŋ^{I} ~ tsʰʋaŋ^{III} *put in high place* vt; Za sʋaŋ^{I} *cockscomb* n, sʋaŋ^{I} ~ sʋn^{IIb} *put in high place* vt; Th soŋ^{I} *cockscomb* n, soŋ^{I} ~ soon^{III} *put in high place* vt; Zo soŋ^{I} *cockscomb* n, soŋ^{I} ~ soon^{III} *put in high place* vt; Te sʋaŋ^{I} *cockscomb* n, sʋaŋ^{I} ~ sʋan^{III} *put in high place* vt; Si sʋaŋ^{I} *cockscomb* n, sʋaŋ^{I} ~ sʋen^{III} *place on stove/head* vt.

[685] Za sʋaŋ^{IIa} ~ sʋan^{III} *boil* vt, son^{IIb} *boil* vb. Initial tsʰ- is provisionally reconstructed on the basis of Sizang sʋaŋ^{I} ~ sʋen^{III} *place on stove/head* vt from *tsʰʋaŋ.

[686] Mi *pour, cast metal* vt.

noon n[687]	*tsʰun^{III}	tsʰun^{III}	sun^{III}	sun^{III}	sun^{III}	sun^{III}
resemble (facially) vi	*tsʰun^{III} *tsʰun^{III}-s	tsʰun^{III} tsʰon^{IIb}			sun^{III} søt	sun^{III} søt

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[687] Mi daytime n.

*W-

	NC	Mizo	Zahau	Thado	Zo	Tedim	Sizang
ring-shaped stand n[688]	*weɭ^{III}-s	vɛlʔ	vɛl^{IIb}	vel^{III}	vɑl^{III}	velʔ	vel^{III}
swallow vt	*weɭ^{III}-s	vɔlʔ		vel^{III}	vel^{III}	velʔ	vɑl^{III}
sparse, hollow vi[689]	*weŋ^{I} *wen^{III} (< *weŋ^{I}-s)	vaŋ^{I} van^{III}	vaaŋ^{I}	veŋ^{I} ven^{III}	veŋ^{II} vɑn^{III}	vaaŋ^{II} van^{III}	vɑŋ^{II} van^{III}
bird n	*wa^{II}	va^{IIb}	va^{IIb}	va^{II}	va^{II}	va^{II}	va^{-}
foreigner n[690]	*waj^{I}	vaj^{I}	vaj^{I}	vaj^{I}	vaj^{I}	vaj^{I}	vaj^{I}
chaff n[691]	*waj^{I}	vaj^{I}	vaj^{I}	vaj^{I}	vaj^{I}	vaj^{I}	vaj^{I}
commute to/from field n[692]	*waj^{II}			vaj^{II}	vaj^{II}-		vaj^{II}
hunt vt	*waj^{II} *waj^{III} (< *waj^{II}-s)			vaj^{II} vaj^{III} / vej^{III}	vej^{II} vej^{III}		vaj^{II} vaj^{III}

[688] Mi velʔ noose n, make a noose vt; Za wrap with string vt. Mizo has velʔ ring-shaped-stand n, vel^{IIa} ~ vel^{III} circular, radiate in a circle vi, vel^{III} ring n.

[689] Mi sparse, extensive vi; Za widened (as hole) vi; Th perforated vi; Zo/Si sparse, hollow vi; Te veŋ^{I} ~ ven^{III} veŋ^{I} hole n, sparse, hollow vi.

[690] Usually refers to Indians as supported by table B in Luce (1962a); Lehman's contrast (1963:29) with *kol^{I} Burman as a more formal/polite term was not observed.

[691] Za food made by soaking rice with husk in hot water before draining and removing husk n.

[692] Zahau vaj^{III} ~ vej^{ʔ} migrate vi.

fluster v[693]	*waj^III *waj^III-s	vaj^III vɛj? / vaj^IIb	-vaj^III vaj^IIb / vaj?	vaj^III vaj^III	vaj^III vɛj?	vaj^III vɛj?	vaj^III vaj^III
walk vi[694]	*wak^II *wak^II-s	vak^IIb vɛ?	vak^IIb vɛ?	va?^II va^III	va?^II va^III	vak^II vak^III	vak^II vak^III / va^III
excessive vi[695]	*wal^I *wal^III (< *wal^I-s)			val^I val^III	val^I val^III	val^I val^III	val^I val^III
embers n, red hot vi[696]	*wam^II *wam^III (< *wam^II-s)	vam^IIa vam^III	vam^IIa vam^III	vam^II	vam^II	vam^II	vam^II
illuminate v, sky n[697]	*waŋ^II *wan^III (< *waŋ^II-s) *wan^III-s	vaŋ^IIa van^III	vaŋ^IIa van^III van^IIb	vaŋ^II van^III	vaŋ^II van^III	van^III	vaŋ^II van^III
glory n	*waŋ^III			vaŋ^III	vaŋ^III	vaŋ^III	vaŋ^III
illuminate vi[698]	*war^I *war^I (< *war-s)	var^I var^III	var^I var^III	va?^I ve?	va?^I va?^III	vak^I vak^III	vak^I vak^III
left-side n	*wɛj^II	vɛj^IIa	vɛj^IIa	vɛj^II	vɛj^II	vɛj^II	vɛj^II

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693 Mi vaj^III ~ vɛj? *bewildered vi*, vɛj^IIb *wave vt*; Za -vaj^III *bewildered vi*, vɛj^IIb ~ vɛj? *wave vt*; Th/Zo/Te/Si *dizzy vi.*

694 Th/Zo *roam vi*; Si *exit vi.*

695 Tedim and Sizang have val^II ~ val^III *bulge (as eyes, pregnant belly) vi.*

696 Mi/Za vam^IIa *embers n*, vam^II ~ vam^IIa ~ vam^III *red hot vi*; Th/Zo/Te/Si *ashes n.* Mizo has vap^II *ashes n.*

697 Mi vaŋ^IIa *width n*, van^II *sky n*; Za vaŋ^II ~ van^III *illuminate vt*, van^III *sky n*; Th vaŋ^II ~ van^III *illuminate vt*, van^IIb *illuminate vt*, van^III *sky n*; Zo/Te *sky n*; Si vaŋ^II *twilight n*, van^III *sky n.*

698 Mi *illuminate, white vi*; Za *white vi.*

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swing vt, times n [699]	*wɛɲ^I			vɛɲ^I	vɛɲ^I	vɛɲ^I	vɛɲ^I
	*wɛɲ^III (< *wɛɲ^I-s)	vɜɲ^III / vɔɲ^III	vɜɲ^III / vɔɲ^III	vɛɲ^III	vɛɲ^III	vɛɲ^III	vɛɲ^III
fart n [700]	*wɛɲ^III-s	vɔɲʔ	vɔɲʔ	vɛɲ^III	vɛɲ^III	vɛɲʔ	vɛɲ^III
strike vt	*wɛl^I			vɛl^II	vɛl^I	vɛl^I	vɛl^I
	*wɛl^III (< *wɛl^I-s)	vel^III	vel^III	vɛl^III	vɛl^III	vɛl^III	vɛl^III
	*wɛl^III-s	vɛlʔ	vɛlʔ				
neighbour n, guard vt [701]	*weɲ^I	veɲ^I	veɲ^I	veɲ^I	veɲ^I	veɲ^I	vɛaɲ^I
	*wen^III (< *weɲ^I-s)	ven^III	ven^III	ven^III	ven^III	ven^III	
	*wen^III-s	vɛn^IIb					
gird vt [702]	*wɛt	vɛt^IIb		vɛt	vɛt	vɛt	vɛt
	*wɛt-s	vɛʔ		ve^III	ve^III	veʔ	ve^III
coil n/v, times n [703]	*wɪal^I/II	vɪal^I		veɪ^II	-veɪ^I / vɪeɪ^II	vɪal^I / vɪal^II	veɪ^II
	*wɪal^III (< *wɪal^I/II-s)	vɪal^III		veɪ^III	vɪeɪ^III	vɪal^III	vɪeɪ^III
	*wɪal^III-s					vɪalʔ	
check up on vt [704]	*wɪ^I	vɪ^IIa		vɪ^I	vɪ^I	vɪ^I	vɪ^I

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699 Mi veɲ^III swing vt, complete (a yearly cycle) vi, voɲ^III times n; Za veɲ^III swing vt, times n, voɲ^III complete (a yearly cycle) vi; Th/Zo swing vi/t; Te/Si swing vt.
700 Mi/Za/Th fart n/vi.
701 Mi veɲ^I neighbourhood n, veɲ^I ~ ven^III guard vt, Za veɲ^I ~ ven^IIb gird vt, ven^IIb gird vb; Th veɲ^I ward n, veɲ^I ~ ven^III guard vt; Zo/Te veɲ^I neighbour, ward vt; Th veɲ^I ward n, veɲ^I ~ ven^III guard vt; Zo/Te veɲ^I neighbour, ward n, veɲ^I ~ ven^III be neighbours vi; Si vɛaɲ^I neighbour, ward n.
702 Mi tie around vt.
703 Mi vɪal^I ~ vɪal^III coil vi, vɪal^III coil vt; Th veɪ^II times n, veɪ^II ~ veɪ^III coil vt; Zo -vɪeɪ^I coil (of hair on head) n; Zo -vɪeɪ^I coil vt; Te vɪal^I coil (of hair on head) n, vɪeɪ^III times n, vɪeɪ^III coil vt; Te vɪal^I coil (of hair on head) n, vɪal^II times n, vɪal^III ~ vɪalʔ coil vt; Si vɪeɪ^II times n, vɪeɪ^I ~ vɪeɪ^III wander around vi, vɪeɪ^III coil vt.
704 Mi watch over, look after vt.

pig n	*wɪ^{III} (<*wɪ^{I}-s)	vɪ^{III}-	vɪ^{III}	vɪ^{III}	vɪ^{III}	vɪ^{III}	vɪ^{III}
bear n	ɲɛw^{I}*	vɛk	ʔɛv	vɛʔ	vɛk	vɛk	vɛk
black vi	*wɔm^{I}*	vɔm^{I}	vɔm^{I}	vɔm^{I}	vɔm^{I}	vɔm^{I}	vɔm^{I}
	*wɔm^{II} (<*wɔm^{I}-s)	vɔm^{III}	vɔm^{III}	vɔm^{III}	vɔm^{III}	vɔm^{III}	vɔm^{III}
pregnant v, offspring n[705]	*wɔn^{I}*	vɔn^{I}	vɔn^{I}	vɔn^{I}	vɔn^{I}	vɔn^{I}	vɔn^{I}
	(s-)vɔm^{I}* (>)						
	vɔm^{III}* (s-)	vɔm^{III}					
wear vt, load n[706]	s-vɔm^{II}*	vɔn^{II}	vɔn^{II}	vɔn^{II}		ŋav^{II} / vɔn^{III}	ŋav^{III}
	*wɔn^{II} (<) *wɔm^{II} (s-)	vɔn^{III}	vɔn^{III}	vɔn^{III}		vɔn^{III} / ŋav^{III}	
leech n	*wɔt / *wat*	-vat	vɔt	vɔt	vɔt	vɔt	vɔt
cast v[707]	*wor^{I}*	vor^{I} (S)	vok^{I}	vok^{I}		vok^{I}	vok^{I}
	*wor^{III} (<*wor^{I}-s)	vor^{III}	vor^{III}	vo^{III}	vo^{III}	vo^{III}	vok^{III}
	*wor^{III}-s	vɔrʔ	vɔrʔ		vɔʔ		vo^{III}
wrinkle vi[708]	*wɔaj^{I}*	vɔaj^{I}	vouj^{I}	ɡɔej^{I}	vouj^{I}	vɔaj^{I} / ɡɔaj^{I}	huɛj^{I}

[705] Za vonᴵ ~ vonᴵᴵᴵ *pregnant vi*, vonᴵᴵᴵ *impregnate vt*; Zo/Te/Si *offspring n*. Zo, Tedim and Sizang are song words. Laizo has vonᴵ ~ vonᴵᴵᴵ *pregnant vi*, vonᴵᴵᵇ *impregnate vt*.

[706] Th vonᴵᴵ ~ vonᴵᴵᴵ *wear vt*, vonᴵᴵᴵ *load, clothes n*; Zo vonᴵᴵ ~ vonᴵᴵ *wear vt*, vænᴵᴵᴵ *load n*; Te/Si *load n*. Mizo has vonᴵᴵsorᴵ ~ vonᴵᴵᴵsorᴵᴵᴵ *have diarrhoea vi* which is discussed in footnote 503 of the main text; the tone III derivatives meaning *load n* may plausibly be associated with *wonᴵ *pregnant v, offspring n* as discussed in 7.5.2.2.

[707] Mi vorᴵ ~ vorᴵᴵᴵ *sing vi*, vorʔ *sow vt*; Za vorᴵᴵᴵ *discard vt*, vorʔ *sow vt*; Th/Zo *sow vt*; Te vokᴵ ~ vokᴵᴵᴵ *throw vt*, voʔ *sow vt*; Si vokᴵ ~ vokᴵᴵᴵ *discard vt*, voᴵᴵᴵ *sow vt*. Mizo vorᴵ ~ vorᴵᴵᴵ *sing vi* is a song word.

[708] Tedim gɔajᴵ ~ gɔajᴵᴵᴵ is a song word variant.

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	*wɔaj^III (< *wɔaj^I-s)	vɔaj^III	vɔaj^III	vɔaj^III	vooj^III	ʊej^III	vɔaj^III / gɔaj^III	huʒj^III
elephant n [709]	*wɔj^I	vɔj^I	vɔj^I	vɔj^I		vɔj^I-	vɔj^I-	vɔj^I-
rear (animals) vt [710]	*wɔɪ^III / *wɔɪ^III-s	vɔɪʔ	vɔɪʔ	vɔɪʔ	vɔɪ^III	vɔɪ^III	vɔɪ^III / vɔɪʔ	hɔɪ^III
skin n	*wɔn^II	vɔn^IIa	vɔn^IIa	vɔn^IIa	vɔn^II	vɔn^II	vɔn^II	hɔn^II
ash n	*wɔt	vɔt	vɔt	vɔt	vɔt	vɔt	vɔt	vɔt
pierce vt	*wɔt / *wɔt-s	vɪt / vɪʔ	vɪt / vɪʔ	vɔt / vu^III	vɔt / vu^III	vɔt / vu^III	vɔt / vɔʔ	hɔt / hu^III
frost, snow n	*wur^I	vur^I	vur^I	vur^I	buʔ^I	vɔa^I	vuk^I	huk^I

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709 Zo, Tedim and Sizang are song words which may account for the discrepant Zo vocalism and Sizang initial; the Zo vocalism may alternatively be a result of compounding.
710 Te/Si rear vb. Zo is a song word.

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